WELL BEGUN IS HALF DONE:
Investigating the Work and Career of the Young Workforce

Jos Akkermans

ISBN: 978-94-6191-742-3
Printed by: Ipskamp Drukkers BV, Enschede

WELL BEGUN IS HALF DONE:
Investigating the Work and Career of the Young Workforce

EEN GOED BEGIN IS HET HALVE WERK:
Een Onderzoek naar het Werk en de Loopbaan van Jonge Werknemers
(met een samenvatting in het Nederlands)

Proefschrift

ter verkrijging van de graad van doctor aan de Universiteit Utrecht op gezag van de rector magnificus, prof. dr. G.J. van der Zwaan, ingevolge het besluit van het college voor promoties in het openbaar te verdedigen op dinsdag 18 juni 2013 des ochtends te 10.30 uur

door

Theodorus Johannes Akkermans
geboren op 3 februari 1984, te Heesselt

Promotoren: Prof. dr. R.W.B. Blonk
Prof. dr. W.B. Schaufeli

Co-promotor: Dr. V. Brenninkmeijer

The studies in this thesis were financially supported by “Foundation Institute GAK” (Hilversum, The Netherlands)

Contents

CHAPTER 1

GENERAL INTRODUCTION

Chapter 1

1.1. The Changing Work and Career of Young Employees

"Young employees suffer worst because of the crisis" (July 15th 2012), "Cities all around Europe have to deal with youth unemployment" (June 27th 2012), "Young employees are sick more often because of work stress" (November 11th 2012), "educated for non-existing jobs" (August 7th 2012), "Young individuals are vulnerable on the work floor" (January 29th 2013). These are just a few examples of Dutch news headers appearing online and in newspapers through 2012 and 2013. All of these headers stress the importance of supporting young employees in managing their work and career. Research has shown that the transition to the labor market is often challenging (Savickas, 1998), that employment opportunities for young employees are declining (Ryan, 2001), that young workers often face unfavorable working conditions, high dropout rates, and underemployment (Koivisto, Vuori, & Nykiri, 2007), and that young workers have been struck hardest by the worldwide economic crisis that started in 2009 (European Commission, 2012). These risks may be especially relevant for young workers with lower levels of education, considering the growing complexity of the labor market, the increasing certificate and diploma demands, and the growing importance of service-oriented jobs and communicative skills (Nieuwenhuis, Coenen, Fouarge, Harms, & Oosterling, 2012). As the differences in quality of work and career opportunities between educational groups are increasing in favor of the higher educated (Raad voor Werk en Inkomen, 2009), it is important to focus on ways to support young workers with lower levels of education in the early stages of their professional career.

Supporting these young workers during the first years of their career is especially important because labor markets have started to evolve into more dynamic, constantly changing environments (Arthur, Khapova, & Wilderom, 2005). These on-going changes have had many implications for organizations and for employees. On the organizational level, organizations continually have to adapt and innovate to gain a competitive advantage and to be successful. Employee productivity and wellbeing is therefore becoming ever more important for organizations up and above financial and material

issues (Diener & Seligman, 2004). On the individual level, employees are increasingly expected to take responsibility for managing their own work and career (Segers & Inceoglu, 2012). They need to deal with a dynamic and changing work environment, remain motivated and healthy, and they need to pursue more complex careers (Vuori, Toppinen-Tanner, & Mutanen, 2011). Moreover, because temporary employment, career transitions, and individual responsibility are increasing, career self-management is becoming a prominent part of the daily work life (Meijers, 2004). Although research on work and career development has predominantly focused on more experienced employees (e.g., Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009), the responsibility for managing one's work and career may be especially difficult for young employees who are about to enter, or have recently entered the labor market. These young workers go through many unique changes in their lives in a relatively brief period of time, such as forming a new identity, taking on new roles and responsibilities, and having to make important vocational choices (Elfering, Semmer, Tschan, Kälin, & Bucher, 2007; Savickas, 1998). Making career choices may therefore be of even greater importance to young workers, as these choices set the scene for their long-term careers.

These statements all point out that it is crucial to gain a better understanding of the work and career of young employees with lower levels of education, whereby we characterize a career as the general course or progression of one's working life and/or one's professional achievements that include vocational choices, work experience, and further education. First, it is important that we gain a deeper understanding of the factors that can influence wellbeing of young employees, specifically those young workers with lower levels of education. Therefore, in this thesis we will investigate in which ways certain job characteristics may positively or negatively influence wellbeing, health, and performance of young employees, and whether there are differences between educational groups. Second, we need to investigate what kind of competencies these young workers may need to successfully navigate their career, and how we can assess those competencies. For

that reason, we will investigate what kind of career-related competencies are relevant for young employees, how we can assess these competencies, and what their potential contribution is to career development and work-related wellbeing of young employees. Third, it is necessary that interventions are devised that stimulate career development and wellbeing of young employees who are at the start of their career. We will therefore develop and empirically test a career development intervention for young workers which aims to stimulate their career development and wellbeing through the mastery of career competencies.

The main target group in this thesis consists of young employees aged 16-30 with lower levels of education (less than 16 years of total education; non-college level). Appendix II at the end of this thesis provides a detailed explanation of the Dutch educational system.

1.2. Wellbeing, Health, and Performance of Young Workers

Entering the labor market is a challenging process for young employees as they are often not fully prepared for working life after finishing their education. This has several reasons. First, young individuals have to make many choices concerning their future careers even before finishing their education. Especially for those with lower levels of education, this can lead to an information overload (Hiteq, 2009). In addition, educational programs do not always provide good chances of employment: in the top five most popular vocational training programs in The Netherlands, four of those programs offer less than a 50% chance of gaining employment (Intermediair PW, 2012). Young employees may therefore enter the labor market not fully prepared and without a clear job perspective (Raad voor Werk en Inkomen, 2011). Once they have entered the labor market, young workers experience many changes during the early years of their professional career (Elfering et al., 2007; Koivisto, Vuori, & Nykiri, 2007). They have to go through a socialization process during which they receive more responsibilities and face increasing demands, they have to arrange their time in a new way, and they have to be more flexible (Ryan, 2001). These new responsibilities

and tasks can subsequently lead to stress and insecurity about their own competence (Goodwin & O'Connor, 2007). In addition, seeking a suitable job can be a stressor for young employees (Koivisto et al., 2007), and their motivation may be reduced because of relatively low wages (Ryan, 2001). In line with this reasoning, Schaufeli and Bakker (2004) found that young employees are generally less engaged in their work. If these young workers do not learn how to manage their work and career in a healthy and productive way, this may lead to unfavorable outcomes such as underemployment or staying in jobs with unfavorable work circumstances for too long, resulting in reduced wellbeing and employability. Because young workers are faced with such difficult challenges and risk factors, their wellbeing may be determined in a unique way. That is, they may be exposed to and they may require a different set of job characteristics to remain healthy and perform well. For example, young employees may experience low amounts of autonomy because they have just started their professional lives. Support from peers, who may share their experiences, and support from supervisors, who may lead them in the right direction, may be especially important for these young workers in order to perform well and experience high levels of wellbeing.

In this thesis we will use the Job Demands-Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) as a conceptual basis for gaining new knowledge of the unique set of work-related circumstances of young employees. The JD-R model assumes that occupation-specific factors can be divided into *job resources* and *job demands* (Bakker & Demerouti, 2007). The presence of sufficient job resources fosters motivation and wellbeing, which is referred to as a *motivational process* (Bakker, Demerouti, & Schaufeli, 2003; Schaufeli & Bakker, 2004). An excessive amount of job demands can lead to exhaustion and impaired health (Bakker & Demerouti, 2007; Bakker et al., 2003), which is referred to as a *health impairment process*. The motivational and health impairment processes of the JD-R model have received widespread empirical support (e.g., Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Hakanen, Schaufeli, & Ahola, 2008). The JD-R model will be used in this thesis as theoretical basis to examine job

characteristics and motivational and health impairment processes among young employees. Using this model, we will address the following research question in Chapters 2, 3, and 5:

Research Question 1**:** *In which ways are job characteristics relevant for determining the wellbeing, health, and performance of young employees with lower levels of education?*

1.3. Differences Between Educational Groups

Most research among young employees has been performed among employees with a high educational level (e.g., Kuijpers & Meijers, 2012). However, there is reason to believe that especially those with lower educational levels may be at risk for experiencing reduced wellbeing and career success. Research indicates that a lower educational level can result in an extended job search for the first job and in lower job security. Moreover, certificate and diploma demands are increasing on the entire labor market, also resulting in a growing complexity of lower skilled-jobs, for example because of the growing role of Information and Communication Technology (ICT; Nieuwenhuis et al., 2012). As a general trend, the labor markets are becoming more service-oriented and more knowledge-driven (Centraal Planbureau, 2002). Autonomy, innovation, and creativity are becoming increasingly important, whereas specialized repetitive tasks are declining (Nieuwenhuis et al., 2012). Furthermore, European labor market studies show increasing differences between educational groups concerning health, sickness absence, and unemployment, whereby employees with lower educational levels report more negative outcomes (European Commission, 2012; Raad voor Werk en Inkomen, 2010). Moreover, differences in quality of work and career opportunities are increasing in favor of the higher educated (European Commission, 2012; Raad voor Werk en Inkomen, 2009). Smulders (2005) reported higher sickness absence among those with lower educational levels, due to factors such as a high physical workload, less favorable work circumstances, and fewer chances for promotions.

Taken together, these developments indicate that young workers with lower educational levels may be more prone to experience reduced wellbeing during the start of their working lives. This thesis therefore examines educational differences with regard to job characteristics, wellbeing, health, and performance. We will attempt to answer the following research question in Chapters 2 and 3:

Research Question 2*: Do young employees with different educational levels differ with respect to job characteristics, wellbeing, health, performance, and the relations between these aspects?*

As we have argued above, managing one's career is becoming increasingly important for young employees in order to become and remain employable. For this reason, it important to examine the competencies that young workers with lower levels of education would need to successfully manage their career. A first step to achieve this would be to devise a model of career competencies and design an instrument to assess these competencies.

1.4. Career Competencies for Career Development

Traditionally, career development was achieved by acquiring job competencies (i.e., skills and abilities that are needed to perform a specific job) and gaining experience in a job. Career growth could be achieved by making vertical steps within the hierarchy of one organization (Arthur, 1994). However, in recent decades the so-called "new career" is becoming more dominant on the labor market, in which career development can be achieved by moving vertically through horizontal shifts between different organizations (Arnold & Cohen, 2008; Arthur & Rousseau, 1996; Vuori et al., 2011). As a result, there is a growing need for self-managed learning, flexibility, and social skills (Halfpap, 2000). These generic competencies are even becoming a necessity for successfully performing a job (Ott, 1999). Consequently, it is becoming more important for individuals to develop both

job-related competencies and career-related competencies (Meijers, 2004). To be successful in navigating the current dynamic career paths and to prevent such problems as unemployment and underemployment, employees increasingly need to possess career competencies (Kuijpers, 2003; Van der Heijden & Van der Heijde, 2006). Considering the unique challenges, the socialization process, and the many work-related changes that young employees face when starting their career, it may be of great importance for them to master career competencies. An important objective of this thesis is therefore to conceptualize career competencies for young employees with lower levels of education. In order to do so, we first explored the existing literature on this topic.

Four perspectives on career competencies seem to coexist in the literature: the boundaryless career perspective, the protean career perspective, the career self-management perspective, and the human capital perspective. First, the perspective of the *boundaryless career* was brought forward by Defillippi and Arthur (1994). According to this perspective, career competencies play a crucial role in maintaining the employee's value to the organization (Arthur & Rousseau, 1996). Defillippi and Arthur discriminate three types of career competencies, or "ways of knowing", that can contribute to an employee's effective adaptation to change. *Knowing why* career competencies (e.g., career insight, openness to experiences) are related to career motivation, identification with work, and personal meaning making in one's work. *Knowing whom* career competencies (e.g., extensiveness of networks) concern career-related networks and the use of these networks for the professional career. Finally, *knowing how* career competencies (e.g., professional activities) represent career-relevant skills and job-related knowledge. The boundaryless career perspective has been used in several studies with regard to career competency research since its introduction (e.g., Colakoglu, 2011; De Janasz & Sullivan, 2004; Direnzo & Greenhaus, 2011; Eby, Butts, & Lockwood, 2003; Jones & Lichtenstein, 2000; Sturges, Simpson, & Altman, 2003).

Second, Mirvis and Hall (1994) introduced the *protean career perspective*. Although there is some conceptual overlap with the boundaryless career perspective (e.g., the individual gaining more responsibility for managing his or her career), the protean career perspective emphasizes the self-directed, subjective perspective of individuals in their career. In a protean career, contrary to the boundaryless career perspective, the value of career competencies for individual subjective career success is of central importance (Briscoe & Hall, 2006; Briscoe, Hall, & DeMuth, 2006). According to Hall and Mirvis (1995), the development of career competencies is a continuous learning process during an individual's career. Anakwe, Hall, & Schor (2000) described three types of career competencies in the protean career perspective. First, *self-knowledge skills* (e.g., self-awareness) are related to individual development and self-awareness. Second, *interpersonal knowledge skills* (e.g., conflict management) deal with the contribution of significant others to one's career success. Finally, *environmental knowledge skills* (e.g., exploration; flexibility) refer to monitoring the environment and adapting one's professional identity to changes in the environment. The protean career perspective has been used as a conceptual basis in several studies related to career competency research (e.g., Briscoe & Hall, 1999; Briscoe, Hall, & DeMuth, 2006; Cunningham & Sweet, 2009; Hall, 1996; Hall & Moss, 1998).

The third perspective on career competencies emphasizes the proactive behaviors that employees need to perform to effectively self-manage their career (De Vos & Soens, 2008). Kossek, Roberts, Fisher, and Demarr (1998) described career self-management as the degree to which one gathers information and plans for career problem solving and decision making. Similar to the boundaryless and protean career perspectives, the *career self-management perspective* considers the individual as the primary agent in managing his or her career. The main differences lie in the focus on proactivity and on actual behavior. The career self-management perspective seems to originate primarily from an empirical study by Gould and Penley (1984), who developed the Career Strategies Inventory (CSI) and

presented seven career strategies: creating opportunities, extending work involvement, self-nomination, seeking career guidance, networking, opinion conformity, and other-enhancements. Based on their work, Noe (1996) distilled four career strategies: 1) building a network to further one's career progress, 2) developing skills and taking leadership, 3) making others aware of one's aspirations and goals, and 4) asking others, such as supervisors or other experienced individuals, for advice. De Vos and Soens (2008) and De Vos, De Clippeleer, and Dewilde (2009) added to this perspective by arguing that career self-management not only consisted of a behavioral component, but also of a cognitive/reflective component, such as career planning skills. Several studies have used the career self-management perspective (e.g., De Vos, Dewettinck, & Buyens, 2009; Forret & Doughterty, 2004; King, 2004; Sturges, Guest, Conway, & Mackenzie Davey, 2002).

The fourth and final view on career competencies originates from a *human capital perspective*. In this perspective, the value of career competencies both to the individual employee (i.e., professional career development) and the organization (i.e., better use of skills and abilities of employees to gain economic advantage) is emphasized. Kuijpers and Scheerens (2006) distinguish three types of competencies: work competencies, learning competencies, and career competencies. Career competencies are relevant for all employees to develop their career, regardless of the specific job they have, and they are assumed to manage work and learning competencies. Studies in this perspective are based on Kuijpers (2003), who distinguished four career competencies. First, *career reflection* refers to reflecting on capacities and motives that are relevant for one's career. Second, *work exploration* pertains to acquiring information and being conscious of possibilities on the labor market. Third, *career control* relates to actively planning one's career and setting goals. Finally, *self-presentation* refers to disseminating one's qualities and wishes to significant others. According to Kuijpers, Meijers, and Gundy (2011), career competencies can be structured in three categories: *reflective behaviors* (e.g., career reflection), *proactive behaviors*

(e.g., work exploration), and *interactive behaviors* (e.g., networking). Several studies have refined this framework of career competencies (e.g., Kuijpers & Meijers, 2012; Kuijpers, Schyns, & Scheerens, 2006).

In summary, although the four existing perspectives that we found in the literature have different starting or end points (i.e. the organization, the individual, or both), there are clear conceptual similarities between them. For one, they are all built on the notion of a changing career landscape in which the responsibility for managing a career is increasingly put on the individual as opposed to the organization. Second, the four perspectives all recognize the importance of career-related competencies up and above work competencies. Third, similar dimensions seem to be discerned in the four perspectives. However, an integrative theoretical model has not yet been developed. To fully understand the value of career competencies for young workers with lower levels of education, it is necessary to devise a model of career competencies, and a measurement instrument to assess these competencies. In this thesis, we will attempt to do so. We therefore formulated the following research question, which will be examined in Chapter 4:

Research Question 3*: Which career competencies are relevant for young employees with lower levels of education, and how can we measure these competencies?*

Our next objective is to examine whether career competencies may impact upon the wellbeing of young employees. We aim to build a bridge between our research on wellbeing of young workers (Research Question 1 and 2) and our research on their career competencies (Research Question 3).

1.5. Career Competencies and Employee Wellbeing

Career competencies may be useful in managing career transitions (Defillippi & Arthur, 1994), in achieving career success (Eby et al., 2003), and in managing work and learning competencies (Kuijpers, 2003). Moreover,

in a recent study Hall and Las Heras (2010) argued that research on career development should be combined more intensively with research on job design and organizational behavior. Specifically, the authors argued that career-related factors and work-related factors may be mutually reinforcing when examining career development and wellbeing at work. In line with their arguments, mastering career competencies may not only contribute to career development, but also to job characteristics and employee wellbeing. Developing career competencies requires motivation and proactivity (De Vos & Soens, 2008), and it may also increase goal achievement and personal development (Hall & Mirvis, 1995). Following this line of reasoning, it is likely that individuals who develop their career competencies are more motivated and better able to achieve their goals. This implies that career competencies may be related to employee wellbeing in a similar way as personal resources, which are characterized as being functional in achieving goals, and stimulating personal growth and development (Hobfoll, Johnson, Ennis, & Jackson, 2003; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Personal resources have been linked to employee wellbeing (e.g., Judge, Bono, Erez, & Locke, 2005) and work engagement (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). If career competencies indeed have a similar function as personal resources, mastering these competencies may also stimulate employee wellbeing of young employees during the early stages of their career. This leads us to formulate the following research question that we will attempt to answer in Chapter 5:

***Research Question 4**: Are career competencies a relevant concept in predicting wellbeing of young employees with lower levels of education?*

The final objective of this thesis is to develop a career development intervention for young workers. With this intervention we could provide young workers with new skills and abilities that may help them during the start of their career, thereby preventing potential negative outcomes such as underemployment and strain, while at the same time stimulating positive

outcomes such as work engagement and employability.

1.6. A Career Development Intervention for Young Employees

Various interventions have been developed and tested in Occupational Health Psychology (OHP) that focus on work, health, and careers. Most of these studies focused on preventing negative outcomes such as occupational stress (e.g., Giga, Noblet, Farragher, & Cooper, 2003; Marine, Ruotsolainen, Serra, & Verbeek, 2006), stress reducing tactics (e.g., Van der Klink, Blonk, Schene, & Van Dijk, 2001), and psychological ill-health (e.g., Michie & Williams, 2003). A common effect in these intervention studies was a decrease in negative symptoms such as burnout, depression, and occupational stress symptoms. In recent years however, an increasing trend is visible that focuses both on preventing negative outcomes and on enhancing positive outcomes (Bakker & Schaufeli, 2008; Ouweneel, 2012), and that focuses on strengths instead of weaknesses (Harter, Schmidt, & Hayes, 2002; Hodges & Clifton, 2004). The main aim of interventions in OHP and Human Resource Management (HRM) would be to enhance wellbeing and motivation in order for employees to function optimally. Because young employees face many unique challenges and transitions during the first years on the labor market, we believe it is vital to develop and test an intervention that focuses both on preventing negative outcomes and on promoting positive outcomes. This may prepare young workers for the challenges in their early career. Such an intervention would be useful both for high-risk groups (e.g., dropouts) and for non-high-risk groups because it can increase their resilience and their preparedness for entering the labor market (Vuori et al., 2011).

Individual-level Interventions. Most interventions in the field of OHP have been focused on the individual level (Sockoll, Kramer, & Bödeker, 2008). One of the reasons that underlie this trend is that individual-level interventions are an important basis for achieving *empowerment* (Spreitzer, 1995). Empowerment is based on the notion that it is important to provide individuals with resources and opportunities for development, as well as holding them responsible and accountable for the outcome of

their own actions. According to the idea of empowerment, individuals will then actively contribute to their own development (Spreitzer, 1995). Research has indeed shown that self-initiated learning and development has a greater and more lasting effect compared with externally driven changes (e.g., Judge, Locke, Durham, & Kluger, 1998; Spector, Cooper, Sanchez, O'Driscoll, & Sparks, 2002). That is, changes that require intrinsic motivation, intentional activities, and sustained effort have a more lasting effect on motivation and wellbeing than circumstantial changes (Ng, Sorensen, & Eby, 2006; Sheldon & Lyubomirsky, 2006). For these reasons, we will adopt an individual perspective for the development of our intervention.

The JOBS Methodology. A training methodology that has often been used in mental health interventions and in career development interventions is the JOBS methodology, which was originally developed at the Michigan Prevention Research Centre (MPRC) in 1982 as a preventive intervention for recently unemployed job seekers (Caplan, Vinokur, Price, & Van Ryn, 1989; Van Ryn, & Vinokur, 1992). The main focus of this methodology is on enhancing individuals' self-efficacy (Bandura, 1997) and resilience against setbacks (Meichenbaum, 1985). During training sessions, the emphasis is put on increasing the unique strengths of the participants. In addition, weaknesses of participants are dealt with in an indirect and positive way. JOBS and JOBS derived interventions have received extensive empirical support in multiple countries (Brenninkmeijer & Blonk, 2011; Vinokur, Price, & Schul, 1995; Vuori, Silvonen, Vinokur, & Price, 2002; Vuori et al., 2011). Young employees face many choices and they often do not clearly know what they want. An intervention based on the JOBS methodology would suit their needs well because it focuses on increasing their self-efficacy, which may be relatively low during the first years of their career, and on increasing their resilience against setbacks, thereby increasing their preparedness to overcome career-related obstacles.

The final objective of this thesis is to develop and empirically test a career development intervention for young employees. Using the JOBS methodology as the underlying basis, we will develop

and empirically test an intervention based on career competencies that aims to stimulate young employees' career development and wellbeing. In Chapter 6, we will elaborate on our final research question:

Research Question 5*: Can a career development intervention, which focuses on mastering career competencies, enhance career development and wellbeing of young employees?*

1.7. Outline of this Thesis

Chapter 2 and 3 aim to explore relevant factors that influence wellbeing, health, and performance of young employees. Using the JD-R model, we investigate the role of job characteristics in determining motivation and wellbeing, health, and performance of young employees. Moreover, we examine potential differences between educational groups. We investigate these issues in large cross-sectional (Chapter 2) and longitudinal (Chapter 3) samples of young employees that are representative of the Dutch workforce.

In *Chapter 4* we aim to integrate the available literature on career competencies, in order to build an integrative framework. We use available literature, qualitative methods, and quantitative methods to devise a model of career competencies that specifically focuses on young workers. Based on our framework, we will develop a measurement instrument that can be used to assess career competencies.

The main objective of *Chapter 5* is to examine the role of career competencies in fostering wellbeing of young employees. Using the JD-R model, we investigate the potential role of career competencies in motivational and health impairment processes. We hypothesize that career competencies may function in a similar way as personal resources in the JD-R model.

Chapter 6 investigates the effectiveness of a career development intervention that aims to enhance career development and employee wellbeing through the mastery of career competencies. We empirically test this intervention in a large educational institution and a Dutch

multinational organization with a quasi-randomized control trial.

In the final chapter, *Chapter 7*, we summarize and draw conclusions from our results. In addition, we discuss the main strengths and limitations of this thesis, and we offer suggestions for future research. We conclude this thesis with a reflection on the theoretical and practical implications of this thesis.

References

Anakwe, U. P., Hall, J. C., & Schor, S. M. (2000). Knowledge-related skills and effective career management. *International Journal of Manpower, 21,* 566-579.

Arnold, J., & Cohen, L. (2008). The psychology of careers in industrial and organizational settings: A critical but appreciative analysis. In G. P. Hodgkinson & J. K. Ford (Eds.), *International Review of Industrial and Organizational Psychology* (pp. 1-44). Chichester: Wiley Ltd.

Arthur, M. B. (1994). The boundaryless career: A new perspective for organizational inquiry. *Journal of Organizational Behavior, 15,* 295-306.

Arthur, M. B., Khapova, S. N., & Wilderom, C. P. M. (2005). Career success in a boundaryless career world. *Journal of Organizational Behavior, 26*, 177-202.

Arthur, M. B., & Rousseau, D. M. (1996). *The Boundaryless Career: A New Employment Principle for a New Organizational Era.* Oxford: University Press.

Bakker, A.B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology, 22*, 309-328.

Bakker, A., Demerouti, E., & Schaufeli, W. (2003). Dual processes at work in a call centre: An application of the Job Demands-Resources model. *European Journal of Work and Organizational Psychology, 12*, 393-417.

Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology, 99*, 274-284.

Bakker, A, B., & Schaufeli, W. B. (2008). Positive organizational behaviour: Engaged employees in flourishing organizations. *Journal of Organizational Behavior, 29*, 147-154.

Brenninkmeijer, V., & Blonk, R. W. B. (2011). The effectiveness of the JOBS program among the long-term unemployed: A randomized experiment in the Netherlands. *Health Promotion International, 27*, 220-229.

Briscoe, J. P., & Hall, D. T. (1999). Grooming and Picking Leaders Using Competency Frameworks: Do They Work? An Alternative Approach and New Guidelines for Practice. *Organizational Dynamics, 28,* 37-52.

Briscoe, J. P., & Hall, D. T. (2006). The interplay of boundaryless and protean careers: Combinations and implications. *Journal of Vocational Behavior, 69*, 4-18.

Briscoe, J. P., Hall, D. T., & DeMuth, R. L. F. (2006). Protean and boundaryless careers: An empirical exploration. *Journal of Vocational Behavior, 69*, 30-47.

Caplan, R. D., Vinokur, A. D., Price, R. H., & Van Ryn, M. (1989). Job-seeking, reemployment and mental health: A randomized field experiment in coping with job loss. *Journal of Applied Psychology, 74*, 759-769.

Centraal Planbureau (2002). *De pijlers onder de kenniseconomie. Opties voor institutionele vernieuwing.* [The trademarks of the knowledge economy. Options for institutional innovation.] 's Gravenhage: Centraal Planbureau.

Colakoglu, S. N. (2011). The impact of career boundarylessness on subjective career success: The role of career competencies, career autonomy, and career insecurity. *Journal of Vocational Behavior, 79*, 47-59.

Cunningham, J. B., & Sweet, B. (2009). Individual competencies that older workers use in successfully adapting during their career. *International Journal of Human Resource Development and Management, 9*, 198-222.

De Janasz, S. C., & Sullivan, S. E. (2004). Multiple mentoring in academe: Developing the professional network. *Journal of Vocational Behavior, 64,* 263-283.

De Vos, A., De Clippeleer, I., & DeWilde, T. (2009). Proactive career behaviors and career success during the early career. *Journal of Occupational and Organizational Psychology, 82,* 761-777.

De Vos, A., Dewettinck, K., & Buyens, D. (2009). The professional career on the right track: A study on the interaction between career self-management and organizational career management in explaining employee outcomes. *European Journal of Work and Organizational Psychology, 18,* 55-80.

De Vos, A., & Soens, N. (2008). Protean attitude and career success: The mediating role of self-management. *Journal of Vocational Behavior, 73,* 449-456.

Defillippi, R. J., & Arthur, M. B. (1994). The Boundaryless Career: A Competency-Based Perspective. *Journal of Organizational Behavior, 15,* 307-324.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W.B. (2001). The Job Demands-Resources model of burnout, *Journal of Applied Psychology, 85*, 499-512.

Diener, E., & Seligman, M. E. P. (2004). Beyond Money. *Psychological Science in the Public Interest, 5*, 1-31.

Direnzo, M. S., & Greenhaus, J. H. (2011). Job search and voluntary turnover in a boundaryless world: A control theory perspective. *Academy of Management Review, 36*, 567-589.

Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of Success in the Era of the Boundaryless Career. *Journal of Organizational Behavior, 24,* 689-708.

Elfering, A., Semmer, N. K., Tschan, F., Kälin, W., & Bucher, A. (2007). First years in job: A three-wave analysis of work experiences. *Journal of Vocational Behavior, 70*, 97-115.

European Commission (2012). *Employment and Social Developments in Europe 2011*. Luxembourg: Publications Office of the European Union.

Forret, M. L., & Dougherty, T. W. (2004). Networking behaviors and career outcomes: Differences for men and women? *Journal of Organizational Behavior, 25,* 419-437.

Giga, S. I., Noblet, A. J., Faragher, B., & Cooper, C. L. (2003). The UK Perspective: A Review of Research on Organisational Stress Management Interventions. *Australian Psychologist, 38*, 158-164.

Goodwin, J., & O'Connor, H. (2007). Continuity and change in the experiences of transition from school to work. *International Journal of Lifelong Education, 26*, 555-72.

Gould, S., & Penley, L. E. (1984). Career strategies and salary progression: A study of their relationships in a municipal bureaucracy. *Organizational Behavior and Human Performance*, *34*, 244-265.

Hakanen, J. J., Schaufeli, W. B., and Ahola, K. (2008). The Job Demands-Resources model: a three-year cross-lagged study of burnout, depression, commitment, and work engagement. *Work & Stress, 22*, 224-241.

Halfpap, K. (2000). Curriculum development in the dual vocational training system in Germany. *European Journal of Vocational Training, 21*, 32-40.

Hall, D. T. (1996). Protean Careers of the 21st Century. *Academy of Management Executive, 10,* 8-15.

Hall, D. T., & Las Heras, M. (2010). Reintegrating job design and career theory: Creating not just good jobs but smart jobs. *Journal of Organizational Behavior, 31*, 448-462.

Hall, D. T., & Mirvis, P. H. (1995). The New Career Contract: Developing the Whole Person at Midlife and Beyond. *Journal of Vocational Behavior, 47,* 269-289.

Hall, D. T., & Moss, J. E. (1998). The New Protean Career Contract: Helping Organizations and Employees Adapt. *Organizational Dynamics, 26,* 22-37.

Harter, J. K., Schmidt, F. L., & Hayes, T. L. (2002). Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis. *Journal of Applied Psychology, 87*, 268-279.

Hiteq (2009). *Kenmerkend MBO.* [Trademark intermediate vocational education.] Hilversum: Hiteq.

Hobfoll, S. E., Johnson, R. J., Ennis, N., & Jackson, A. P. (2003). Resource loss, resource gain, and emotional outcomes among inner city women. *Journal of Personality and Social Psychology, 84*, 632-643.

Hodges, T.D., and Clifton, D.O. (2004). Strength based development in practice, In P.A. Linley and S. Joseph (Eds.), *International handbook of positive psychology in practice: from research to application* (pp. 256-268). New Yersey: Wiley and Sons.

Intermediair PW (2012). *Studeer en wordt opgeleid tot… werkloze*. [Study and be educated as… unemployed]. Retrieved from http://www.intermediairpw.nl/artikel/vakinformatie/365140/studeer-en-wordt-opgeleid-tot-werkloze.html

Jones, C., & Lichtenstein, B. M. (2000). The ‚Architecture' of Careers: How Career Competencies Reveal Firm Dominant Logic in Professional Services. In M. A. Peiperl, M. B. Arthur, R. Goffee, & T. Morris (Eds.), *Career Frontiers: New Conceptions of Working Lives* (pp. 153-176). Oxford: University Press.

Judge, T. A., Bono, J. E., Erez, A., & Locke, E. A. (2005). Core self-evaluations and job and life satisfaction: The role of self-concordance and goal attainment. *Journal of Applied Psychology, 90*, 257-268.

Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, *83*, 17-34.

King, Z. (2004). Career self-management: Its nature, causes and consequences. *Journal of Vocational Behavior, 65,* 112-133.

Koivisto, P., Vuori, J., & Nykiri, E. (2007). Effects of the school-to-work group method among young people. *Journal of Vocational Behavior, 70*, 277-296.

Kossek, E. E., Roberts, K., Fisher, S., & Demarr, B. (1998). Career self-management: A quasi-experimental assessment of the effects of a training intervention. *Personnel Psychology, 51,* 935-962.

Kuijpers, M. A. C. T. (2003). *Loopbaanontwikkeling.* Enschede: Twente University Press.

Kuijpers, M. A. C. T., & Meijers, F. (2012). Learning for now or later? Career competencies among students in higher vocational education in The Netherlands. *Studies in Higher Education, 37*, 449-467.

Kuijpers, M. A. C. T., Meijers, F., & Gundy, C. (2011). The relationship between learning environment and career competencies of students in vocational education. *Journal of Vocational Behavior, 78*, 21-30.

Kuijpers, M. A. C. T., & Scheerens, J. (2006). Career Competencies for the Modern Career. *Journal of Career Development, 32,* 303-319.

Kuijpers, M. A. C. T., Schyns, B., & Scheerens, J. (2006). Career Competencies for Career Success. *The Career Development Quarterly, 55,* 168-178.

Marine, A., Ruotsolainen, J. H., Serra, C., & Verbeek, J. H. (2006). Preventing occupational stress in healthcare workers. *Cochrane Database of Systematic Reviews 2006, 4,* Art. No. CD002892.

Meichenbaum, D. (1985). *Stress inoculation training: A clinical guidebook.* Elmsford, NY: Pergamon Press.

Meijers, F. (2004). *Wat leer je in de praktijk? Een onderzoek naar de mogelijkheden tot beroepsvorming in het kader van de beroepspraktijkvorming.* [What do you learn in practice? A study on the possibilities of professional training as part of vocational training programs.] Zoetermeer: Colo.

Michie, S., & Williams, S. (2003). Reducing work related psychological ill health and sickness absence: a systematic literature review. *Occupational and Environmental Medicine, 60,* 3-9.

Mirvis, P. H., & Hall, D. T. (1994). Psychological Success and the Boundaryless Career. *Journal of Organizational Behavior, 15,* 365-380. Ng, T. W. H., Sorensen, K. L., & Eby, L. T. (2006). Locus of control at work: A meta-analysis. *Journal of Organizational Behavior*, *27*, 1057-1087.

Nieuwenhuis, L., Coenen, J., Fouarge, D., Harms, T., & Oosterling, M. (2012). *De creatie van publieke waarde in het middelbaar beroepsonderwijs.* [The creation of public value in intermediate vocational education.] Retrieved from http://www.nwo.nl/files.nsf/pages/NWOP_8YRECJ/$file/PubliekewaardevanhetMBO.pdf

Noe, R. A. (1996). Is career management related to employee development and performance? *Journal of Organizational Behavior, 17,* 119-133.

Ott, B. (1999). Structural characteristics and target categories of holistic vocational training. *European Journal of Vocational Training, 17*, 52-61.

Ouweneel, E. (2012). *Building towards engagement: An individual perspective*. Enschede: Ipskamp Drukkers B.V.

Raad voor Werk en Inkomen (2009). *Arbeidsmarktanalyse 2009.* [Analysis of the labor market 2009]. Raad voor Werk en Inkomen.

Raad voor Werk en Inkomen (2010), *Arbeidsmarktanalyse 2010.* [Analysis of the labor market 2010.]. Raad voor Werk en Inkomen.

Raad voor Werk en Inkomen (2011), *Arbeidsmarktanalyse 2011* [Analysis of the labor market 2011]. Raad voor Werk en Inkomen.

Ryan, P. (2001). The school-to-work transition: a cross-national perspective. *Journal of Economic Literature, 39*, 34-92.

Savickas, M. L. (1998). The transition from school to work: a developmental perspective. *Career Development Quarterly, 47*, 326-336.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement. *Journal of Organizational Behavior, 25*, 293-325.

Segers, J., & Inceoglu, I. (2012). Exploring supportive and developmental career management through business strategies and coaching. *Human Resource Management, 51*, 99–120.

Sheldon, K. M., & Lyubomirsky, S. (2006). Achieving sustainable gains in happiness: Change your actions, not your circumstances. *Journal of Happiness Studies, 7*, 55-86.

Smulders, P. G. W. (2005). *Jongere en oudere werknemers: hun werk, werktijden, ongevallen en verzuim*. [Younger and older employees: their work, work schedules, accidents, and absence]. TNO, Hoofddorp.

Sockoll, I., Kramer, I., & Bödeker, W. (2008). *Effectiveness and economic benefits of workplace health promotion and prevention. Summary of scientific evidence 2000-2006* (IGA Report No. 13e). Retrieved from http://www.iga-info.de/fileadmin/Veroeffentlichungen/iga-Reporte_Projektberichte/iga-Report_13e_effectiveness_workplace_prevention.pdf

Spector, P. E., Cooper, C .L., Sanchez, J. I., O'Driscoll, M., & Sparks, K. (2002). Locus of control and well-being at work: How generalizable are western findings? *Academy of Management Journal*, *45*, 453-466.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: dimensions, measurements, and validation. *Academy of Management Journal*, *38*, 1442-1465.

Sturges, J., Guest, D., Conway, N., & Mackenzie Davey, K. (2002). A longitudinal study of the relationship between career management and organizational commitment among graduates in the first ten years at work. *Journal of Organizational Behavior, 23,* 731-748.

Sturges, J., Simpson, R., & Altman, Y. (2003). Capitalising on learning: an exploration of the MBA as a vehicle for developing career competencies. *International Journal of Training and Development, 7*, 53–66.

Van der Heijden, B.I.J.M., De Lange, A.H., Demerouti, E., & Van der Heijde, C.M. (2009). Age effects on the employability-career success relationship. *Journal of Vocational Behavior, 74*, 156-164.

Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2006). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management, 45,* 449-476.

Van der Klink, J. J., Blonk, R. W., Schene, A. H., & Van Dijk, F. J. (2001). The Benefits of Interventions for Work-Related Stress. *American Journal of Public Health, 91*, 270-276.

Van Ryn, M., & Vinokur, A.D. (1992). How did it work? An examination of the mechanisms through which an intervention for the unemployed promoted job-search behaviour. *American Journal of Community Psychology, 20*, 577-597.

Vinokur, A. D., Price, R. H., & Schul, Y. (1995). Impact of the JOBS intervention on unemployed workers varying in risk for depression. *American Journal of Community Psychology, 23,* 39-74.

Vuori, J., Silvonen, J., Vinokur, A., & Price, R. (2002). The Työhön Job Search Program in Finland: Benefits for the unemployed with risk of depression or discouragement. *Journal of Occupational Health Psychology, 7*, 5-19.

Vuori, J., Toppinen-Tanner, S., & Mutanen, P. (2011). Effects of resource-building group intervention on career management and mental health in work organizations: randomized controlled field trial. *Journal of Applied Psychology, 97,* 273-286.

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*, 121-141.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior, 74*, 235-244.

CHAPTER 2

FRESH AND HEALTHY? WELLBEING, HEALTH, AND PERFORMANCE OF YOUNG EMPLOYEES WITH INTERMEDIATE EDUCATION

Appeared as:

Akkermans, J., Brenninkmeijer, V., Blonk, R. W. B., & Koppes, L. L. J. (2009). Fresh and healthy? Well-being, health and performance of young employees with intermediate education. *Career Development International*, *14*, 671-699.

Chapter 2

2.1. Introduction

During the last decades, the labor markets have changed into dynamic, constantly changing environments in which flexibility with regard to work and career is essential. As a result, individuals nowadays have to actively seek opportunities and take initiatives to develop their own careers (Arthur, Khapova, & Wilderom, 2005; Clarke, 2009; Eby, Butts, & Lockwood, 2003). This may be particularly difficult for young employees, as they have just finished their education and they have to make many important career decisions during the first few years of their employment that are likely to have major consequences in their lives (Savickas, 1998). It is of critical importance to gain a better understanding of the wellbeing and performance of young employees who are starting their career. Surprisingly, a very small amount of research is available on this group. Research on career development has mainly focused on older employees (e.g. Shacklock, Brunetto, & Nelson, 2009; Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009; Van der Heijden, Schalk, & Van Veldhoven, 2008). Furthermore, the few studies that did focus on young employees were mostly aimed at higher educated employees (i.e., college level degree). Hence, it can be concluded that the large group of employees with intermediate educational level (employees that have had a total of 13 - 16 years of education) has largely been ignored so far (Raad voor Werk en Inkomen, 2009).

With the previous statements in mind, it is clear that a lack of knowledge exists with respect to the challenges and problems that young employees with intermediate educational level face while entering the labor market. Additionally, little is known about their wellbeing, health, and performance. Because this is a relatively large group on the labor market, it would be of great importance to researchers, employers, and HR managers to gain more knowledge about this group. With this knowledge, negative outcomes such as sickness absence and underemployment might be reduced. Moreover, positive outcomes such as satisfaction and motivation at work might be fostered. This study is specifically designed to gain more knowledge about these important issues. First, young employees with

intermediate educational level (18-25 years) are compared with their lower and higher educated counterparts on a number of relevant factors regarding the demands and resources in their jobs, as well as their wellbeing, health, and performance. The group with intermediate educational level consists of employees who have completed either a higher general secondary education, a pre-university education, or an intermediate vocational education. They have had a total of 13 to 16 years of total education. In contrast, a low education is considered to be 12 years of education or less, having completed no education, elementary education, or lower general secondary education. A high education is considered to be 17 years of education or more, having completed a higher vocational education or university education. Second, the determinants of wellbeing, health, and performance among young employees with intermediate education will be examined, using the Job Demands-Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) as a theoretical basis.

Wellbeing, Health, and Performance of Young Employees

The school-to-work transition can be considered a long and challenging process. Seeking a suitable job may be a stressor for young workers (Koivisto, Vuori, & Nykyri, 2007). The motivation to actively seek a job may also be reduced because young workers often face relatively low wages. This seems to be especially the case in the United States, the United Kingdom and the Netherlands, compared to countries like Germany and France (Ryan, 2001). Once they have found a job, young workers face many new challenges and tasks: they have less leisure time, more responsibilities, they have to arrange their time in a new way, and they have to be more flexible (Ryan, 2001). All these new tasks and responsibilities, as well as the socialization process in their work, can potentially lead to insecurity and stress (Goodwin & O'Connor, 2007; Koivisto et al., 2007). Furthermore, many young workers only manage to obtain temporary employment, which could potentially lead to additional uncertainty and reduced wellbeing (Ryan, 2001; Smulders, 2005). In line with these findings, it has been found that younger employees are less

engaged in their work (Schaufeli & Bakker, 2004; Smulders, 2005). To conclude, it is clear that young employees who have just entered the labor market, or will be entering the labor market, face important transitions and challenges that deserve the attention of researchers.

It might be particularly important to investigate young employees with intermediate educational level. Approximately 40% of the Dutch labor market has completed intermediate level education, thereby making this the largest educational group on the labor market in the Netherlands (Schouten, 2009; Van Eijs, 2003). Additionally, in 2006 approximately 6.5% of these employees on the Dutch labor market were unemployed, which was less than employees with low educational level, but more than employees with a high educational level (Raad voor Werk en Inkomen, 2006). Moreover, employment opportunities have decreased for young employees, especially for those who have low or intermediate education (Ryan, 2001). Sickness absence among employees with intermediate education has also been reported as relatively high, caused by factors like a high physical workload, work circumstances that are less favorable compared with higher educated employees, and fewer chances for promotions (Smulders, 2005; Van Cruchten, 1997). Also, the difference in chances on the labor market between lower and higher educated employees on the Dutch labor market seem to be increasing, in favor of the latter (Raad voor Werk en Inkomen, 2009). At the same time, both research and practice focus on the highest educated employees (i.e., high potentials) and the lowest educated employees (i.e., explicit risk groups), while the intermediate group is largely ignored (Raad voor Werk en Inkomen, 2006). Clearly, more knowledge is needed with regard to young employees with intermediate educational level.

In this study, we will examine to what extent three educational groups of young employees differ with regard to their job characteristics, wellbeing, health, and performance. Furthermore, we will examine in what ways wellbeing, health, and performance at work are determined for employees with intermediate educational level, in comparison with the other two educational groups.

Determinants of Wellbeing of Young Employees with Intermediate Educational Level

A theoretical model that is often used to predict wellbeing at work and that has received significant empirical support is the Job Demands-Resources (JD-R) Model (Demerouti et al., 2001). The basic assumption of this model is that occupation-specific risk factors at work can be classified in two general categories: *job demands* and *job resources*. The JD-R model is an overarching model that can be applied to various occupational settings, irrespective of the specific demands and resources involved in a particular job setting.

Job demands refer to those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physical and/or psychological costs (Bakker & Demerouti, 2007). Examples of job demands are a high emotional and physical workload. Job demands are not necessarily negative in themselves, but may turn into stressors when meeting these demands requires high effort from which an employee cannot adequately recover (Meijman & Mulder, 1998).

Job resources are those physical, psychological, social, or organizational aspects of the job that are either functional in achieving work goals, reducing job demands, or stimulating personal growth, learning, and development (Bakker & Demerouti, 2007). Examples of job resources are autonomy and social support. Job resources are important in their own right, but also help to deal with job demands. Furthermore, resources may be located at different levels: the organization at large (e.g., career opportunities), the interpersonal and social relations level (e.g., social support of the supervisor and/or colleagues), the organization of work (e.g., role clarity), and the task level (e.g., autonomy).

Two different psychological processes underlie the JD-R model: the *health impairment process* and the *motivational process*. In the health impairment process, job demands lead to a state of exhaustion (e.g., burnout) and subsequently to organizational outcomes, such as

health problems (Bakker & Demerouti, 2007; Demerouti et al., 2001). This means that exhaustion mediates the relationship between job demands and organizational outcomes. The health impairment process, including the mediating role of emotional exhaustion, has been demonstrated in multiple studies (e.g. Hakanen, Bakker, & Schaufeli, 2006; Lewig, Xanthopoulou, Bakker, Dollard, & Metzer, 2007). In the motivational process, job resources lead to a higher level of motivation (e.g., work engagement) and subsequently to organizational outcomes, such as higher performance (Bakker & Demerouti, 2007; Bakker & Demerouti, 2008; Schaufeli & Bakker, 2004). In this process, work engagement mediates the relationship between job resources and organizational outcomes, which has been supported by multiple studies as well (e.g. Hakanen, Schaufeli, & Ahola, 2008; Schaufeli & Bakker, 2004). In addition to these effects, it is assumed that an interaction exists between job demands and job resources. Job resources can buffer the effect of certain job demands (Johnson & Hall, 1988; Van der Doef & Maes, 1999). The assumptions of the JD-R model have gained widespread empirical support (e.g. Hakanen et al., 2006; Xanthopoulou, Bakker, Dollard, Demerouti, Schaufeli, Taris, & Schreurs, 2007).

The health impairment process and motivational process both lead to certain organizational outcomes. Important organizational outcomes that have often been the subject of studies using the JD-R model are health (problems) and performance (Bakker & Demerouti, 2007; Demerouti et al., 2001). Both general health and performance have been shown to be related to working conditions (Halbesleben & Wheeler, 2008; Schreuder, Roelen, Koopmans, & Groothoff, 2008; Williams & Anderson, 1991). Therefore, these two variables will be used in this study. General health will be measured by the subjective health experience of employees. Performance will be measured by the perceived in-role performance, which refers to the degree to which an employee fulfills the specific tasks that are part of the job (Goodman & Svyantek, 1999). A graphical representation of the research model of the current study is shown in Figure 1.

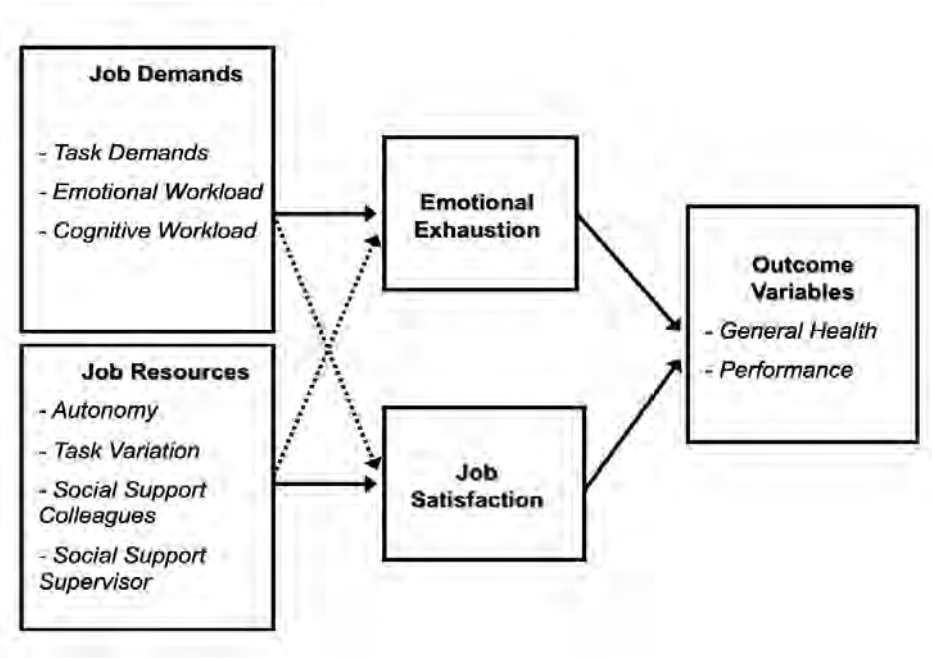

Figure 1

The Job Demands-Resources model as used in the current study.

The Health Impairment Process: Burnout and Job Demands

Burnout is considered as the central variable in the exhaustion process described by the JD-R model and is traditionally defined as a syndrome of exhaustion, cynicism towards work, and reduced personal efficacy (Maslach, Jackson, & Leiter, 1996; Schaufeli & Enzmann, 1998), which is an almost universally accepted definition (Schaufeli, Leiter, & Maslach, 2009). Emotional exhaustion is a form of strain that refers to feelings of being overextended and exhausted by the emotional demands of one's work (Demerouti et al., 2001). Emotional exhaustion is the component of burnout that is most often used as a measure of burnout (Schaufeli et al., 2009; Wright & Bonnet, 1997). Moreover, emotional exhaustion is the strongest correlate with job demands and job resources (Lee & Ashforth, 1996). Therefore, emotional exhaustion is considered as the central variable in the health impairment process in our study.

Three types of job demands are used in this study: *work pressure*, *emotional demands*, and *mental demands*. This selection is supported by previous research (e.g. Hackman & Oldham, 1980; Lee & Ashforth, 1996). The variables that are used have been used in previous studies regarding the JD-R model (e.g. Schaufeli & Bakker, 2004; Xanthopoulou et al., 2007). These demands are expected to directly influence emotional exhaustion. They are also expected to indirectly influence general health and performance via emotional exhaustion.

The Motivational Process: Job Satisfaction and Job Resources

Job satisfaction is a construct that has been used often in occupational behavior research and can be defined as the degree to which an employee appreciates his or her job (Spector, 1997). Although job satisfaction is most often used as an outcome variable, it has also been argued that it predicts performance and health (e.g., Gustainiene & Endriulaitiene, 2009). Job satisfaction is a positive measure of wellbeing and it can therefore be considered part of the motivational process assumed by the JD-R model.

Four job resources were used in this study as part of the motivational process: *autonomy*, *task variation*, *social support provided by the supervisor,* and *social support provided by colleagues*. These variables have often been used in research concerning wellbeing and the JD-R model (e.g. Bakker & Demerouti, 2007; Hackman & Oldham, 1976; Karasek, 1979; Xanthopoulou et al., 2007). These resources are expected to directly influence job satisfaction. They are also expected to indirectly influence general health and performance through job satisfaction.

In sum, the following hypotheses are formulated with regard to the determinants of wellbeing of young employees with intermediate educational level:

Hypothesis 1: *Job demands (work pressure, emotional demands, and mental demands) are positively related to emotional exhaustion*.

Hypothesis 2: *Job resources (autonomy, task variation, social support from supervisor, and social support from colleagues) are positively related to job satisfaction*.

Hypothesis 3: *Emotional exhaustion is negatively related to general health and in-role performance*.

Hypothesis 4: *Job satisfaction is positively related to general health and in-role performance*.

As mentioned above, we also expect to find evidence for a health impairment process, as described in the JD-R model. In this process, job demands lead to a state of exhaustion, which subsequently lead to reduced organizational outcomes (Bakker & Demerouti, 2007; Demerouti et al., 2001; Hakanen et al., 2006; Lewig et al., 2007). Hence, emotional exhaustion would mediate the relationship between job demands and the outcome variables.

Hypothesis 5a: *Emotional exhaustion mediates the relationship between job demands and general health*.

Hypothesis 5b: *Emotional exhaustion mediates the relationship between job demands and in-role performance*.

In a similar way, we expect to find a motivational process, in which job resources lead to an increased satisfaction with work, which subsequently leads to improved organizational outcomes (Bakker & Demerouti, 2007; Hakanen et al., 2008; Schaufeli & Bakker, 2004). In this process, job satisfaction is expected to mediate the relationship between the job resources and the outcome variables.

Hypothesis 6a: *Job satisfaction mediates the relationship between job resources and general health*.

Hypothesis 6b: *Job satisfaction mediates the relationship between job resources and in-role performance*.

Finally, additional analyses will be performed to check whether there are any cross-relationships present between job demands and job satisfaction, and between job resources and emotional exhaustion, for the current target group. In this way, we can explore whether earlier findings regarding the buffering effect of resources in the JD-R model (Johnson & Hall, 1988; Van der Doef, & Maes, 1999) can be replicated for the group of young employees with intermediate educational level.

2.2. Method

Design

Data were derived from the Netherlands Working Conditions Survey (NWCS) that was carried out in 2007 (Van den Bossche, Koppes, Granzier, De Vroome, & Smulders, 2008). The NWCS is the largest survey on working conditions available in the Netherlands, and serves as a national benchmark for sector-level monitoring. The NWCS constitutes a representative sample of the Dutch workforce in the age of 15-64 years. A total of 80,000 individuals were sampled from the Dutch working population database of Statistics Netherlands. This database included each of the almost seven million employees in The Netherlands. Sampling was random, except for a 50% over-sampling of employees aged younger than 23 years and employees with a non-western background, because the response rate in these two groups was known to be relatively low.

The individuals in the sample received a written questionnaire by mail at their home address in the first week of November 2007. The questionnaires were accompanied by an answering envelope and an information leaflet in which the purpose of the study was explained and participation was asked. After three to six weeks, reminders were sent to the majority of those who had not yet responded. The questionnaire could be filled out with a pencil, or could be filled out via internet using a personal code that was printed on

the questionnaire. As a compensation for participation, gift vouchers of 25 euro were raffled among respondents, resulting in a chance of one in ten to obtain a gift voucher. The individuals in the sample were given nine weeks to fill out and return the questionnaire.

Participants

A total of 22,759 employees participated in the NWCS 2007. In our study, we used a subsample of young employees for the ANOVAs (*n* = 2,535; 50.4% female) to compare the differences between three educational groups. This subsample consisted of the age group of 18 to 25 and contained those with low education (*n* = 460), with intermediate education (*n* = 1,477) and with high education (*n* = 598).

The subsample of employees with intermediate education (*n* = 1,477; 52% female) served as a basis in the main regression analyses in this study. A majority of the participants (65.9%) had completed an intermediate vocational education. Most of them had one paid job (89%) and a little less than half of the respondents (48.4%) had permanent employment. Trade (24.9%) and health and social work (17.5%) were the best represented branches in this sample.

Non-response analyses were performed to check whether the distribution of a number of background variables (e.g., gender and age) was equal to the total sample population from the Dutch working population database of Statistics Netherlands. A number of minor differences were found, but did not pose a problem because the weighing of these variables ensured that the data were representative for the Dutch labor market. Further details about the characteristics of the participants can be found in Table 1.

Table 1

Characteristics of employees aged 16 to 25 years with intermediate education.

Total N = 1,477		**Percentage**
Gender	Male	52.6 %
	Female	47.4 %
Education	Intermediate Vocational	65.9 %
	Higher General Secondary	34.1 %
Working Hours	<20	37.4%
	20-32	19.8%
	>32	42.8%
Occupational Area	Agriculture	2.4 %
	Manufacturing	8.2 %
	Building and construction	4.9 %
	Trade	24.9 %
	Hotels and restaurants	9.3 %
	Transport	5.4 %
	Financial Activities	2.0 %
	Business Activities	13.4 %
	Public Administration	4.3 %
	Education	2.3 %
	Health and social work	17.5 %
	Culture and other services	5.3 %
Number of Paid Jobs	1	89.0 %
	>1	11.0 %
Terms of Employment	Permanent	48.4 %
	Fixed Term	51.4 %
	Other	0.2 %

Measures

Job demands were measured on a 4-point Likert scale ranging from 1 (*never*) to 4 (*always*). *Work pressure* was assessed with four items, based on the Job Content Questionnaire (Karasek, 1985; Karasek, Brisson, Kawakami, Houtman, Bongers, & Amick, 1998). Example items for this scale were: "Do you have to work very fast?" and "Is your work hectic?" (α = .82). *Emotional demands* were measured with three items based on the Copenhagen Psychosocial Questionnaire (Kristensen & Borg, 2000). Example items were: "Is your work emotionally demanding?" and "Are you emotionally attached to your work?" (α = .78). *Mental demands* were measured with three items based on Houtman, Goudswaard, Dhondt, Van der Grinten, Hildebrand, and Kompier (1995). Example items were: "Does your work require you to think intensively" and "Does your work require you to focus a lot?" (α = .79).

Job resources were measured on a 4-point Likert scale, except for autonomy. *Autonomy* was measured with a 4-item scale based on the Job Content Questionnaire (Karasek, 1985; Karasek et al., 1998). Example items were: "Can you decide for yourself how to perform your job?" and "Can you decide the order of doing your tasks?". The items were measured on a 3-point scale ranging from 1 (*yes*, *most of the time*) to 3 (*never*), α = .74. *Task variation* was measured with three items, based on the Job Content Questionnaire (Karasek, 1985; Karasek et al., 1998). An example item of this scale was "Does your work require creativity?" (α = .77). The items were measured on a 4-point scale ranging from 1 (*never*) to 4 (*always*). *Social support by the supervisor* and *social support by colleagues* were each assessed with four items based on the Job Content Questionnaire (Karasek, 1985; Karasek et al., 1998), which were translated in Dutch by Houtman et al. (1995). Example items were: "My supervisor takes the wellbeing of the employees into account" and "My colleagues show a personal interest in me". The items were measured on 4-point scales, ranging from 1 (*completely disagree*) tot 5 (*completely agree*), α = .87 and .85, respectively.

Emotional exhaustion was measured with five items based on the Utrecht Burnout Scale (UBOS, Schaufeli & Van Dierendonck, 2000). An example item was: "I feel emotionally exhausted because of my work". The items were measured on a 7-point scale, ranging from 0 (*never*) to 6 (*every day*), α =.82.

Job satisfaction was measured with two items that were created for the NWCS. An example item was: "All in all, how satisfied are you with your work?". The items were measured on a 5-point scale, ranging from 1 (*very unsatisfied*) to 5 (*very satisfied*), α = .80.

General health (i.e., subjective health experience) was assessed with one item: "In general, how do you rate your health?". This item was derived from the Integrated System of Social Surveys (POLS, Statistics Netherlands, 2003).

Perceived performance was measured with three items that were developed for the NWCS and were inspired by the criteria of Goodman and Svyantek (1999). An example item was: "I perform well at work". The items were measured on a 5-point scale, ranging from 1 (*completely agree*) to 5 (*completely disagree*), α = .85.

Strategy of Analysis

Respondents who reported that they were not an employee, but for example worked as a freelancer or were self-employed, were excluded from the analyses, as were those with missing data on gender, age, or educational level. The responses were weighed for gender, age, professional group, ethnic origin, geographic region, and educational level, to let the sample distribution correspond to the distribution of these factors of all Dutch employees. The respondents were given a weight that either increased or decreased their value, to make sure that the data used represented the distribution in the actual labor market.

To test for differences between the three educational groups, one-way ANOVAs were performed. Post hoc tests with a Bonferroni correction (alpha = .05) were performed to see which aspects differed significantly between

the educational groups. Linear regression analyses were performed to test the hypotheses of this study and were performed on the subsample of young employees with intermediate educational level.

Mediation analyses were conducted in accordance with the approach suggested by Baron and Kenny (1986). According to Baron and Kenny (1986), a series of conditions should be met to establish mediation. First, the independent variable must affect the mediator variable. Second, the independent variable must affect the dependent variable. Third, the mediator variable must affect the dependent variable. Finally, the effect of the independent variable on the dependent variable should be smaller in the third condition than it was in the second condition. Sobel tests were used to test for the significance of possible (partial) mediation effects.

2.3. Results

Intercorrelations between variables are presented in Table 2.

Table 2

Intercorrelations of job demands, job resources, wellbeing, health and performance for young employees (aged 18-25) with intermediate education (n = 1,477).

	1	2	3	4	5	6	7	8	9	10	11
Work Pressure	-										
Emotional Demands	.38**	-									
Mental Demands	.34**	.37**	-								
Autonomy	-.09**	-.06*	.15**	-							
Task Variation	.14**	.27**	.52**	.23**	-						
Social Support Supervisor	-.22**	-.15**	.01	.11**	.20**	-					
Social Support Colleague	-.01	.02	.15**	.04	.20**	.27**	-				
Emotional Exhaustion	.33**	.32**	.14**	-.14**	-.07**	-.27**	-.17**	-			
Job Satisfaction	-.20**	-.15**	.05	.16**	.18**	.40**	.23**	-.39**	-		
General Health	-.05	-.09**	-.04	.04	.03	.10**	.11**	-.21**	.16**	-	
Performance	-.03	-.06*	-.09**	.09**	-.06**	.08**	.06**	-.20**	.11**	.13**	-

*Notes: * $p < .05$; ** $p < .01$*

Description of the Target Group

To investigate possible differences between the three educational groups, ANOVAs were performed with post-hoc comparisons (*N* = 2,535). Comparisons were made between employees with low education, intermediate education, and high education. An overview of these results is presented in Table 3.

Table 3

Differences between intermediate educated employees, lower educated employees and higher educated employees (N = *2,535*).

	Low		*Intermediate*		*High*	
	M	**SD**	**M**	**SD**	**M**	**SD**
Job Demands						
Work Pressure	2.13	0.60	**2.16**	**0.58**	2.25▲	0.54
Emotional Demands	1.42▼	0.56	**1.49**	**0.53**	1.76▲	0.60
Mental Demands	2.76	0.76	**2.74**	**0.72**	3.02▲	0.69
Job Resources						
Autonomy	2.25▼	0.49	**2.35**	**0.47**	2.47▲	0.47
Task Variation	2.55	0.82	**2.55**	**0.77**	2.86▲	0.72
Social Support Supervisor	2.95	0.72	**2.98**	**0.64**	3.06	0.61
Social Support Colleague	3.30	0.53	**3.34**	**0.50**	3.42▲	0.47
Well-being, Health, and Performance						
Emotional Exhaustion	1.85	1.10	**1.78**	**1.00**	1.86	0.95
Job Satisfaction	3.77	0.87	**3.80**	**0.74**	3.86	0.74
General Health	3.53	0.87	**3.56**	**0.85**	3.68▲	0.80
Performance	4.46	0.63	**4.42**	**0.57**	4.35	0.50

Notes: ▲ and ▼ indicate significant differences in comparison to the intermediate level measured with a post hoc Bonferroni test at $p < .05$

Job Demands. With regard to work pressure, the omnibus ANOVA was significant ($F(2) = 5.21$, $p < .01$). The post-hoc test showed that there was a significant difference between intermediate and high education, with intermediately educated employees experiencing significantly less work pressure ($M = 2.16$ vs. $M = 2.25$, $p < .05$). There was no difference between intermediate education and low education. Similar results were found for mental demands. There were overall differences between the groups ($F(2) = 19.48$, $p < .01$) and intermediately educated employees experienced significantly fewer mental demands compared with higher educated employees ($M = 2.74$ vs. $M = 3.02$, $p < .05$). Differences were also found for emotional demands ($F(2) = 48.85$, $p < .01$). Intermediately educated employees experienced more emotional demands than those with low education ($M = 1.49$ vs. $M = 1.42$, $p < .05$), but fewer than higher educated employees ($M = 1.49$ vs. $M = 1.76$, $p < .05$).

Job Resources. A significant difference was found between the three educational groups with regard to autonomy ($F(2) = 29.06$, $p < .01$). The post-hoc test showed that employees with intermediate educational level experienced more autonomy than employees with low educational level ($M = 2.35$ vs. $M = 2.25$, $p < .05$), but less autonomy than higher educated employees ($M = 2.35$ vs. $M = 2.47$, $p < .05$). Differences were also found with regard to task variation ($F(2) = 22.86$, $p < .01$). Those with intermediate education experienced significantly less task variation than employees with high education ($M = 2.55$ vs. $M = 2.86$, $p < .05$). A similar result was found for social support from colleagues ($F(2) = 7.05$, $p < .01$). Employees with intermediate education experienced significantly less social support from their colleagues than highly educated employees ($M = 3.34$ vs. $M = 3.42$, $p < .05$). The omnibus ANOVA did not reach full significance for social support from the supervisor ($F(2) = 2.88$, $p = .06$). Because the ANOVA was marginally significant, a post hoc test was still performed. The results show that there was no difference between intermediately and highly educated employees. The difference between low educational level and high educational level was significant however ($M = 2.95$ vs. $M = 3.06$, $p < .05$).

Wellbeing, Health, and Performance. With regard to general health, there were significant differences between the three educational groups ($F(2) = 4.10$, $p < .05$). Those with intermediate education reported a slightly lower degree of general health than those with high education ($M = 3.56$ vs. $M = 3.68$, $p = .051$). Finally, the omnibus ANOVA for performance was significant ($F(2) = 4.45$, $p < .05$). Young workers with intermediate education did not differ from low or high educational level. There was, however, a difference between low and high educational level ($M = 4.42$ vs. $M = 4.35$, $p < .05$): those with low educational level perceived their performance as higher. No differences were found between the three groups with regard to emotional exhaustion ($F(2) = 1.75$, $p = 0.17$) and job satisfaction ($F(2) = 1.10$, $p = 0.17$).

In sum, employees with intermediate education and with high education differed in terms of the job demands and the job resources they experienced. Those with intermediate education experienced fewer job demands, but also fewer job resources. This group also felt less healthy compared with the highly educated group. The intermediate group and the lower group were highly similar.

Determinants of Emotional Exhaustion and Job Satisfaction

The analyses regarding the determinants of wellbeing and performance were performed with a specific focus on the subgroup of young employees with intermediate education ($n = 1,477$). Comparisons with low educational level ($n = 460$) and high educational level ($n = 598$) were also made. As the current study focuses mainly on employees with intermediate education, no further attention is paid to these comparisons here. These can be obtained from the first author.

Job Demands. The regression analyses for the main effects of job demands on emotional exhaustion and job satisfaction are presented in Table 4. Work pressure and emotional demands were positively associated with emotional exhaustion ($\beta = 0.25$, $p < .01$, and $\beta = 0.24$, $p < .01$, respectively). Mental demands showed no relationship with emotional exhaustion. These results partially supported Hypothesis 1,

which stated that job demands are positively related to emotional exhaustion. The cross-relationships between the job demands and job satisfaction were also tested. Work pressure (β = -0.20, $p < .01$) and emotional demands (β = -0.13, $p < .01$) both had a negative relationship with job satisfaction. Mental demands were positively related to job satisfaction (β = 0.18, $p < .01$).

Job Resources. The regression analyses for the main effects of job resources on emotional exhaustion and job satisfaction are presented in Table 5. Autonomy and task variation were positively associated with job satisfaction (β = 0.10, $p < .01$, and β = 0.06, $p < .01$, respectively). Social support from the supervisor and from colleagues were also positively related to job satisfaction (β = 0.34, $p < .01$, and β = 0.12, $p < .01$, respectively). These results fully supported Hypothesis 2, which stated that job resources are positively related to job satisfaction. The cross-relationships between job resources and emotional exhaustion were also tested. Autonomy (β = -0.14, $p < .01$), social support of the supervisor (β = -0.22, $p < .01$) and social support of the colleagues (β = -0.08, $p < .01$) were negatively associated with emotional exhaustion. Task variation was not associated with emotional exhaustion.

Table 4

Gender and Age adjusted regression coefficients of the associations of Job Demands with Emotional Exhaustion and Job Satisfaction (n = *1,477*).

	Emotional Exhaustion		*Job Satisfaction*	
	β	**ΔR^2**	**β**	**ΔR^2**
Step 1		.01**		.00
Gender	-.00		-.03	
Age	.09**		-.05	
Step 2		.15**		.07**
Work Pressure	.25**		-.20**	
Emotional Demands	.25**		-.13**	
Mental Demands	-.05		.18**	

Note: * $p < .05$; ** $p < .01$

Table 5

Gender and Age adjusted regression coefficients of the associations of Job Resources with Emotional Exhaustion and Job Satisfaction (n = *1,477*).

	Emotional Exhaustion		*Job Satisfaction*	
	β	**ΔR²**	**β**	**ΔR²**
Step 1		.01*		.00
Gender	.02		-.03	
Age	.07*		-.05	
Step 2		.09**		.19**
Autonomy	-.14**		.11**	
Task Variation	-.01		.07*	
Social Support Supervisor	-.22**		.33**	
Social Support Colleague	-.08**		.12**	

Note: * $p < .05$; ** $p < .01$

Determinants of General Health and Performance

Job Demands. The regression analyses for the associations between job demands and the outcome variables general health and performance are presented in Table 6 (step 2). Contrary to the expectations, none of the job demands had a significant association with general health.

Job Resources. The results of the regression analyses for the associations of job resources with the outcome variables are presented in Table 7 (step 2). Social support of the supervisor and social support of the colleagues were positively related to general health (β = 0.08, $p < .05$ and β = 0.09, $p < .01$, respectively). Autonomy (β = 0.05, $p = .13$) and task variation (β = -0.02, $p = .58$) were not significantly associated with general health. Autonomy (β = 0.11, $p < .01$) and social support of the colleagues (β = 0.06, $p < .05$) were positively related to performance.

Contrary to the expectations, task variation was negatively related to performance (β = -0.12, $p < .01$). Social support of the supervisor was

positively related to performance, as expected, but this relationship was only marginally significant (β = 0.05, *p* = .09).

Testing the Health Impairment Process

Regression analyses were performed to check the associations of emotional exhaustion with general health and performance. Emotional exhaustion had a significant negative relationship with general health (β = -0.21, *p* < .01) and performance (β = -0.20, *p* < .01), thereby fully supporting Hypothesis 3.

As stated in hypothesis 5a and 5b, we expected that emotional exhaustion would mediate the relationship between job demands and the outcome variables. As presented in Table 6 (step 3), emotional exhaustion was added in the third step of the regression analyses and showed a significant negative relationship with general health (β = -0.21, *p* < .01). However, mediation by emotional exhaustion was not further tested because none of the job demands showed a significant relationship with general health. Therefore, Hypothesis 5a was not supported by these results.

Emotional exhaustion also showed a negative relationship with performance (β = -0.22, *p* < .01). However, as the associations of the job demands did not decrease with the addition of emotional exhaustion, we concluded that emotional exhaustion did not mediate the relationship between job demands and performance. These results did not support Hypothesis 5b.

Testing the Motivational Process

Regression analyses were performed to check the associations of job satisfaction with the outcome variables (Table 7). Job satisfaction had a significant positive relationship with general health (β = 0.16, *p* < .01) and performance (β = 0.11, *p* < .01). The results fully supported Hypothesis 4.

As stated in Hypothesis 6a and 6b, we expected that job satisfaction would mediate the relationship between job resources and the outcome variables. As can be seen in Table 7 (step 3), job satisfaction had a positive association with general health (β = 0.12, *p* < .01). Social support of the supervisor did not have a significant association

anymore in this third step (β = 0.04, p = .25). Social support of the colleagues was still significant, but the association was smaller (β = 0.08, p < .05). Sobel tests were performed to check for statistical significance. The indirect associations of social support by the supervisor and social support by colleagues were both significant (Sobel statistic $t = 2.84$, $p < .01$,and $t = 3.07$, $p < .01$, respectively). We concluded that job satisfaction fully mediated the relationship between social support of the supervisor and general health, and partially mediated the relationship between social support of colleagues and general health. These results partially supported Hypothesis 6a.

Table 7 (step 3) further shows that job satisfaction was also positively related to performance (β = 0.08, $p < .05$). Task variation still had a significant and negative association with performance (β = -0.12, $p < .01$). The association of autonomy was still significant as well, but it was smaller (β = 0.10, $p < .01$). Social support from colleagues was reduced to a marginally significant association in this step (β = 0.05, $p = .09$). Sobel tests were performed to check for mediation. The indirect association of autonomy was significant, but the indirect association of social support from colleagues only reached marginal significance (Sobel statistic $t = 2.39$, $p < .05$,and $t = 1.76$, $p = .08$, respectively). We concluded that job satisfaction partially mediated the relationship between autonomy and performance, but it did not mediate the relationship between social support of the colleagues and performance. These results offer partial support for Hypothesis 6b.

Table 6

Gender and Age adjusted regression coefficients of the associations of Job Demands and Emotional Exhaustion with General Health and Performance (n = *1,477*).

	General Health		*Performance*	
	β	**ΔR²**	**β**	**ΔR²**
Step 1		.02**		.00
Gender	-.13**		.03	
Age	-.07**		.01	
Step 2		.00		.01*
Work Pressure	-.02		.02	
Emotional Demands	-.04		-.05	
Mental Demands	-.02		-.07*	
Step 3		.03**		.04**
Work Pressure	.03		.07*	
Emotional Demands	.01		.01	
Mental Demands	-.03		-.08**	
Emotional Exhaustion	-.21**		-.22**	

Note: * $p < .05$; ** $p < .01$

Table 7

Gender and Age adjusted regression coefficients of the associations of Job Resources and Job Satisfaction with General Health and Performance (n = *1,477*).

	General Health		*Performance*	
	β	**ΔR²**	**β**	**ΔR²**
Step 1		.02**		.00
Gender	-.11**		.03	
Age	-.06*		-.01	
Step 2		.02**		.03**
Autonomy	.05		.11**	
Task Variation	-.02		-.12**	
Social Support Supervisor	.08*		.05	
Social Support Colleague	.09**		.06*	
Step 3		.01**		.01**
Autonomy	.03		.10**	
Task Variation	-.03		-.12**	
Social Support Supervisor	.04		.03	
Social Support Colleague	.08*		.05	
Job Satisfaction	.12**		.08*	

Note: * $p < .05$; ** $p < .01$

Additional Mediation Analyses

Additional regression analyses were performed to check whether mediation was present with regard to the cross-relationships (i.e., job demands with job satisfaction; job resources with emotional exhaustion). Social support provided by the supervisor and by the colleagues both had a direct association with general health (β = .08, $p < .05$ and β = .09, $p < .01$, respectively). Furthermore, the indirect associations of social support by the supervisor and social support by colleagues (via emotional exhaustion) with general health were both significant (Sobel statistic $t = 3.01$, $p < .01$, and $t = 2.99$, $p < .01$, respectively). We concluded

that emotional exhaustion fully mediated the relationship between social support of the supervisor and general health, and that it partially mediated the relationship between social support from colleagues and general health.

Autonomy and social support provided by colleagues were both significantly associated with performance (β = .11, $p < .01$, and β = .06, $p < .05$, respectively). The indirect associations of autonomy and social support from colleagues (via emotional exhaustion) with performance were also significant (Sobel statistic $t = 2.99$, $p < .01$, and $t = 2.09$, $p < .05$, respectively). We concluded that emotional exhaustion partially mediated the relationship between autonomy and performance, and that it fully mediated the relationship between social support of the colleagues and performance.

No indirect cross-relationships were found for job demands, implying that job satisfaction did not mediate the relationship between job demands and the outcome variables.

2.4. Discussion

Little is known about the many challenges and changes that young employees with intermediate educational level face when entering the labor market, and what kind of effects these have on their wellbeing, health, and performance. Therefore, this study examined the wellbeing, health and performance of young employees (18 – 25 years) with intermediate education. First, as an exploration, young workers with intermediate education (13-16 years of total education) were compared with lower educated (12 years or less of total education) and higher educated (17 years or more of total education) employees on a number of factors related to demands, resources, wellbeing, health, and performance at work. Second, determinants of wellbeing were examined among young employees with intermediate education. We expected that the basic assumptions of the Job Demands-Resources (JD-R) model (Demerouti et al., 2001) would be confirmed for this group.

The main conclusions of this study are that while young employees with intermediate education experience fewer job resources compared with their higher educated counterparts, these resources are important

determinants of their wellbeing at work, both via a health impairment and a motivational process.

Differences between Educational Levels

The results indicated that young workers with low and intermediate education are highly similar. However, the differences between young employees with intermediate education and those with high education were more prominent. The two groups differed on all of the job demands, with the former experiencing fewer job demands. The groups also differed on most of the job resources, whereby employees with intermediate education experienced fewer job resources. The only resource on which the groups did not differ, was social support provided by the supervisor. Both groups did not differ with regard to emotional exhaustion, job satisfaction, and performance. Employees with intermediate education did experience a somewhat poorer health compared with the higher educated employees.

Taken together, these results give a comprehensive overview of the similarities and differences between the three educational groups of young employees. The main conclusion is that young employees with low and intermediate education experience similar working conditions with respect to job demands, job resources, wellbeing, health and performance. Compared with their higher educated colleagues however, they generally experience less favorable working conditions.

Determinants of Emotional Exhaustion and Job Satisfaction

In line with the expectations, work pressure and emotional demands were associated with emotional exhaustion among young employees with intermediate education. Employees experiencing a higher level of work pressure and emotional demands were more likely to be emotionally exhausted. These findings are in line with the assumption that job demands lead to emotional exhaustion (Demerouti et al., 2001). Mental demands, however, were not related to emotional exhaustion. Surprisingly, mental demands did have a significant and positive relationship with job satisfaction.

This indicates that young employees with intermediate education are more satisfied about their jobs if their work is mentally challenging. This finding is in contrast with earlier findings regarding the health impairment and motivational process assumed by the JD-R model (Bakker & Demerouti, 2007; Demerouti et al., 2001). A possible explanation could be that high mental demands are an indication of the opportunity to learn and develop at work for these young workers. As such, mental demands may be perceived as a challenge rather than a stressor.

As expected, all of the job resources were positively related to job satisfaction. Young employees with intermediate education were more satisfied with their jobs when they experienced more autonomy, more variation in their tasks, and more social support provided by the supervisor and colleagues. These findings support the assumptions of the motivational process of the JD-R model (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004).

Determinants of Health and Performance

Job demands generally appeared to be hardly associated with general health and performance. We assume that this might reflect a qualitatively different process for young employees with intermediate education. Apparently, job demands are of relatively small importance with regard to health and performance of young employees with intermediate education. It should be noted that this group experienced fewer job demands compared with highly educated employees. This may reflect a relatively high resistance to job demands for young employees, which indicates that these young workers are able to cope with demanding work conditions.

An important finding was that task variation had a negative relationship with performance. This means that the more variation a job requires and the more creativity is necessary to perform a job, the worse individuals perform. Because task variation was framed as a job resource in this study, this was an unexpected finding. Apparently, for young employees with intermediate education, too much variation and creativity in their

jobs may have a counterproductive effect. These young employees already face many new tasks and responsibilities and may therefore be negatively affected by additional variation in their jobs. This supports the statements of Goodwin and O'Connor (2007), who claim that young employees may be overwhelmed by the large amount of new tasks and responsibilities. Task variation then, may be unsuitable to use as a job resource for young employees with intermediate education, and could even function as a job demand.

Another finding was that, overall, young employees with intermediate education value the social support provided by their colleagues more than the social support provided by the supervisor. Social support by the colleagues was more prominently related to the subjective health experience and to the in-role performance. This finding is interesting, because it is usually found that the supervisor has a stronger impact on various outcome variables (e.g. Ouweneel, Taris, Van Zolingen, & Schreurs, 2009; Tannenbaum, 1997). This is a finding that may characterize a unique aspect of a young target group. Because our target group consists, at least partially, of adolescent employees, a parallel might be found with research on the influence of peers on adolescents. Research has indicated that adolescents are particularly susceptible for peer influence (Maxwell, 2002). This can occur both in a negative way (e.g., peers may sometimes increase risk behavior) and a positive way (e.g., peers can act as a buffer against negative outside influences). A similar process may occur on the work floor, with the young employees being more receptive to support from their colleagues, compared with support from their supervisor. This issue should be taken into account in future research.

The Health Impairment and Motivational Process

Emotional exhaustion was negatively related to health and performance of young employees with intermediate education. Employees who reported a higher level of emotional exhaustion, felt less healthy and perceived their performance as worse. These findings are in line with earlier

studies (Bakker & Demerouti, 2007; Demerouti et al., 2001). Contrary to the expectations, however, emotional exhaustion did not mediate the relationship between job demands and general health, nor did it mediate the relationship between job demands and performance. None of the job demands were related to general health, implying that emotional exhaustion could not mediate these non-existing relationships. In the case of performance, only the mental demands showed a significant association, but this did not decrease with the addition of emotional exhaustion. These are surprising findings that contradict the basic assumptions of the JD-R model (Demerouti et al., 2001).

Job satisfaction was related to health and to performance of young employees with intermediate education. Employees that were more satisfied with their jobs felt healthier and perceived their performance as better. These findings are in line with earlier findings regarding job satisfaction (Halbesleben & Wheeler, 2008; Schreuder et al., 2008; Williams & Anderson, 1991), and the motivational process described in the JD-R model (Schaufeli & Bakker, 2004). In line with our expectations, job satisfaction mediated the relationship between social support and general health. A higher level of perceived support provided by the supervisor was associated with a higher level of job satisfaction, and subsequently with a higher level of perceived health. The same was found for social support from colleagues. However, the association of social support from colleagues was only partially mediated: it also had a unique association with general health. This may again illustrate the relative importance of peers for young workers. Job satisfaction did not mediate the associations of autonomy and task variation with general health. These results partially confirm the assumptions regarding the motivational process of the JD-R model (Schaufeli & Bakker, 2004). It should be noted however, that mixed results have been found before: not all of the job resources were consistently mediated in previous studies (e.g. Hakanen et al., 2008; Mauno, Kinnunen, & Ruokolainen., 2007).

Job satisfaction was shown to mediate the relationship between autonomy and performance. This means that a higher level of perceived

autonomy was associated with higher levels of job satisfaction, which subsequently affected performance in a positive way. Furthermore, an indication was found that job satisfaction mediates the relationship between social support from colleagues and performance, but this mediation was only marginally significant. No mediation was found for task variation and social support from the supervisor. Again, these results partially confirm the assumptions regarding the motivational process of the JD-R model (Bakker & Demerouti, 2007; Schaufeli & Bakker, 2004). The results also support the adequacy of using job satisfaction as the central variable in the motivational process, because it mediated multiple relationships between job resources and our outcome variables.

Cross-Relationships

Although job resources played an important role in the motivational process among young employees with intermediate education, the job resources also proved to be relevant for the health impairment process. A higher level of social support (both by the supervisor and the colleagues) was related to a lower level of emotional exhaustion, which was subsequently associated with a higher level of health. In addition, a higher level of autonomy was related to a lower level of emotional exhaustion, which was subsequently associated with a higher level of performance. It seems that job resources have a buffering effect on the health impairment process, thereby supporting earlier findings in this area regarding the buffer hypothesis (Bakker & Demerouti, 2007). It should be noted, however, that the job demands in themselves had little effect on health and performance in the first place. Hence, job resources, compared with job demands, may be more important determinants of wellbeing, health, and performance of young employees with intermediate education.

Importance of Investigating Separate Groups

The determinants of wellbeing, health, and performance were also examined for employees with low and with high levels of education. Because this study

focused mainly on young workers with intermediate education, we did not elaborate on the other two groups here. However, it seems clear that the determinants differ in various ways between the three educational groups, especially between low and intermediate educational level on the one hand, and high educational level on the other hand. These differences illustrate the importance of distinguishing between educational levels, because the wellbeing, health, and performance of each educational group is determined by distinct processes. It also underlines the uniqueness of young employees with intermediate education and it underlines the value of focusing on this often neglected group.

Limitations and Suggestions for Future Research

Despite the large sample size and nationally representative nature of the sample, a limitation of this study was its cross-sectional nature. Cross-sectional designs only show a measure of one specific point in time and are therefore not very well suited to test for causal relationships and mediation effects (Taris & Kompier, 2006). Therefore, longitudinal data are needed to further examine the findings of this study. Follow-up assessments of the sample used for this manuscript will be available in the near future (Netherlands Working Conditions Cohort Study (NWCCS)) and longitudinal analyses will be performed to verify the present findings.

A second limitation was the use of regression analyses to test the assumptions of the JD-R model, especially the mediation effects. Structural equation modeling should be more suitable for this purpose and has often been used in other in JD-R related studies (e.g., Xanthopoulou et al., 2007). This was not done in the current study because the variables in the dataset were weighed to represent the Dutch labor market and structural equation modeling requires the user to undo the weights. The weights were especially important for the comparisons between the educational groups and were therefore sustained to be able to make a representative comparison with the entire Dutch labor market. In the follow-up study, using the NWCCS data, the central aim will be the testing of the theoretical model, making

the weights far less important. Therefore, structural equation modeling will be used in the follow-up study to further verify the assumptions of the JD-R model for our target group of young employees.

Another possible limitation was the use of job satisfaction as the central mediator variable in the JD-R model. Although the results were in line with our expectations, it is more common to use work engagement as the central variable of the motivational process (Bakker & Demerouti, 2008; Schaufeli & Bakker, 2004). Work engagement is assumed to be the positive counterpart of burnout and can be defined as a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli, Salanova, González-Romá, & Bakker, 2002). which is related to performance in a positive way (Bakker, Van Emmerik, & Van Riet, 2008). Work engagement is a more active motivational aspect of wellbeing and might be better suited as the central variable of the motivational process.

Self-report measures were used in this study to measure health and performance. These measures are valuable in their own right, but have an intrinsic subjective aspect. Therefore, it would be interesting to combine these with more objective measures of health and performance. For instance, in some professions objective sales performances could be used as an objective measure for performance (Bakker et al., 2008b), whereas medical databases could be used as indicators of more objective health criteria.

The amount of explained variance in the current study seemed to be modest for a number of variables. A possible explanation is that a limited number of variables was used in each regression analysis, most notably that the job demands and the job resources were analyzed separately. Moreover, the job demands and job resources that were included in this study are not the only possible work characteristics to be used in JD-R related research. Other demands (e.g., physical demands, conflict at work) and resources (e.g., opportunities for development, feedback) have been studied in previous research and might add to the explained variance in this study.

Future studies should explore the influence of other job demands and job resources as well, to replicate and expand our findings.

Finally, this study made use of the Netherlands Working Conditions Survey 2007, which gives an overview of the working conditions in the Dutch labor market. This could possibly pose generalization problems to the working conditions of the labor markets in other countries. Therefore, generalizations of the current findings to employees outside of the Dutch labor market should be made with caution.

Practical Implications

Employers and HR managers should be aware that job resources are of great importance to young employees with intermediate education. It appears that this group experiences fewer resources compared with highly educated employees, but at the same time these resources are important predictors for their wellbeing, health, and performance. The balance between demands and resources at work should be monitored closely, whereby it is important that sufficient resources are provided to them, such as autonomy at work and social support.

This study showed that the support from colleagues may be especially important for young employees with intermediate education. Therefore, it is important for employers and HR managers that attempts are made to optimize the social ties between colleagues, for instance by organizing informal activities. Another possibility would be to assign a colleague to be a mentor to young employees that have recently started a job in their company. This form of support could help the young employees experience a positive socialization process.

Another practical implication of this study is that young employees with intermediate education perform less well when they experience more variation in their tasks, but at the same time seem to enjoy mentally challenging tasks. This implies that employers should aim to create delineated tasks for them that still pose sufficient challenges.

Theoretical Implications

This study has provided additional understanding of the working conditions, wellbeing, health, and performance of young employees with intermediate education. We have provided an overview of the similarities and differences between three educational groups of young employees. Young employees with low and intermediate education are highly similar, but young employees with high education generally report more favorable working conditions and health. Furthermore, this study has added to the theoretical knowledge of the JD-R model by showing that several, but not all, assumptions can be applied to youg employees with intermediate education. The results indicate that some processes are apparently different for this specific group, most notably with respect to the important role of job resources as opposed to job demands. We hope that these results will serve as an impetus for future research among young employees with intermediate education.

References

Arthur, M. B., Khapova, S. N., & Wilderom, C. P. M. (2005). Career success in a boundaryless career world. *Journal of Organizational Behavior*, 26, 177-202.

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology, 22*, 309-328.

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International 13*, 209-223.

Bakker, A. B., Van Emmerik, H., & Van Riet, P. (2008). How job demands, resources, and burnout predict objective performance: A constructive replication. *Anxiety, Stress and Coping, 21*, 309-324.

Baron, R. M., & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research. Conceptual, Strategic, and Statistical Considerations. *Journal of personality and social psychology, 51*, 1173-1182.

Clarke, M. (2009). Plodders, pragmatists, visionaries and opportunists: career patterns and employability. *Career Development International*, *14*, 8-28.

Demerouti, E., Nachreiner, F., Bakker, A. B., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology, 86*, 499-512.

Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of success in the era of the boundaryless career. *Journal of Organizational Behavior, 24*, 689-708.

Goodman, S. A., & Svyantek, D. J. (1999) Person-Organization Fit and Contextual Performance: Do Shared Values Matter. *Journal of Vocational Behavior, 55*, 254-275.

Goodwin, J., & O'Connor, H. (2007). Continuity and change in the experiences of transition from school to work. *International Journal of Lifelong Education, 26*, 555-572.

Gustainiene, L., & Endriulaitiene, A. (2009). Job satisfaction and subjective health among sales managers. *Baltic Journal of Management, 4*, 51-65.

Hackman, J. R., & Oldham, G. R. (1980). *Work Redesign.* Addison-Wesley, Reading, M. A.

Hackman, J. R., & Oldham, G. R. (1976). Motivation through the design of work: test of a theory. *Organizational Behavior and Human Performance, 16*, 250-279.

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*, 495-513.

Hakanen, J. J., Schaufeli, W. B., & Ahola, K. (2008). The job demands-resources model: A three-year cross-lagged study of burnout, depression, commitment, and work engagement. *Work and Stress, 22*, 224-241.

Halbesleben, J. R. B., & Wheeler, A. R. (2008). The relative roles of engagement and embeddedness in predicting job performance and intention to leave. *Work and Stress, 22*, 242-256.

Houtman, I. L. D., Goudswaard, A., Dhondt, S., Van der Grinten, M., Hildebrandt, V., & Kompier, M. (1995). *Evaluatie van de monitorstudie naar stress en lichamelijke belasting*. VUGA, Den Haag.

Johnson, J. V., & Hall, E. M. (1988). Job strain, work place social support, and cardiovascular disease: A cross-sectional study of random sample of the Swedish Working Population. *American Journal of Public Health, 78*, 1336-1342.

Karasek, R. A. (1985). *Job Content Questionnaire and User's Guide.* University of Massachusetts, Department of Work Environment, Lowell.

Karasek, R. A. (1979). Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign. *Administrative Science Quarterly, 24*, 285-308.

Karasek, R., Brisson, C., Kawakami, N., Houtman, I., Bongers, P., & Amick, B. (1998). The Job Content Questionnaire (JCQ): an instrument for internationally comparative assessments of psychosocial job characteristics. *Journal of Occupational Health Psychology, 3*, 322-355.

Koivisto, P., Vuori, J., & Nykyri, E. (2007). Effects of the School-to-Work Group Method among young people. *Journal of Vocational Behavior, 70*, 277-296.

Kristensen, T., & Borg, V. (2000). *Copenhagen Psychosocial Questionnaire (COPSOQ).* National Institute of Occupational Health, Copenhagen.

Lee, R. T., & Ashforth, B. E. (1996). A meta-analytic examination of the correlates of the three dimensions of job burnout. *Journal of Applied Psychology, 81*, 123-133.

Lewig, K. A., Xanthopoulou, D., Bakker, A. B., Dollard, M. F. and Metzer, J. C. (2007). Burnout and connectedness among Australian volunteers: A test of the Job Demands-Resources model. *Journal of Vocational Behavior, 71*, 429-445.

Maslach, C., Jackson, S. E., & Leiter, M. P. (1996). *The Maslach Burnout Inventory* (3rd ed.). Consulting Psychology Press, Palo Alto, California.

Mauno, S., Kinnunen, U., & Ruokolainen, M. (2007). Job demands and resources as antecedents of work engagement: A longitudinal study. *Journal of Vocational Behavior, 70*, 149-171.

Maxwell, K. A. (2002). Friends: The role of peer influence across adolescent risk behaviors. *Journal of Youth and Adolescence, 31*, 267-277.

Meijman, T. F., & Mulder, G. (1998). Psychological aspects of workload. In *Handbook of Work and Organizational Psychology*, P. J. Drenth, H. Thierry & C. J. De Wolff (eds., 2nd ed.), 5-33. Erlbaum, Hove.

Ouweneel, A. P., Taris, T. W., Van Zolingen, S. J., & Schreurs, P. J. (2009). How task characteristics and social support relate to managerial learning: empirical evidence from Dutch home care. *The Journal of Psychology, 143*, 28-44.

Raad voor Werk en Inkomen (2006). *Arbeidsmarktanalyse 2006*. [Analysis of the Labor Market 2006]. Raad voor Werk en Inkomen.

Raad voor Werk en Inkomen (2009). *Arbeidsmarktanalyse 2009*. [Analysis of the Labor Market 2009]. Raad voor Werk en Inkomen.

Ryan, P. (2001). The school-to-work transition: A cross-national perspective. *Journal of Economic Literature, 39*, 34-92.

Savickas, M. L. (1998). The Transition from School to Work: A Developmental Perspective. *Career Development Quarterly, 47*, 326-336.

Schaufeli, W., & Enzmann, D. (1998). *The burnout companion to study and practice: A critical analysis.* CRC.

Schaufeli, W. B., Leiter, M. P., & Maslach, C. (2009). Burnout: 35 years of research and practice. *Career Development International, 14*, 204-220.

Schaufeli, W. B., & Van Dierendonck, D. (2000). *Handleiding van de Utrechtse Burnout Schaal (UBOS).* [Manual of the Utrecht Burnout Scale]. Swets and Zeitlinger, Lisse.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior, 25*, 293-315.

Schaufeli, W. B., Salanova, M., González-Romá, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: A two sample confirmatory factor analytic approach. *Journal of Happiness Studies, 3*, 71-92.

Schouten, W. (2009), *Wat is er aan de hand aan de onderkant?* [Homepage of RWI], [Online]. Available: http://www.profielconferenties.nl/l/nl/library/download/1605 [2009, 06/11] .

Schreuder, K. J., Roelen, C.A.M., Koopmans, P.C. and Groothoff, J. W. (2008). Job demands and health complaints in white and blue collar workers. *Work: A Journal of Prevention, Assessment and Rehabilitation, 31,* 425-432.

Shacklock, K., Brunetto, Y., & Nelson, S. (2009). The different variables that affect older males' and females' intentions to continue working. *Asia Pacific Journal of Human Resources, 47*, 79-101.

Smulders, P. G. W. (2005). *Jongere en oudere werknemers: hun werk, werktijden, ongevallen en verzuim*. [Younger and older employees: their work, their work schedules, accidents, and absence]. TNO.

Spector, P. E. (1997). *Job satisfaction. Application, assessment, causes and consequences* (1st ed.). London: Sage Publications.

Statistics Netherlands (2003). *Integrated System of Social Surveys (POLS) 2003*. Heerlen: Statistics Netherlands.

Tannenbaum, S. I. (1997). Enhancing continuous learning: Diagnostic findings from multiple companies. *Human Resource Management, 36*, 437-452.

Taris, T. W. and Kompier, M. A. J. (2006). Games researchers play - Extreme-groups analysis and mediation analysis in longitudinal occupational health research. *Scandinavian Journal of Work, Environment and Health, 32*, 463-472.

Van Cruchten, J. M. J. (1997). Ziekteverzuim; uitkomsten van de Enquête beroepsbevolking, 1992-1995. [Sickness absence; outcomes of the working conditions survey 1992-1995]. *Sociaal-Economisch Maandstatistiek,* April.

Van den Bossche, S. N. J., Koppes, L. L. J., Granzier, J. J. M., De Vroome, E. M. M., & Smulders, P. G. W. (2008). *Nationale Enquête Arbeidsomstandigheden 2007: Methodologie en globale resultaten.* [Netherlands Working Conditions Survey 2007: Methodology and global results]. PlantijnCasparie, Almere.

Van Der Doef, M., & Maes, S. (1999). The Job Demand-Control(-Support) model and psychological well-being: A review of 20 years of empirical research. *Work and Stress, 13*, 87-114.

Van der Heijden, B. I. J. M., De Lange, A. H., Demerouti, E., & Van der Heijde, C. M. (2009). Age effects on the employability-career success relationship. *Journal of Vocational Behavior, 74*, 156-164.

Van Der Heijden, B. I. J. M., Schalk, R., & Van Veldhoven, M. J. P. M. (2008). Ageing and careers: European research on long-term career development and early retirement. *Career Development International, 13*, 85-94.

Van Eijs, P. (2003). *De arbeidsmarkt voor MBO-schoolverlaters: nu en straks editie 2003. [The labor market for drop-outs of vocational educational: now and then edition 2003).*

Williams, L. J. and Anderson, S. E. (1991). Job satisfaction and organizational commitment as predictors of organizational citizenship and in-role behaviors. *Journal of Management, 17*, 601-617.

Wright, T. A., & Bonett, D. G. (1997). The contribution of burnout to work performance. *Journal of Organizational Behavior, 18*, 491-499.

Xanthopoulou, D., Bakker, A. B., Dollard, M. F., Demerouti, E., Schaufeli, W. B., Taris, T. W., & Schreurs, P. J. G. (2007). When do job demands particularly predict burnout? The moderating role of job resources. *Journal of Managerial Psychology, 22*, 766-786.

CHAPTER 3

YOUNG AND GOING STRONG? A LONGITUDINAL STUDY ON OCCUPATIONAL HEALTH AMONG YOUNG EMPLOYEES OF DIFFERENT EDUCATIONAL LEVELS

Based on:

Akkermans, J., Brenninkmeijer, V., Van den Bossche, S. N. J., Blonk, R. W. B., & Schaufeli, W. B. (in press). Young and Going Strong? A Longitudinal Study on Occupational Health Among Young Employees of Different Educational Levels. *Career Development International*.

Chapter 3

3.1. Introduction

Young employees go through many changes in a relatively brief period of time that may have major consequences for their occupational health and wellbeing: they have to make important vocational decisions, adopt new roles, form new relationships, and become more independent from their family (Elfering, Semmer, Tschan, Kälin, & Bucher, 2007; Savickas, 1998). These young workers have to go through a socialization process during which they receive more responsibilities, have to arrange their time in new ways, and have to be more flexible (Ryan, 2001). To make matters worse, young workers have been hit hardest by the worldwide economic crisis that started in 2009 (European Commission, 2012). Faced with these new challenges, the wellbeing of young workers may be determined by other factors compared with older, more experienced employees. Although the increasingly dynamic and complex career challenges are applicable to employees across age groups, research on occupational health and wellbeing thus far has predominantly focused on more experienced employees (e.g., Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009) and individuals with higher education (e.g., Kuijpers & Meijers, 2012). Because a lack of knowledge seems to exist with respect to young employees, specifically those with lower levels of education, it is important to further investigate factors influencing their wellbeing, health, and performance (see also: Akkermans, Brenninkmeijer, Blonk, & Koppes, 2009).

In this study, which is part of an overarching research project that focuses on career development and work-related wellbeing of the young workforce, we will examine factors that can predict wellbeing, health and performance of young employees aged 16-30 years with lower educational levels (i.e., less than 16 years of education; non-college degree), in a two-wave longitudinal sample. A multidirectional perspective is adopted, that is, we will look both at direct and reciprocal relationships over time. Moreover, we will investigate whether motivational and health impairment processes work differently for these young workers, compared with their higher educated counterparts. We will use the

Job Demands-Resources model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) as our conceptual basis. The JD-R model is an influential model in the field of Work and Organizational Psychology that describes motivational and health impairment processes in the workplace. Based on this model, we examine the associations between job resources, job demands, dedication (a component of work engagement), emotional exhaustion (a component of burnout), general health, and perceived performance.

Young Employees with Lower Levels of Education on the Labor Market

The many changes and challenges that young employees face when entering the labor market, such as needing to be more flexible, and going through a socialization process at work, can lead to stress and feelings of insecurity (Goodwin & O'Connor, 2007; Koivisto, Vuori, Nykiri, 2007). This may especially be the case for young employees with lower levels of education, as certificate demands are increasing and lower-skilled jobs are also becoming ever more complex, for example because of the growing role of communicative skills and ICT (Nieuwenhuis, Coenen, Fouarge, Harms, & Oosterling, 2012). These young workers with lower educational levels often face little job security and an extended job search for their first job (Nieuwenhuis et al., 2012). However, at the same time it has been shown that searching for a job can be stressful for young workers (Koivisto et al., 2007), and that they are less engaged in their work (Schaufeli & Bakker, 2004a; Smulders, 2005). Moreover, the differences in quality of work and career opportunities between educational groups are increasing in favor of the higher educated (Raad voor Werk en Inkomen, 2009). Finally, Akkermans et al. (2009) found that young employees with lower levels of education reported fewer job demands and job resources, and a poorer health and performance compared with their higher educated counterparts. In sum, young employees with lower levels of education are confronted with a variety of risk factors with regard to their wellbeing at work, which makes it crucial to gain a better understanding of the factors that can help them remain healthy and motivated.

Chapter 3

Determinants of Wellbeing, Health, and Performance at Work

The Job Demands-Resources (JD-R) Model is a heuristic model that includes work-related factors predicting wellbeing and productivity (Demerouti et al., 2001). The JD-R model synthesizes the theoretical insights from several other models, including the Conservation of Resources Theory (COR; Hobfoll, 1989). The basic assumption is that occupation-specific factors can be classified in *job resources* and *job demands*. Job resources are those physical, psychological, social, or organizational aspects of the job that are either functional in achieving work goals, reducing the negative impact of job demands, or stimulating personal growth, learning, and development (Bakker & Demerouti, 2007). Because the presence of sufficient job resources fosters goal accomplishment and personal growth and development, they lead to stronger motivation and dedication at work (Bakker, Demerouti, & Schaufeli, 2003b), thereby setting in motion a *motivational process*. In this motivational process, job resources are expected to foster work engagement, which is subsequently associated with positive outcomes, such as increased performance and better health (Schaufeli & Bakker, 2004b; Schaufeli, Salanova, González-Roma, & Bakker, 2002).

Job demands are those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological (cognitive and emotional) effort or skills and are therefore associated with certain physical and/or psychological costs (Bakker & Demerouti, 2007). An excessive amount of job demands can lead to energy depletion and thus to exhaustion (Bakker et al., 2003b). In a *health impairment process*, job demands are associated with exhaustion and strain, which subsequently lead to negative outcomes, such as health problems and sickness absence (Schaufeli & Bakker, 2004b). The motivational and health impairment processes have both received extensive empirical support (e.g., Bakker, Demerouti, De Boer, & Schaufeli, 2003a; Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007).

The Current Study

In this study we used autonomy, social support of the supervisor, and social support of colleagues as job resources. Furthermore, we used work pressure, emotional workload, and physical workload as job demands. We used these specific job characteristics because they are expected to be relevant for our target group of young workers (Akkermans et al., 2009). Employees need to be increasingly autonomous, but at the same time it is important for them to receive support both from colleagues and supervisors in order to confirm that they are performing well. Furthermore, because young workers have to get used to many challenges and responsibilities, it is relevant to examine the ways in which a high work pressure and emotional workload may affect their wellbeing. In addition, these characteristics are often used in the literature because they apply to a large array of different types of work contexts (Bakker & Demerouti, 2007). Our study is a follow-up of a previous study that also used most of these characteristics (Akkermans et al., 2009). However there are some slight changes. Contrary to the previous study, we did not use task variation as a job resource, as it seemed to act as a job demand. Another difference is that we did use physical workload in this study, as lower skilled jobs are often characterized by more physical work aspects.

Finally, we used dedication as an indicator of motivation and emotional exhaustion as indicator of strain. Dedication is characterized by a sense of significance, enthusiasm, inspiration, pride, and challenge in one's work (Schaufeli et al., 2002), and emotional exhaustion refers to feelings of being overextended and exhausted by the emotional demands of one's work (Demerouti et al., 2001). By examining dedication and exhaustion, we included two non-overlapping indicators that represent different underlying dimensions of motivation and strain (Gonzalez-Romá, Schaufeli, Bakker, & Llorens, 2006; Schaufeli & Taris, 2005). Our study consisted of two parts. In the first part, we investigated mean differences between the educational groups (i.e., low versus high) with regard to the current study variables. In the second part of our study we examined potential differences between

these groups in motivational and health impairment processes as assumed by the JD-R model.

European labor market studies show increasing differences between educational groups concerning health, sickness absence, and unemployment, whereby employees with lower educational levels report more negative outcomes (European Commission, 2012; Raad voor Werk en Inkomen, 2010). Akkermans et al. (2009) demonstrated that employees with lower levels of education generally experienced fewer job resources, and poorer wellbeing and health compared with their higher educated colleagues. Moreover, lower socioeconomic and educational levels (i.e., blue collar workers) are generally associated with poorer wellbeing and health outcomes (e.g., Adler, Boyce, Chesney, Cohen, Folkman, Kahn, & Syme, 1994), and these individuals are less engaged in their work (Schaufeli & Bakker, 2004a). Adler and Ostrove (1999) also stated that educational level by itself is of importance to health outcomes: lower educational levels and lower occupational grades were related to poorer health outcomes at a later age. These findings all indicate that young workers with lower levels of education experience less favorable working conditions and wellbeing.

Contrary to these findings, Akkermans et al. (2009) found that young employees with lower educational levels experienced fewer job demands and less exhaustion at work. However, most studies thus far show a different picture. For example, Smulders (2005) argued that young workers with lower levels of education report higher levels of sickness absence and physical injuries at work, because of factors such as a high physical workload. Moreover, Van den Bossche (2004) demonstrated that these young workers are faced with more unwanted behaviors and intimidation. Other studies have underlined social class differences, in which lower classes (i.e., lower educational levels) generally report a less favorable work environment and more health-related problems (e.g., Upmark, Lundberg, Sadigh, & Bigert, 2001). These findings point to less favorable working conditions and more health risks for young employees with lower levels of education.

Taken together, this leads us to formulate the following hypotheses:

Hypothesis 1: *Young employees of lower educational levels experience lower levels of job resources and dedication compared with young employees of high educational level*.

Hypothesis 2: *Young employees of lower educational levels experience higher levels of job demands and emotional exhaustion compared with young employees of high educational level*.

Hypothesis 3: *Young employees of lower educational levels experience poorer health and perceived performance compared with young employees of high educational level*.

In the second part of our study, we investigated the longitudinal relationships between job characteristics, wellbeing, health, and performance of young employees with the JD-R model. This adds to the existing literature by providing new empirical insights in a sample of young employees. Further, as Boyd, Bakker, Pignata, Winefield, Gillespie, and Stough (2011), and Hakanen, Schaufeli, and Ahona (2008) proposed, more longitudinal research concerning the relationships in the JD-R model is necessary. It is likely that the proposed relationships of the motivational and health impairment processes hold true for this sample of young employees with lower levels of education, as earlier studies have demonstrated the robustness of these processes (e.g., Korunka, Kubicek, Schaufeli, & Hoonakker, 2009). If these young workers experience unfavorable working conditions and poorly designed jobs, that will make them vulnerable to exhaustion and subsequent health problems (Bakker & Demerouti, 2007). Conversely, young employees have to learn and develop a lot in a relatively short period of time. Experiencing sufficient resources, such as autonomy and social support, may help them in becoming more motivated, and subsequently experience better health and performance (Bakker & Demerouti, 2007).

Therefore, we formulated the following hypotheses:

Hypothesis 4a: *Job resources have a positive association with dedication over time*.
Hypothesis 4b: *Dedication has a positive association with general health and perceived performance over time*.

Hypothesis 5a: *Job demands have a positive association with emotional exhaustion over time*.
Hypothesis 5b: *Emotional exhaustion has a negative association with general health and perceived performance over time*.

We also investigated possible differences between the two educational groups with regard to the relationships (i.e., structural paths) in the JD-R model. Differences in the JD-R model between white collar workers and blue collar workers have been tested in earlier studies (e.g., Korunka et al., 2009; Toppinen-Tanner, Kalimo, & Mutanen, 2002), but have not been demonstrated. However, initial cross-sectional support for differences between educational groups was demonstrated (Akkermans et al., 2009). Longitudinal research would be needed to further investigate this issue. In addition, studying these possible differences may tell us more about the unique characteristics of young employees and of specific educational groups. These findings would also add to our knowledge about the generalizability of the JD-R model. However, because differences have not been found and the robustness of the model has been demonstrated in various studies (e.g., Bakker et al., 2003a; Bakker et al., 2007), we expected that this model would also hold in the case of young employees of different educational levels. That is, although we expected the actual level of the study variables to differ between educational groups, we did not expect differences regarding the motivational and health impairment processes across the groups.

Hypothesis 6: *The relationships between the elements of the JD-R model will be consistent between educational groups*.

Finally, in line with earlier findings from De Lange, De Witte, and Notelaers (2008), we also examined potential reciprocal associations. De Lange et al. (2008) argued that a uni-directional view of work and mental health may be too narrow. They found that employees may be considered active shapers of their work environment, rather than just passive receivers. This idea is in line with the principles of COR theory (Hobfoll, 1989), which states that so-called gain cycles or loss cycles can develop over time. For example, Llorens, Schaufeli, Bakker, and Salanova (2007) found that job resources, through efficacy beliefs, can influence work engagement, but that work engagement, in turn, can influence efficacy beliefs and job resources over time. De Lange et al. (2008) also stated that the nature of these reciprocal relationships is still unclear. To further investigate multi-directional associations, we tested potential reversed relationships between the study variables in our study.

3.2. Method

Participants and Procedure

The data used in this study were derived from the two-wave Netherlands Working Conditions Cohort Study (NWCCS; Koppes, De Vroome, & Van den Bossche, 2010). The NWCCS is carried out annually by TNO Work & Employment, Statistics Netherlands, and the Dutch Ministry of Social Affairs and Employment. It constitutes a representative sample of the Dutch employees aged 15-64 years. Questionnaires were distributed in November 2008 (Time 1) and November 2009 (Time 2). A mixed-method design was used: individuals received a written questionnaire at their home address, which could be returned by mail or filled out online. A total of 10,395 employees completed the 2008 NWCS, of which 7,500 (72%) also responded to the follow-up questionnaire in 2009. In this study, we used a specific subset of young employees in the age range of 16-30 because our study

was a follow-up of an earlier study (Akkermans et al., 2009). This previous study used an age criterion of 18-25 years, but we expanded the upper limit to 30 years in order to have a representative amount of employees with high educational levels. Following the advice of Taris and Kompier (2003), who argued that examining certain subgroups of employees in longitudinal designs may yield more meaningful information, we used subgroup analyses to investigate educational differences. This also corresponds to our overarching research goal of gaining a better understanding of young workers, specifically those with lower levels of education.

Only employees who filled out both questionnaires were used in the analyses: of the 1,650 young employees in 2008, 1,346 (82%) filled out the questionnaire again in 2009. There were 62 respondents who acquired a higher educational level at T2 or who reported that they had become self-employed or had stopped working: they were excluded from the analyses. These criteria resulted in a total sample size of 1,284 employees. We checked for selective attrition of participants between T1 and T2, but we did not find any significant differences with regard to gender ($F(1, 1584) = 1.16$, $p = .22$), educational level ($F(1, 1585) = 3.19$, $p = .07$), or age ($F(1, 1580) = 2.67$, $p = .10$).

The average age of the participants in the sample used for this study was 25.5 ($SD = 3.4$ years), and 63.4% were female. More than half of them had permanent employment (66.5%) and they worked an average of 32 hours per week ($SD = 9.8$ days). The most represented industries were trade (14.2%), general business (16.0%), and health and social work (25.5%). Participants were divided in two groups: lower educational level (less than 16 years of total education), and high educational level (more than 16 years of total education). Roughly speaking, this can be compared to non-college and college level in the North-American educational system. Criteria for placement in these groups followed the Dutch educational system. Employees with either no education, elementary education, lower secondary general education/pre-vocational education (“vmbo”), higher general secondary education (“havo”), pre-university education (“vwo”),

or intermediate vocational education ("mbo") were placed in the lower educational group (*N* = 643). In this group, the job types that were represented most often were shop attendants, nurse assistants, and administrative work. Employees with higher vocational education ("hbo") or university ("wo") level education were placed in the high educational group (*N* = 641). The most represented job types in this group were teachers, technicians, and medical specialists. The two groups differed somewhat, but not significantly, with regard to gender (40% males in the lower educational group versus 33% males in the high educational group).

Measurement Instruments

Job Resources. Autonomy was measured with four items based on the Job Content Questionnaire (JCQ: Karasek, 1985; Karasek, Brisson, Kawakami, Houtman, Bongers, & Amick, 1998), which were translated to Dutch by Houtman, Goudswaard, Dhondt, Van der Grinten, Hildebrand, and Kompier (1995). Items were measured on a three-point scale ranging from 1 (*no*) to 3 (*yes, regularly*). An example item was, "Can you decide how you perform your work?" (α_{T1} = .78, α_{T2} = .76). Social support from the supervisor and from colleagues were both measured with four items based on the JCQ. Example items were "My supervisor takes the wellbeing of the employees into account" (α_{T1} = .85, α_{T2} = .86), and "My colleagues show a personal interest in me" (α_{T1} = .83, α_{T2} = .85), respectively. The items were measured on four-point scales, ranging from 1 (*completely disagree*) to 4 (*completely agree*).

Job Demands. Work pressure was assessed with four items, based on the Job Content Questionnaire (Karasek, 1985; Karasek et al., 1998). An example item was "Is your work hectic?" (α_{T1} = .85, α_{T2} = .85). Emotional workload was measured with three items based on the Copenhagen Psychosocial Questionnaire (Kristensen & Borg, 2000). An example item was "Is your work emotionally demanding?" (α_{T1} = .81, α_{T2} = .81). Work pressure and emotional workload were both measured on a four-point scale, ranging from 1 (*never*) to 4 (*always*).

Physical workload was measured with three items derived from the Integrated System of Social Surveys (POLS; Statistics Netherlands, 2003). Items were measured on a three-point scale ranging from 1 (*no*) to 3 (*yes*, *regularly*). An example item was, "Do you have to work in an uncomfortable position?" (α_{T1} = .80, α_{T2} = .79).

Dedication, a subscale of work engagement, was measured with four items, based on the UWES (Utrecht Work Engagement Scale; Schaufeli, & Bakker, 2003). The items were measured on a 4-point scale, ranging from 1 (*never*) to 4 (*always*). A sample item was "My work inspires me" (α_{T1} = .90, α_{T2} = .90). Emotional exhaustion, a subscale of burnout, was measured with five items, based on the UBOS (Utrecht Burnout Scale; Schaufeli & Van Dierendonck, 2000). The items were measured on a 7-point scale, ranging from 1 (*never*) to 7 (*every day*). An example item was "I feel completely exhausted because of my work" (α_{T1} = .83, α_{T2} = .86).

General health (i.e., perceived health) was measured with one item: "In general, how do you rate your own health?". This item was derived from the Integrated System of Social Surveys (POLS; Statistics Netherlands, 2003). The item was measured on a 5-point scale, ranging from 1 (*bad*) to 5 (*excellent*). A single item measure for self-rated health has been shown to have good predictive validity (Peterson, Bergström, Demerouti, Gustavsson, Asberg, & Nygren, 2011). *Perceived performance* was measured with three items selected by the developers of the NWCCS, which were based on the questionnaire for Task Performance designed by Goodman and Svyantek (1999). The items were measured with a 5-point scale, ranging from 1 (*completely disagree*) to 5 (*completely agree*). A sample item is, "I achieve the goals in my job" (α_{T1} = .85, α_{T2} = .86).

Strategy of Analysis

In part 1 of the analyses, we tested for differences between educational groups (i.e., low versus high) with repeated measures MANOVA followed by ANOVA. We used structural equation modeling (SEM) analyses with AMOS 20 (Arbuckle, 2011) to examine the fit of the data using the comparative fit

index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA). CFI and TLI values of > .90 and RMSEA values of < .08 represent acceptable fit, whereas values of > .95 and < .05 represent a good fit (Hu & Bentler, 1999; Schumacker & Lomax, 2004). We performed the analyses with latent-variable structural path analyses with maximum likelihood estimation, and controlled for gender and age in our analyses. We could not control for job tenure as this was not assessed in the NWCCS. However, we did control for a change of employer and a change of job in the last 12 months in our analyses.

To test the models, we included the latent variables job resources (i.e., autonomy, social support from the supervisor, and social support from colleagues), job demands (i.e., work pressure, emotional workload, and physical workload), dedication, emotional exhaustion, general health, and task performance. To reduce the risk of common method variance, we tested the fit of a one-factor model where all indicators loaded onto one latent factor (Podsakoff, MacKenzie, Podsakoff, & Lee, 2003). In addition, to ensure construct validity, we tested the fit of the measurement model, which consisted of all the indicators loading onto their proposed latent factors, and two competing models. In fitting the structural models, we followed the procedures advocated by De Lange, Taris, Kompier, Houtman, and Bongers (2004). We compared four structural models: a stability model (containing only the synchronous correlations at T1 and the auto regression paths for each construct from T1 to T2), a causality model (adding all direct associations between T1 and T2), a reciprocal model (adding all reverse associations between T1 and T2), and a final model (deleting non-significant paths and optimizing model fit). Chi-square difference ($\Delta\chi^2$) tests were used to compare successive models.

In part 2 of our analyses we used multiple group analysis using SEM. We examined differences between educational groups by examining whether an unconstrained model fitted the data better than several alternative models: a model in which the factor weights were constrained to be equal, a model in which the regression weights were constrained to

be equal, and a model in which the means and intercepts were constrained to be equal.

3.3. Results

Intercorrelations of the study variables for the group with lower educational level are presented in Table 1. Virtually all correlations were significant and in the expected direction. No extremely high correlations were found, indicating that multicollinearity is not likely to bias our results. We also performed a test for normality and outliers, but we did not find significant departure from normality or outliers. The correlation table for the group with high educational level can be obtained from the corresponding author.

Table 1

*Intercorrelations of the study variables at T1 and T2 for group with lower educational level (*n = *643).*

	1	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*11*
1. Age											
2. Autonomy T1	.14										
3. Autonomy T2	.04	.40									
4. Social Support Supervisor T1	-.01	.49	.26								
5. Social Support Supervisor T2	.01	.32	.46	.37							
6. Social Support Colleagues T1	.09	.48	.28	.52	.40						
7. Social Support Colleagues T2	.02	.32	.50	.38	.51	.38					
8. Work Pressure T1	.01	-.19	-.17	-.26	-.27	-.26	-.24				
9. Work Pressure T2	-.02	-.20	-.14	-.17	-.21	-.17	-.13	.41			
10. Emotional Workload T1	.08	-.27	-.17	-.30	-.19	-.29	-.18	.49	.17		
11. Emotional Workload T2	.06	-.22	-.20	-.18	-.24	-.18	-.24	.16	.49	.38	
12. Physical Workload T1	-.03	-.17	-.16	-.22	-.16	-.17	-.16	.42	.15	.41	.14
13. Physical Workload T2	-.01	-.18	-.09	-.15	-.15	-.14	-.08	.09	.43	.17	.42
14. Dedication T1	.08	.32	.20	.35	.30	.39	.31	-.24	-.09	-.20	-.08
15. Dedication T2	.04	.41	.23	.47	.41	.52	.34	-.24	-.14	-.20	-.10
16. Emotional Exhaustion T1	-.06	-.29	-.15	-.37	-.22	-.32	-.19	.21	.22	.21	.17
17. Emotional Exhaustion T2	-.08	-.34	-.20	-.41	-.31	-.39	-.33	.27	.20	.34	.24
18. General Health T1	.03	.34	.20	.31	.31	.43	.32	-.24	-.18	-.28	-.21
19. General Health T2	-.02	.20	.15	.17	.17	.27	.22	-.21	-.14	-.25	-.13
20. Perceived Performance T1	.10	.43	.31	.44	.41	.53	.43	-.30	-.18	-.37	-.25
21. Perceived Performance T2	.11	.28	.25	.26	.25	.33	.32	-.21	-.10	-.21	-.13

Note: Correlations ≥ .07 are significant at $p < .05$; correlations ≥ .08 are significant at $p < .01$.

Table 1 (CONTINUED)

	12	*13*	*14*	*15*	*16*	*17*	*18*	*19*	*20*
12. Physical Workload T1									
13. Physical Workload T2	.42								
14. Dedication T1	-.18	-.08							
15. Dedication T2	-.16	-.14	.54						
16. Emotional Exhaustion T1	.14	.13	-.44	-.33					
17. Emotional Exhaustion T2	.20	.10	-.45	-.43	.53				
18. General Health T1	-.22	-.19	.43	.49	-.35	-.44			
19. General Health T2	-.18	-.17	.51	.31	-.42	-.35	.56		
20. Perceived Performance T1	-.23	-.15	.46	.57	-.41	-.55	.51	.42	
21. Perceived Performance T2	-.19	-.10	.51	.40	-.44	-.44	.38	.46	.59

Note: Correlations ≥ .06 are significant at $p < .05$; correlations ≥ .10 are significant at $p < .01$.

PART 1

Mean Differences Between Educational Groups

The means and standard deviations are depicted in Table 2. The group of low educational level scored significantly lower than the group with high educational level on autonomy at T1 ($F(1, 1282) = 67.55$, $p < .001$), and T2 ($F(1, 1282) = 122.55$, $p < .001$), social support of the supervisor at T1 ($F(1, 1282) = 42.60$, $p < .001$) and T2 ($F(1, 1282) = 38.25$, $p < .001$), social support of colleagues at T1 ($F(1, 1282) = 9.09$, $p = .003$) and T2 ($F(1, 1282) = 56.05$, $p < .001$), dedication at T1 ($F(1, 1282) = 25.18$, $p < .001$) and T2 ($F(1, 1282) = 20.71$, $p < .001$), general health at T1 ($F(1, 1282) = 37.93$, $p < .001$) and T2 ($F(1, 1282) = 86.95$, $p < .001$), and perceived performance at T1 ($F(1, 1282) = 5.45$, $p = .019$) and T2 ($F(1, 1282) = 35.17$, $p < .001$). In addition, they scored significantly higher on physical workload at T1 ($F(1, 1282) = 122.82$, $p < .001$) and T2 ($F(1, 1282) = 190.16$, $p < .001$), and on emotional exhaustion at T1 ($F(1, 1282) = 68.32$, $p < .001$) and T2 ($F(1, 1282) = 14.98$, $p < .001$). No differences were found for work pressure and emotional workload. As hypothesized, young employees with lower educational level reported fewer job resources and less dedication (H1), more exhaustion (H2), and poorer health and perceived performance (H3). However, they did not experience more work pressure or emotional demands, only more physical demands, thereby partially supporting Hypothesis 2.

Table 2

Means and standard deviations of the study variables for lower educational level and for high educational level.

	Low - Intermediate Level (N = 643)				High Level (N = 641)			
	M_{T1}	SD_{T1}	M_{T2}	SD_{T2}	M_{T1}	SD_{T1}	M_{T2}	SD_{T2}
Autonomy	2.35	0.68	2.31	0.71	2.62**	0.54	2.69**	0.46
Social Support Supervisor	2.70	0.88	2.72	0.88	2.99**	0.75	3.00**	0.71
Social Support Colleagues	3.18	0.93	3.08	0.96	3.32**	0.71	3.42**	0.61
Work Pressure	2.40	0.82	2.44	0.82	2.38	0.74	2.38	0.68
Emotional Workload	1.98	0.99	2.02	0.98	1.93	0.77	1.95	0.77
Physical Workload	2.00	0.72	2.03	0.76	1.57**	0.68	1.50**	0.62
Dedication	2.99	0.89	2.94	0.89	3.22**	0.75	3.15**	0.76
Emotional Exhaustion	2.65	1.66	2.44	1.67	2.18**	1.12	2.10**	1.20
General Health	3.33	1.04	3.27	1.07	3.65**	0.80	3.79**	0.91
Perceived Performance	4.15	1.05	3.96	1.20	4.26**	0.54	4.28**	0.67

*Note: ** = $p < .01$. Significance levels depict mean differences between the two educational groups within a measurement time.*

Testing Motivational and Health Impairment Processes

The one-factor model showed a poor fit to the data: $\chi^2(170) = 4{,}079.73$, $p < .01$; TLI = .54; CFI = .58; RMSEA = .13, suggesting that common method variance was not a major issue in our study. To support the construct validity of our measures, we performed a confirmatory factor analysis in which we compared the measurement model with two competing models. The measurement model showed a good fit to the data: $\chi^2(108) = 276.37$, $p < .01$; TLI = .97; CFI = .98; RMSEA = .04. All factor loadings were significant onto their proposed factor with factor loadings ranging from .61 to .76. The first competing model, in which job resources and job demands were collapsed into one factor, showed significantly poorer fit to the data than the measurement model: $\Delta\chi^2(21) = 1{,}489.02$, $p < .001$; TLI = .74; CFI = .83; RMSEA = .10. The second competing model, in which we collapsed job resources and dedication, and job demands and emotional exhaustion, also showed poorer fit to the data than the measurement model: $\Delta\chi^2(38) = 3{,}417.67$, $p < .001$; TLI = .51; CFI = .62; RMSEA = .14. These results support the construct validity of our measures.

The results of the SEM analyses are shown in Table 3. The first step was to fit the proposed JD-R model to the group of lower educational level. The initial stability model provided a bad fit to the data. Stability estimates ranged from .53 for job demands and emotional exhaustion to .71 for job resources. The stability model accounted for 29% of the variance in dedication, 26% in emotional exhaustion, 34% in general health, and 33% in task performance.

Table 3

Fit indices of multiple group models and of structural equation models for both educational groups, N_{low} *= 643 and* N_{high} *= 641.*

Model	χ^2	*df*	$\Delta\chi^2$	*TLI*	*CFI*	*RMSEA*
Unconstrained model	654.13	258		.94	.96	.04
Equal factor weights	672.93	266	18.80*	.94	.96	.04
Equal regression weights	722.28	274	68.15**	.93	.95	.04
Equal means & intercepts	1185.30	302	531.17**	.88	.80	.05
Stability model L	1072.96	142		.75	.81	.10
Causality model L	590.75	130	482.21**	.87	.91	.07
Reciprocal model L	530.02	118	60.73**	.87	.92	.07
Final model L	325.40	130	204.62**	.94	.96	.048
Stability model H	1047.56	142		.70	.78	.10
Causality model H	711.87	130	335.69**	.79	.86	.08
Reciprocal model H	691.18	118	20.69**	.77	.86	.09
Final model H	366.48	133	323.70**	.92	.94	.05

Note: $\Delta\chi^2$ values in multiple group models represent comparisons with unconstrained model for equal factor weights, equal regression weights, and equal means and intercepts. L = participants with lower educational level, H = participants with high educational level. ** $p < 0.01$, * $p < .01$.

For the causality model, we added all direct paths from T1 to T2. Model fit was significantly increased compared to the stability model, $\Delta\chi^2(130) = 482.21$, $p < .001$, but the overall fit was unsatisfactory (see Table 3). Next, we tested the reciprocal model. This again led to a significant increase in model fit compared to the causality model, $\Delta\chi^2(118) = 60.73$, $p < .001$, although the overall fit was still unsatisfactory. In the final step, we removed the non-significant direct and reversed paths, which provided another significant improvement to our model fit compared with the reciprocal model: $\Delta\chi^2(130) = 204.62$, $p < .001$. Our final model showed a good overall fit to the data: $\chi^2(130) = 325.40$, $p < .001$; TLI = .94; CFI = .96; RMSEA = .048. The final model is depicted in Figure 1. It accounted for 51% of the variance in dedication, 45% in emotional exhaustion, 43% in general health, and 44% in perceived performance. Hypothesis 4a, 4b, 5a, and 5b were confirmed for the group with lower educational level. We also tested this final model for the high education group (see Figure 2). Model fit was acceptable: $\chi^2(130) = 391.77$, $p < .001$; TLI = .91; CFI = .94; RMSEA = .056.

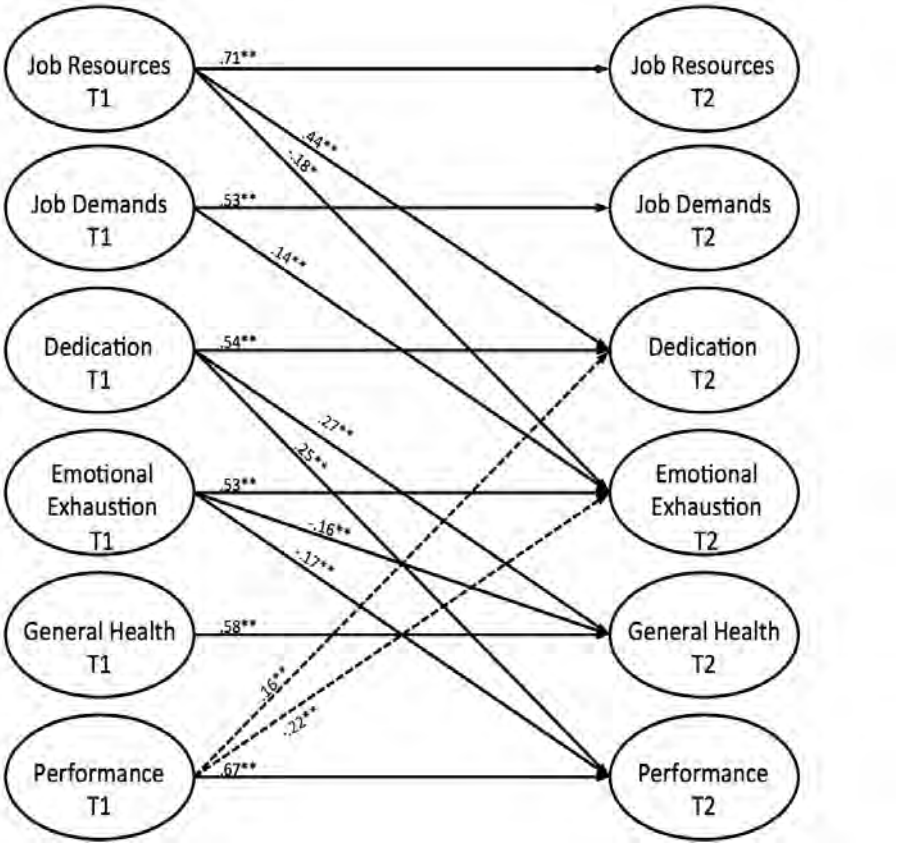

Figure 1. *Final model for participants with lower educational level,* n *= 643. Dotted lines represent reversed effects. Note: ** =* p < *.001, * =* p < *.01.*

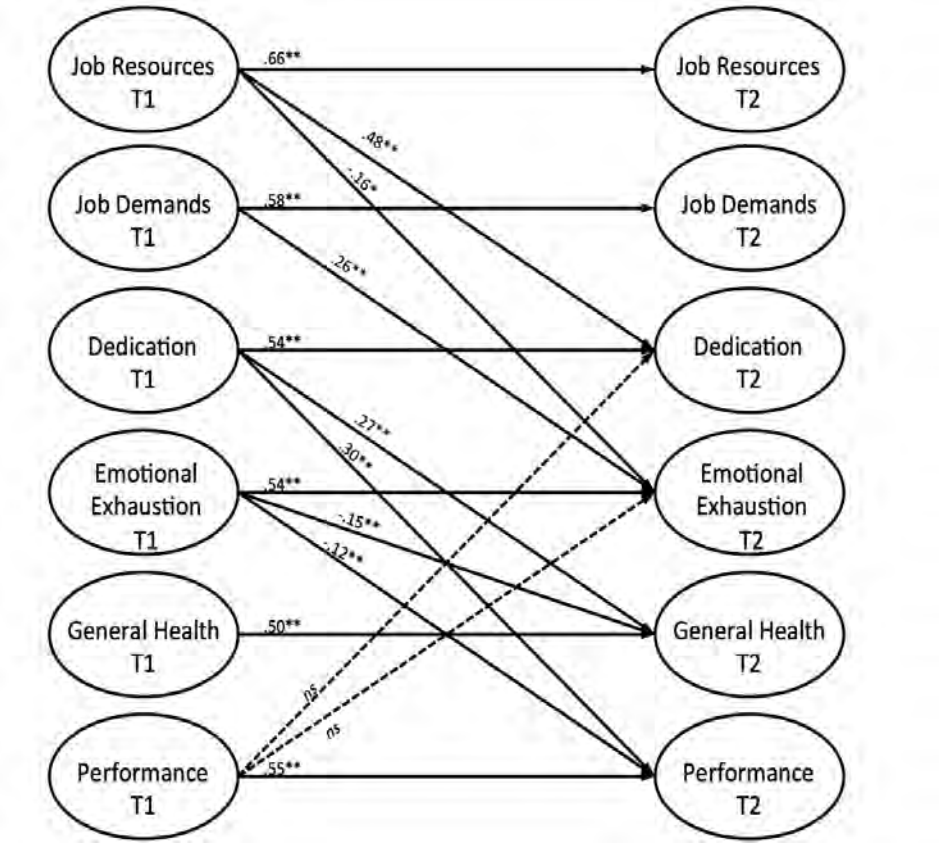

Figure 2. *Final model for participants with high educational level,* n *= 641. Dotted lines represent reversed effects. Note: ** =* p *< .001, * =* p *< .01.*

PART 2

Differences Between Educational Groups in the JD-R Model

The results of the multiple group analyses are displayed in Table 3. All three alternative models (i.e., a model with equal factor weights, a model with equal regression weights, and a model with equal means and intercepts) provided significantly worse model fit compared with the unconstrained model, indicating differences between the educational groups in factor weights ($\Delta\chi^2(266) = -18.80$, $p < .001$), structural paths ($\Delta\chi^2(274) = -68.15$, $p < .001$), and means and intercepts ($\Delta\chi^2(302) = -531.17$, $p < .001$). Because we had not expected any differences between the educational groups, we rejected Hypothesis 6.

We examined which of the structural paths were different for the educational groups by performing a critical ratio for differences test. This is a test in which the parameters are tested across the groups with standardized Z-scores. Values of higher than 1.96 or lower than -1.96 indicate significant differences between groups. The results indicated that the parameters of job resources and perceived performance were more stable for the group with lower levels of education (Z = -.258 and -2.81, respectively), and that the relationship over time between job resources and emotional exhaustion (Z = 2.44) and between job demands and emotional exhaustion (Z = 1.96) were stronger for the group with higher levels of education. We also found differences between the groups for the reversed associations between perceived performance and dedication (Z = -2.40), and between perceived performance and emotional exhaustion (Z = -3.60). These final two were only significant for the group with lower levels of education, as can also be seen in Figure 1 and 2.

3.4. Discussion

In this study, we investigated job characteristics, wellbeing, health, and performance of young employees in a large two-wave longitudinal sample of employees aged 16 to 30 years, representative of the Dutch workforce. In addition, we investigated potential differences between educational groups.

Our results provide several new insights. First, we found differences between educational groups with regard to the levels of job characteristics (job resources and demands), wellbeing (dedication and emotional exhaustion), general health, and perceived performance. Second, we found longitudinal support for the motivational and health impairment processes of the Job Demands-Resources (JD-R) model (Schaufeli & Bakker, 2004b) in our sample of young employees. Third, we demonstrated that differences exist between educational groups in the relationships of the JD-R model, indicating that the processes related to wellbeing, health, and performance are not the same for young employees of different educational levels. Below we will elaborate on each of these results.

Differences Between Educational Groups

We found differences in mean scores between the educational groups. As expected and in line with earlier studies (e.g., Adler & Ostrove, 1999; Akkermans et al., 2009), young employees with lower educational levels experienced fewer job resources, less dedication, more exhaustion, and poorer health and performance. They also experienced more physical demands. We did not find any differences in work pressure and emotional workload. These results differ from the results of a previous study (Akkermans et al., 2009), where young workers with lower levels of education actually experienced fewer job demands (i.e., work pressure, emotional workload, and mental workload). However, physical workload was not measured in that study, and was the only job demand in our study that showed a difference between educational groups. This is actually quite understandable considering that lower skilled jobs are usually more physically straining. Although lower skilled jobs are generally more routine based, it seems that the employees who perform these jobs do experience similar levels of job demands (and a higher physical workload) compared with higher skilled jobs. The results of our study emphasize the importance of gaining more knowledge about the role of job characteristics in the wellbeing, health, and performance of young employees with lower educational levels, because

they seem to experience more physical demands, but fewer job resources compared with employees with high educational levels. This may also explain the higher ratings of emotional exhaustion and lower ratings of dedication, as they may not have sufficient job resources to deal with the demands in their work.

The Motivational and Health Impairment Processes for Young Employees

Support for the principles of the JD-R model has been demonstrated in several cross-sectional studies (e.g., Bakker et al., 2007; Schaufeli & Bakker, 2004b). However, longitudinal evidence has been scarce and conflicting (e.g., Hakanen et al., 2008; Mauno, Kinnunen, & Ruokolainen, 2007). Our results showed that - as expected - job resources were positively associated with dedication, and job demands were positively associated with emotional exhaustion over time. Moreover, and also as expected, dedication was positively related to health and performance, and emotional exhaustion was negatively related to health and performance over time. With these results, we provide longitudinal support for the motivational and health impairment processes of the JD-R model among young employees (e.g., Boyd et al., 2011; De Lange et al., 2008). Our findings show that autonomy, social support, work pressure, emotional workload, and physical workload may be related to future motivation and wellbeing of young employees. Moreover, the results show that dedication and emotional exhaustion may be related to future health and performance.

Differences Between Educational Groups in the JD-R Model

Contrary to our expectations, the educational groups differed in the relationships in the JD-R model. First, the health impairment process was weaker in the group with lower educational level. This result is in line with the findings in an earlier study (Akkermans et al., 2009) where motivational processes were more prominent among this group, as opposed to health impairment processes. Second, we found reciprocal relationships in our model between dedication and performance, and between exhaustion and

performance, but only for the employees with lower educational level. This may reflect a gain cycle between dedication and performance, and a loss cycle between emotional exhaustion and performance for young employees with lower levels of education (De Lange et al., 2008). These findings would be in line with Conservation of Resources (COR) theory (Hobfoll, 1989). For these employees it may be particularly important to perceive themselves as competent in their work, as they are faced with little job security and extended job searches and stress (Nieuwenhuis et al., 2012). They may therefore need more confirmation than their colleagues with higher educational levels that they are performing well and that they can continue their jobs. Another possible explanation is that performing well may compensate for a lack of job resources by providing a sense of competence and positive emotions, which may serve as a buffer against exhaustion.

Limitations and Implications for Future Research

A number of limitations and suggestions for future research need to be addressed. First, common method bias may have been a concern due to the exclusive use of self-report measures. Spector (2006) suggested this may not be a crucial problem in organizational research. Moreover, we used longitudinal data to reduce the risk of common method bias (Doty & Glick, 1998), and we tested a one-factor model (Podsakoff et al., 2003). However, it would be important to include ratings of supervisors and peers, and objective measures to further increase our knowledge about the role of job characteristics in predicting wellbeing, health, and performance of young employees.

Another limitation of our study concerns the indicators that we used for measuring motivation and strain. We could only use dedication and emotional exhaustion because the other indicators (vigor and absorption for engagement; depersonalization and reduced personal accomplishment for burnout) were not included in the NWCCS survey for reasons of economy. Although the indicators of work engagement are clearly correlated with each other, and the indicators of burnout are as well, future studies should also

include the other dimensions to gain a more complete picture of motivation and strain among young workers.

A third limitation of our study is that we could not test a full mediation model due to our two-wave dataset (Taris & Kompier, 2006). Future research should use a three-wave dataset to test whether work engagement and burnout act as mediators in the motivational and health impairment processes of young employees with lower levels of education. In addition, it would be interesting to not only compare young workers of different educational levels with such a design, but also to include employees from different age categories. This could shed more light on differences between educational levels across age groups.

Our study also has a number of important strengths. First, we used a large sample of young employees that was representative of the Dutch workforce. Second, we specifically focused on educational differences between young employees. Third, we used two-wave longitudinal data for our analyses, which allowed us to examine both direct and reversed relationships between the elements of the JD-R Model over time.

Implications for Theory

Our study offers new insights into differences between young employees of different educational levels. In line with earlier studies (e.g., Adler & Ostrove, 1999; Akkermans et al., 2009) young employees with lower educational levels generally reported less favorable working conditions, and poorer wellbeing and performance. Our results show that the basic principles of the JD-R model (Demerouti et al., 2001) also hold for young employees with lower educational levels. Contrary to our expectations though, we did find differences between educational groups with regard to the relationships in the JD-R model, suggesting that the motivational and health impairment processes may differ across educational levels. Specifically, health impairment processes may be more prominent among employees with high educational levels, whereas stimulating motivational processes may be especially important for those with lower levels of education.

Future research could specifically examine how those young workers with lower levels of education can be motivated, and how those with higher levels of education can be prevented from experiencing strain. Moreover, it would be interesting to study whether this also has an effect on outcome measures other than health and performance, for example their sickness absence.

We also found a reciprocal relationship between dedication and performance, and between emotional exhaustion and performance among individuals with lower levels of education. These findings indicate that there may be a gain cycle of performance in motivational processes, whereas there may be a loss cycle in health impairment processes. A sense of performing well may be especially important for these employees, possibly as a means of compensating their generally less favorable working conditions. These findings further support a multi-directional view of work and mental health (De Lange et al., 2008). Future studies should examine this issue in more detail, for example by studying the underlying psychological processes of these potential cycles among young employees with lower levels of education.

Implications for Practice

An imbalance seems to exist for young employees with lower educational levels with regard to their job resources and demands, because they have fewer job resources at work, but more physical demands, compared with employees with a high level of education. These findings suggest that young employees with lower educational levels may be at risk for overcompensating at work (e.g., working harder or longer without having sufficient recovery from their efforts) because they have fewer resources to deal with demands compared with their higher educated counterparts. They are also more likely to experience less dedication, more exhaustion, and poorer health and performance, possibly because they generally work in a more cyclical and monotonous work environment. Therefore, it is crucial that HR policies and career counseling programs support this group of employees by creating

more job resources, and by stimulating motivation and wellbeing during their first years of work. For example, they may appoint a mentor to their young employees who can provide support and guidance in managing the many new tasks and responsibilities.

This study also demonstrates the importance of self-perceived performance for young employees with lower levels of education. When these young workers feel that they are performing well, they subsequently become more dedicated and less exhausted. Because a sense of competence is so essential for this group, it is important that managers and HR consultants focus on this aspect by providing positive reinforcement and constructive feedback when supervising and supporting these young employees. Stimulating job resources, but also a sense of performing well, seems a fruitful combination of strategies to stimulate motivation and to reduce strain in young employees.

Implications for Society

Our findings demonstrate that differences exist between young individuals of varying educational levels with regard to job characteristics, work-related wellbeing, health, and performance. It is important to monitor these aspects and to intervene on these aspects in order to promote the occupational health and performance of these young employees. This is especially relevant because young employees have been struck hardest by the worldwide economic crisis, and because management of one's work and career is becoming ever more complex and challenging. Both research and practice may use the unique characteristics of each group to maintain a healthy and productive young workforce on the labor market.

References

Adler, N. E., Boyce, T., Chesney, M. A., Cohen, S., Folkman, S., Kahn, R. L., & Syme, S. L. (1994). Socioeconomic status and health. The challenge of the gradient. *American Psychologist*, *49*, 15-24.

Adler, N. E., & Ostrove, J. M. (1999). Socioeconomic status and health: What we know and what we don't. *Annals of the New York Academy of Sciences*, *896*, 3-15.

Akkermans, J., Brenninkmeijer, V., Blonk, R. W. B., & Koppes, L. L. J. (2009). Fresh and healthy? Well-being, health and performance of young employees with intermediate education. *Career Development International, 14*, 671-699.

Arbuckle, J. L. (2011). *IBM SPSS AMOS 20 user's guide*. Springhouse, PA: Amos Development Corporation.

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology, 22*, 309-328.

Bakker, A. B., Demerouti, E., De Boer, E., & Schaufeli, W. B. (2003a). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior, 62*, 341-356.

Bakker, A., Demerouti, E., & Schaufeli, W. (2003b). Dual processes at work in a call centre: An application of the Job Demands-Resources model. *European Journal of Work and Organizational Psychology, 12*, 393-417.

Bakker, A. B., Hakanen, J. J., Demerouti, E., & Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology, 99*, 274-284.

Boyd, C. M., Bakker, A. B., Pignata, S., Winefield, A. H., Gillespie, N., & Stough, C. (2011). A longitudinal test of the Job Demands-Resources model among Australian university academics. *Applied Psychology: An International Review, 60*, 112-140.

De Lange, A. H., Taris, T. W., Kompier, M. A. J., Houtman, I. L. D., & Bongers, P. M. (2004). The relationship between work characteristics and mental health: Examining normal, reversed and reciprocal relationships in a 4-wave study. *Work & Stress*, *18*, 149-166.

De Lange, A. H., De Witte, H., and Notelaers , G. (2008). Should I stay or should I go? Examining the longitudinal relation between job resources and work engagement for stayers versus movers. *Work & Stress, 22*, 201-233.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The Job Demands-Resources model of burnout. *Journal of Applied Psychology, 85*, 499-512.

Doty, D., & Glick, W. (1998). Common method bias: does common methods variance really bias results? *Organizational Research Methods, 1*, 374 – 406.

Elfering, A., Semmer, N. K., Tschan, F., Kälin, W., & Bucher, A. (2007). First years in job: A three-wave analysis of work experiences. *Journal of Vocational Behavior, 70*, 97-115.

European Commission (2012). *Employment and Social Developments in Europe 2011*. Luxembourg: Publications Office of the European Union.

González-Roma, V., Schaufeli, W. B., Bakker, A.B., & Llorens, S. (2006). Burnout and work engagement: independent factors or opposite poles? *Journal of Vocational Behavior, 68*, 165-174.

Goodman, S. A., & Svyantek, D. J. (1999). Person-organization fit and contextual performance: Do shared values matter? *Journal of Vocational Behavior, 55,* 254-275.

Goodwin, J., & O'Connor, H. (2007). Continuity and change in the experiences of transition from school to work. *International Journal of Lifelong Learning, 26*, 555-572.

Hakanen, J. J., Schaufeli, W. B., and Ahola, K. (2008). The Job Demands-Resources model: a three-year cross-lagged study of burnout, depression, commitment, and work engagement. *Work & Stress, 22*, 224-241.

Hobfoll, S. E. (1989). Conservation of Resources. A New Attempt at Conceptualizing Stress. *American Psychologist, 44*, 513-524.

Houtman, I. L. D., Goudswaard, A., Dhondt, S., Van der Grinten, M., Hildebrand, V., & Kompier, M. (1995). *Evaluatie van de monitorstudie naar stress en lichamelijke belasting*. [Evaluation of the monitor for stress and physical strain]. VUGA, Den Haag.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *1*, 1-55.

Karasek, R. A. (1985). *Job Content Questionnaire and User's Guide.* University of Massachusetts, Department of Work Environment, Lowell.

Karasek, R., Brisson, C., Kawakami, N., Houtman, I., Bongers, P., and Amick, B. (1998). The Job Content Questionnaire (JCQ): an instrument for internationally comparative assessments of psychosocial job characteristics. *Journal of Occupational Health Psychology, 3*, 322-355.

Koivisto, P., Vuori, J., & Nykiri, E. (2007). Effects of the school-to-work group method among young people. *Journal of Vocational Behavior, 70*, 277-296.

Koppes, L. L. J., De Vroome, E. M. M., & Van den Bossche, S. N. J. (2010). *The Netherlands Working Conditions Cohort Study*. Hoofddorp: TNO.

Korunka, C., Kubicek, B., Schaufeli, W. B., & Hoonakker, P. (2009). Work engagement and burnout: testing the robustness of the Job-Demands Resources model. *The Journal of Positive Psychology, 4*, 243-255.

Kristensen, T., & Borg, V. (2000). *Copenhagen Psychosocial Questionnaire (COPSOQ)*. Copenhagen: National Institute of Occupational Health.

Kuijpers, M. A. C. T., & Meijers, F. (2012). Learning for now or later? Career competencies among students in higher vocational education in The Netherlands. *Studies in Higher Education, 37*, 449-467.

Llorens, S., Schaufeli, W., Bakker, A., & Salanova, M. (2007). Does a positive gain spiral of resources, efficacy beliefs, and engagement exist? *Computers in Human Behavior, 23*, 825-841.

Mauno, S., Kinnunen, U., & Ruokolainen, M. (2007). Job demands and resources as antecedents of work engagement: a longitudinal study. *Journal of Vocational Behavior, 70,* 149-171.

Nieuwenhuis, L., Coenen, J., Fouarge, D., Harms, T., & Oosterling, M. (2012). *De creatie van publieke waarde in het middelbaar beroepsonderwijs.* [The creation of public value in intermediate vocational education.] Retrieved from http://www.nwo.nl/files.nsf/pages/NWOP_8YRECJ/$file/PubliekewaardevanhetMBO.pdf

Peterson, U., Bergström, G., Demerouti, E., Gustavsson, P., Asberg, M., & Nygren, A. (2011). Burnout levels and self-rated health prospectively predict future long-term sickness absence: a study among female health professionals. *Journal of Occupational and Environmental Medicine, 53*, 788-793.

Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and the recommended remedies. *Journal of Applied Psychology*, *88*, 879-903.

Raad voor Werk en Inkomen (2009). *Arbeidsmarktanalyse 2009*. [Analysis of the labor market 2009]. Raad voor Werk en Inkomen.

Raad voor Werk en Inkomen (2010). *Arbeidsmarktanalyse 2010*. [Analysis of the labor market 2010]. Raad voor Werk en Inkomen.

Ryan, P. (2001). The school-to-work transition: a cross-national perspective. *Journal of Economic Literature, 39*, 34-92.

Savickas, M. L. (1998). The transition from school to work: a developmental perspective. *Career Development Quarterly, 47*, 326-336.

Schaufeli, W. B., & Bakker, A. B. (2003). *Voorlopige handleiding Utrechtse Bevlogenheidsschaal (UBES).* [Preliminary manual of the Utrecht Work Engagement Scale]. Universiteit Utrecht: sectie Psychologie van Arbeid, Gezondheid en Organisatie.

Schaufeli, W. B., & Bakker, A. B. (2004a). Bevlogenheid: een begrip gemeten. [Work engagement: Measuring a concept.] *Gedrag & Organisatie, 17*, 89-112.

Schaufeli, W. B., & Bakker, A. B. (2004b). Job demands, job resources, and their relationship with burnout and engagement. *Journal of Organizational Behavior, 25*, 293-325.

Schaufeli, W. B., & Van Dierendonck, D. (2000). *Handleiding van de Utrechtse Burnout Schaal (UBOS).* [Manual of the Utrecht Burnout Scale]. Swets & Zeitlinger, Lisse.

Schaufeli, W. B., Salanova, M., González-Roma, V., & Bakker, A.B. (2002). The measurement of engagement and burnout: a two sample confirmatory factor analytic approach. *The Journal of Happiness Studies, 3*, 71-92.

Schaufeli, W. B., & Taris, T. W. (2005). The conceptualization and measurement of burnout: common grounds and words apart. *Work & Stress, 19,* 256-262.

Schumacker, R., & Lomax, R. (2004). *A Beginner's Guide to Structural Equation Modeling*. Second Edition, Lawrence Erlbaum Associates.

Smulders, P. G. W. (2005). *Jongere en oudere werknemers: hun werk, werktijden, ongevallen en verzuim*. [Younger and older employees: their work, work schedules, accidents, and absence]. Hoofddorp: TNO.

Spector, P. E. (2006). Method variance in Organizational research. *Organizational Research Methods, 9*, 221-232.

Statistics Netherlands (2003). *Permanent Onderzoek Leefsituatie (POLS) Gezondheid 2004*, [Integrated System of Social Surveys 2004]. Heerlen: Centraal Bureau voor de Statistiek.

Taris, T. W., & Kompier, M. (2003). Challenges in longitudinal designs in occupational health psychology. *Scandinavian Journal of Work, Environment & Health*, *29*, 1-4.

Taris, T., & Kompier, M. (2006), Games researchers play – extreme Group analysis and mediation analysis in longitudinal occupational health psychology, *Scandinavian Journal of Work, Environment and Health, 32*, 463 – 472.

Toppinen-Tanner, S., Kalimo, R., & Mutanen, P. (2002). The process of burnout in white-collar and blue-collar jobs: eight-year prospective study of exhaustion. *Journal of Organizational Behavior, 23*, 555-570.

Upmark, M., Lundberg, I., Sadigh, J., & Bigert, C. (2001). Conditions during childhood and adolescence as explanations of social class differences in disability pension among young men. *Scandinavian Journal of Public Health, 29*, 96-103.

Van den Bossche, S. N. J. (2004). *Intimidatie en geweld op het werk*. [Intimidation and violence at work.] Hoofddorp: TNO.

Van der Heijden, B. I. J. M., De Lange, A. H., Demerouti, E., & Van der Heijde, C. M. (2009). Age effects on the employability-career success relationship. *Journal of Vocational Behavior, 74*, 156-164.

CHAPTER 4

COMPETENCIES FOR THE CONTEMPORARY CAREER: DEVELOPMENT AND PRELIMINARY VALIDATION OF THE CAREER COMPETENCIES QUESTIONNAIRE

Appeared as:

Akkermans, J., Brenninkmeijer, V., Huibers, M., & Blonk, R. W. B. (2013). Competencies for the Contemporary Career: Development and Preliminary Validation of the Career Competencies Questionnaire. *Journal of Career Development*. *Journal of Career Development, 40*, 244-266.

Chapter 4

4.1. Introduction

The traditional career has been portrayed as a linear path in which employees develop within a single organization and where growth occurs vertically in the hierarchy of a particular organization (Arthur, 1994; Eby, Butts, & Lockwood, 2003). Career development was primarily considered to be achieved by accumulating job competencies and gaining experience in a specific job. In recent decades, however, more dynamic careers have become apparent, in which employees develop through horizontal shifts between multiple organizations (Arnold & Cohen, 2008; Arthur & Rousseau, 1996). This type of career, in which employees must take responsibility for their employability, is becoming more dominant in the labor market (Vuori, Toppinen-Tanner, & Mutanen, 2011), with employees having flexible contracts, changing jobs more often (forced and by free will), and their employment rates decreasing due to the worldwide financial crisis (European Commission, 2012; Raad voor Werk en Inkomen, 2012).

To obtain and retain a job in this changing labor market, individuals increasingly need career competencies that can help them manage their career (Van der Heijde & Van der Heijden, 2006). This may especially be the case for younger workers at the start of their careers as they are at greater risk of finding only temporary employment, experiencing unsatisfactory employment, poor work socialization, and high levels of discontinuity and under-employment (European Commission, 2012; Koivisto, Vuori, & Nykyri, 2007; Koivisto, Vuori, & Vinokur, 2010). Our study aims to increase the understanding of career competencies, which for the purpose of this paper we have defined as "*knowledge, skills, and abilities central to career development, which can be influenced and developed by the individual*." We provide a framework of career competencies by integrating several perspectives from the scientific literature, and we hope to offer new insights into career development, particularly for young workers. The current study also provides a new measurement instrument for career competencies which may be applicable in HR practices and may serve as a basis for career guidance in educational settings.

The Concept of Career Competencies

On reviewing the literature on career competencies with the aim of developing a measurement instrument using an integrative framework, we found four different perspectives: the boundaryless career perspective, the protean career perspective, the career self-management perspective, and the human capital perspective.

Boundaryless Career Perspective. To understand career development, Defillippi and Arthur (1994) discriminated between job skills and career competencies in their *boundaryless career* perspective. According to Defillippi and Arthur, organizations have to continuously adapt to changing markets and demands. This adaptive process requires increasing flexibility of the workforce, matching job skills with new requirements. Career competencies are assumed to play a crucial role in maintaining the employee's value to the organization (Arthur & Rousseau, 1996). Defillippi and Arthur (1994) discriminate between three "dimensions of knowing" that facilitate this adaptive process. The *knowing why* dimension is related to career motivation, identification with work, and giving personal meaning to work. The *knowing whom* dimension concerns career-relevant networks and the different ways in which individuals can use their network. Finally, the *knowing how* dimension represents career-relevant skills (i.e., skills relevant to effectively shaping a career) and job-related knowledge (i.e., knowledge needed to perform a specific job). This framework has been used in multiple studies. For example, Jones and Lichtenstein (2000) performed an interview study among 23 employees, De Janasz and Sullivan (2004) presented their theoretical reflections on career competencies in the boundaryless career, and Eby, Butts, and Lockwood (2003) undertook an empirical survey study among 458 university alumni.

Protean Career Perspective. The concept of the *protean career* was introduced by Mirvis and Hall (1994) and Hall (1996). Although there is some overlap with the boundaryless career perspective, the protean career perspective emphasizes the added value of career competencies for subjective career success (e.g., career satisfaction), rather than their

organizational value (Briscoe & Hall, 2006; Briscoe, Hall, & DeMuth, 2006). Anakwe, Hall, and Schor (2000) described three types of career competencies: *self-knowledge skills* (e.g., self-awareness, effective listening, time and stress management), which refer to reflective skills with regard to individual development and career self-management; *interpersonal knowledge skills* (e.g., conflict management, assertiveness, and delegation), which refer to knowing how others may contribute to the individual's career; and *environmental knowledge skills*, which pertain to fully understanding one's environment, with individuals constantly having to monitor their environment in order to understand how to adapt their identity to change. It is important to note that the authors emphasize the element of knowledge, referring to the importance of reflection in career development. Gaining skills alone is not enough: knowing when and how to use them is also essential. The protean career perspective has been used in studies such as Hall and Moss's (1998) theoretical reflection on continuous learning in the protean career, and an empirical survey by Anakwe et al. (2000) among 446 students and graduates.

Career Self-Management Perspective. Concordant with the protean career paradigm, the *career self-management* perspective emphasizes that the individual has the primary responsibility for managing his or her career (King, 2004). The career self-management perspective emphasizes the proactive nature of career competencies. De Vos, De Clippeleer, and Dewilde (2009) defined proactive career behaviors as deliberate actions undertaken by individuals in order to realize their career goals. They discerned two components of career self-management: a *behavioral component* (e.g., career planning, creating opportunities), which refers to individuals' behaviors in managing their careers; and a *cognitive component* (e.g., career insight), which refers to the perspectives that individuals develop with respect to their career motivations and aspirations. Various studies focusing on career self-management have proposed conceptually similar career self-management behaviors. For example, Kossek, Roberts, Fisher, and Demarr (1998) performed a three-stage study among professionals in

the U.S. transportation industry, and De Vos et al. (2009) also performed a three-stage study among graduates in Belgium.

Human Capital Perspective. The fourth perspective approaches career competencies from a *human capital* perspective, focusing on lifelong learning and the employability of individual employees. Career competencies are structured into *reflective, proactive*, and *interactive* behaviors (Kuijpers, Meijers, & Gundy, 2011). Kuijpers (2003) distinguished four career competencies: career reflection (reflective), self-presentation (interactive), career control, and work exploration (proactive), and this framework of career competencies was refined in several empirical studies. In an empirical study among 1,579 employees in 16 Dutch organizations, Kuijpers and Scheerens (2006) discerned six different career competencies after performing factor analyses on a large sample of employees: *career development ability* refers to the degree to which employees are capable of realizing personal goals; *reflection on capacities* and *reflection on motives* pertain to reviewing one's own competencies, desires and values with respect to one's career; *networking* involves setting up contacts that are relevant to one's career; *work exploration* refers to an orientation towards aligning one's own identity and competencies with the values and competencies required in a specific work situation; and *career control* refers to career-related planning and influencing learning and work processes. Kuijpers, Schyns, and Scheerens (2006) presented a slightly different set of six career competencies: career-actualization ability, career reflection, motivation reflection, work exploration, career control, and networking.

Development of a Framework of Career Competencies

Based on the perspectives described above, we emphasize that career competencies pertain to the individual's career as a whole and may therefore be clearly distinguished from job skills and work competencies, which are aimed at successfully performing a job. In addition, concepts such as a work-home balance and stress management should be distinguished from career competencies. These concepts may be *related* to career

competencies (e.g., developing career competencies may help individuals to gain a healthy work-home balance), but they are not career competencies in themselves. Furthermore, we emphasize the developmental and behavioral perspectives on career competencies. Earlier studies (e.g., Eby et al., 2003) have proposed dispositional characteristics such as proactive personality and extraversion as career competencies. These dispositional concepts may be *related* to career competencies (e.g., individuals with high scores for proactive personality may master career competencies more easily). According to our definition, however, career competencies concern knowledge, skills, and abilities that can be *developed*. Such a perspective may be fruitful for designing and evaluating interventions that assist individuals to develop and strengthen their career competencies. Based on the criteria mentioned above, we define career competencies as "*knowledge, skills, and abilities central to career development, which can be influenced and developed by the individual*."

The four perspectives on career competencies described above have similar views on the competencies necessary to successfully manage a career. First, all four perspectives discuss the importance of *reflective career competencies*, which are referred to as "knowing why," "self-knowledge skills," "the cognitive component," and "reflective behaviors." A closer examination of the specific competencies that are discerned shows that these reflective career competencies may be divided into *reflection with regard to motivation* (e.g., "career motivation" in Eby et al., 2003; "reflection on motives" in Kuijpers & Scheerens, 2006), and *reflection with regard to qualities* (e.g., "self-awareness of development" in Anakwe et al., 2000; "reflection on capacities" in Kuijpers & Scheerens, 2006). Second, all perspectives underline the importance of *communicative career competencies* in discussing "knowing whom competencies," "interpersonal knowledge skills," "networking, seeking feedback, and seeking career guidance," and "interactive behaviors." Two career competencies stand out in this category: *networking* (e.g., King, 2004; Kuijpers et al., 2011) and *self-profiling* (e.g., "self-presentation" in Kuijpers, 2003; "self-nomination"

in Noe, 1996). Third, the four perspectives emphasize the relevance of *behavioral career competencies*, which are referred to as "knowing how," "environmental knowledge skills," "the behavioral component," and "proactive behaviors." Two specific career competencies dominate in this category: *work exploration* (e.g., Anakwe et al., 2000; Kuijpers et al., 2011) and *career control* (e.g., "career planning" in De Vos et al., 2009; "creating opportunities" in Noe, 1996). Table 1 provides an overview of our theoretical integration of these perspectives.

Table 1

Integration of four perspectives on career competencies in three overarching categories.

	Reflective Competencies	**Communicative Competencies**	**Behavioral Competencies**
Boundaryless Career	*Knowing why*	*Knowing whom*	*Knowing how*
Perspective	Career insight	Experience in mentoring relations	Career identity
	Openness to experience	Extensiveness of networks	Career-related skills
	Proactive personality		
Protean Career	*Self-knowledge skills*	*Interpersonal knowledge skills*	*Environmental knowledge skills*
Perspective	Self-assessment	Assertiveness	Adapting to changing environment
	Self-awareness	Conflict management	Exploration
	Modifying self-perceptions	Dialogue skills & Effective listening	Flexibility
		Influencing others	Time and stress management
		Seeking out relationships	

Table 1 (CONTINUED)

	Reflective Competencies	**Communicative Competencies**	**Behavioral Competencies**
Career Self-management	*Cognitive component*		*Behavioral component*
Perspective	Career insight	Developmental feedback seeking	Boundary management
	Formulating plans	Influence behaviors	Career planning
		Networking	Creating opportunities
		Seeking career guidance	Job mobility preparedness
		Self-nomination	Positioning behavior
Human Capital	*Reflective Behaviors*	*Interactive behaviors*	*Proactive behaviors*
Perspective	Career reflection	Networking	Career actualization ability
	Reflection on motives	Self-presentation	Career development ability
	Reflection on capacities		Career control
			Work exploration

Taking the various perspectives into account, we arrived at an integrative framework that consists of three dimensions: reflective career competencies, communicative career competencies, and behavioral career competencies. Moreover, in each dimension we discerned two specific career competencies. *Reflective career competencies* focus on creating an awareness of one's long-term career and on combining personal reflections and one's professional career. The two career competencies derived from this dimension are: *reflection on motivation*, defined as "reflecting on values, passions, and motivations with regard to one's personal career"; and *reflection on qualities*, defined as "reflecting on strengths, shortcomings, and skills with regard to one's personal career."

Communicative competencies pertain to being able to effectively communicate with significant others to improve one's chances of career success. The two communicative career competencies are: *networking*, defined as "the awareness of the presence and professional value of an individual network, and the ability to expand this network for career-related purposes"; and *self-profiling*, defined as "presenting and communicating personal knowledge, abilities and skills to the internal and external labor market."

Behavioral competencies focus on being able to actually shape one's career by proactively taking action. The two career competencies derived from this dimension are: *work exploration*, defined as "actively exploring and searching for work-related and career-related opportunities on the internal and external labor market"; and *career control*, defined as "actively influencing learning processes and work processes related to one's personal career by setting goals and planning how to fulfill them." This proposed framework of six career competencies is the basis of and the first step in developing the Career Competencies Questionnaire (CCQ).

Research Overview

Study 1 describes the process of scale development, which involved an interview study, two qualitative pilot studies and exploratory factor analyses

(EFA) to check the content validity of the framework and to construct the initial item set. In Study 2 we tested the internal consistency and the factorial, discriminant, and incremental validity of the CCQ. Our research hypotheses were as follows:

Hypothesis 1*: The items of the CCQ show an oblique six-factor structure.*

Hypothesis 2a*: The CCQ has good factorial validity: the six-factor model will fit the data better than a competing one-factor or three-factor model.*

Hypothesis 2b*: The CCQ has good factorial validity: the six first-order career competency factors will load onto a common second-order factor.*

Hypothesis 3*: The CCQ has good discriminant validity: the items are positively related to, but conceptually distinct from, career motivation, general self-efficacy, task performance, and perceived employability.*

Hypothesis 4*: The CCQ has good incremental validity: the items have added value in the prediction of perceived employability over and above the effects of career motivation, general self-efficacy and task performance.*

4.2. STUDY 1: SCALE DEVELOPMENT

After performing our literature review, we undertook a number of semi-structured interviews to examine whether our framework had sufficient content validity. We interviewed 22 academics and practitioners (e.g., HR professionals, managers, educational coordinators, and medical officers), and also organized focus-group sessions with 43 young employees. We explicitly asked the participants their opinions on the content and the importance of our framework. In addition, we provided the interviewees with a large number of preliminary sample items and asked them to rate which ones they found most appropriate. We also asked them for concrete examples that we could use to refine the items. Both the interviews and the

focus groups were recorded and analyzed by three researchers. The analyses were performed at a thematic level, that is, the researchers analyzed the qualitative data by examining which topics were most often brought up in the semi-structured part of the interviews and in the focus groups. We used this input when formulating the initial 32 items of the CCQ.

We subsequently performed a consultation with a panel of experts and a pilot study, both of which were performed simultaneously. In this panel of experts, ten academic researchers in the field of Occupational and Organizational Psychology (four PhD students, three assistant professors, one associate professor and two full professors) checked the 32 items for clarity and potential overlap. The main aim of this consultation was to check the questionnaire with regard to content (i.e., whether the experts felt our items reflected the competencies well), and with regard to technical issues (e.g., potential overlap in items, clear formulations). In the pilot study, we administered the initial 32 items of the CCQ to 81 students (aged 16-30 years) who were on full-time internships. Their mean age was 22 years (SD = 2.14) and 67.9% were female. We also consulted supervisors/coaches: two teachers (one male, one female) and one career coach (female). This pilot study was primarily aimed at checking whether our items were understandable to our target group (e.g., to prevent the use of jargon).

After performing and evaluating the interview study and the qualitative pilot studies, we ran EFA to reduce the over-inclusive set of 32 items and to select the items for the measurement instrument. In accordance with our integrated framework of career competencies we expected to find a six-factor structure in the data (H1).

4.2.1. Method

The data for the EFA were derived from students from five Dutch intermediate vocational schools. These students had all received intermediate vocational education, being educated in a specific job industry for 3 to 4 years (e.g., healthcare, metal industry, administrative work). They had all completed multiple internships, ending with a full-time internship period of 4 days

per week. A total of 243 questionnaires were distributed in the first four institutions by the researchers. After we obtained informed consent, the participants filled out a paper-and-pencil questionnaire. A researcher was constantly present during this process to answer potential questions and to collect the completed questionnaires. All 243 questionnaires were completed and returned to the researchers. Another 40 questionnaires were sent to a team leader at the fifth institution by mail. A total of 17 completed questionnaires were returned. In total, 283 were distributed, resulting in a total response of 260 questionnaires (response rate = 91.9%). A number of participants had to be excluded from the analyses due to missing and/or clearly incorrect answers (e.g., straight lines on a page), or because they did not meet the age criterion of 16 to 30 years. This selection criterion was added because our study was part of a program aimed at young employees with a maximum age of 30 years. A total of 41 questionnaires were excluded, resulting in a total of 219 participants. The mean age of the participants for the EFA was 18.9 years (*SD* = 1.6) and 59.8% were male. They worked an average of 19.2 hours per week (*SD* = 11.3) and the majority had jobs/internships in the fields of Animal Welfare (23.3%), Agriculture and Fishery (32.0%), and the Flower Industry (31.5%).

Measurement Instruments

Career competencies were measured with the 32-item CCQ. The items were measured on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). All of the subscales were measured with five items, except for networking (seven items). An example of an item on reflection on motivation was, “I know what I like in my work,” an example of an item on reflection on qualities was, “I know my strengths in my work,” an example of an item on networking was, “I know how to ask for advice from members of my network,” an example of an item on self-profiling was, “I am able to show others what I want to achieve in my career,” an example of an item on work exploration was, “I know how to search for developments in my area of work,” and an example of an item

on career control was, “I can make clear career plans.”

4.2.2. Results

The results of our interview and focus group study provided support for the content validity of our framework of career competencies: the participants underlined the importance of our framework and the way in which we conceptualized the six career competencies into three dimensions. In addition, the participants of the interview study provided us with valuable advice on selecting and formulating items by giving concrete examples and by emphasizing certain aspects (e.g., that networking pertains to significant others both *within* and *outside* the organization an individual works in). Their feedback assisted in the formulation of the initial 32 items of the CCQ. After consulting with the panel of experts, we rephrased three items that showed too much overlap. Based on the results of the pilot study among 81 students we also refined 7 of the 32 items because they were either unclear, too difficult, or contained jargon.

Subsequently, we performed EFA with principal components extraction. As we hypothesized that the six career competencies would be part of a second-order construct, we expected the dimensions to be related. For this reason, we used an oblique rotation method (Fabrigar, Wegener, MacCallum, & Strahan, 1999). We extracted six factors in our analyses, concordant with our integrative framework of six career competencies. These six factors explained a total of 58.56% of the common variance, most of it being attributable to the first factor (29.32%). Overall, virtually all of the 32 items loaded highest onto the factor that the panel of experts placed them in (except one item for networking), thereby supporting the content validity of the items. We deleted one item on reflection on motivation and one item on reflection on qualities based on feedback suggesting potential overlap during the pilot studies. We had deliberately included these two potentially overlapping items to determine which would have the highest factor loading. Accordingly, we deleted those with the lowest factor loadings. After deleting these initial items, the criterion for other

possible item removals was a low factor loading (< .55), on the basis of which we deleted one item on reflection on motivation (.53), three items on networking (.01, .11, and .30), two items on self-profiling (.37 and .41), two items on work exploration (.19 and .24), and one item on career control (.14). The results for the items on reflection on qualities were somewhat ambiguous because they loaded onto the same factor as reflection on motivation (loadings between .57 and .66). These results seemed to indicate one common factor for the reflective career competencies. However, both our literature review and our interviewees indicated otherwise. We ran an additional EFA on these eight items and found that they clearly loaded onto two separate factors, with loadings between .65 and .78 for reflection on motivation, and loadings between .59 and .88 for reflection on qualities. Based on these results we decided to maintain two separate factors.

In total, 11 items were deleted from the initial item pool, resulting in a 21-item CCQ. We included these 21 items in the second step of the EFA, again extracting six factors. Together, these factors explained 74.67% of common variance, with the highest variance attributable to the first factor (35.17%). All items loaded highly onto their expected factors, with loadings between .72 and .91. The correlations between factors were all between .16 and .44, the latter being between reflection on motivation and reflection on qualities. Despite this relatively high positive correlation, the items on reflection on motivation and reflection on qualities loaded onto clearly separate factors. Loadings onto their proposed factor were between .85 and .91, with cross-loadings between .37 and .56. We concluded that the 21 items show an oblique six-factor structure, thereby confirming Hypothesis 1.

4.3. STUDY 2: SCALE VALIDATION

After reducing the initial item set to 21 items, we administered the CCQ to a group of young employees. First, we tested the factorial validity by comparing several competing models, whereby we expected that the six-factor model would show the best fit (H2a), and that the six factors would load onto a common second-order factor (H2). We analyzed both

Hypotheses 2 and 3 with structural equation modeling (SEM). Second, we examined the discriminant validity by comparing career competencies with several related constructs (H3), outlined briefly below. Third, we investigated the incremental validity of the CCQ items using linear regression (H4).

4.3.1. Career Competencies and Related Constructs

Before describing our methods below, here we provide a brief outline of the constructs we consider related but not equivalent to career competencies. These are measured when testing Hypothesis 3. *Career motivation*, typified as having a positive attitude and intention with regard to one's career, can be considered a motivational predictor of actually performing career-related behaviors (Ajzen, 2005; Giles & Rea, 2002). Earlier studies show that positive motivation towards career-related behaviors was predictive of actual behaviors, both for employees and for students (Millar & Shevlin, 2003; Van Hooft & De Jong, 2009), and that a high score on career motivation predicted a higher score on both objective and subjective career success (Day & Allen, 2004). Based on these findings we expected that career motivation would be different from, but positively related to, career competencies.

General self-efficacy (GSE) refers to the perceived ability to perform across a variety of different situations (Bandura, 1997; Eden, 2001; Judge, Erez, Bono, & Thoresen, 2002). GSE captures differences among individuals in their tendency to view themselves as capable of meeting various demands in a broad array of contexts. It can be considered an evaluation of one's competencies in general. Thus, we argue that GSE and career competencies are positively related, but conceptually different.

Task performance refers to fulfilling the core processes required by the job and it is a widely used measure to assess subjective performance (Goodman & Svyantek, 1999). Self-rated performance has been shown to be related to the experience of successful career development, and it is an important indicator of career success according to the "contest-mobility" perspective (Ng, Eby, Sorensen, & Feldman, 2005). This implies that task performance and career competencies may both be predictors of

successful career development. In other words, individuals who perceive themselves as competent in managing their career may also feel competent in managing their job. Therefore, we expect that the concepts of career competencies and task performance are positively related, though conceptually different constructs.

Perceived employability has been defined in different ways, although the common denominator is the perception of an ability to gain equivalent or better work in the present and in the future (Fugate, Kinicki, & Ashforth, 2004; Van der Heijde & Van der Heijden, 2006). Recent studies on employability have focused on the individual level (De Cuyper, Bernhard-Oettel, Berntson, De Witte, & Alarco, 2008; De Cuyper & De Witte, 2008; Forrier & Sels, 2003). Perceived employability can be characterized as one's perception of an ability to keep the job that one has or to get the job one desires (Rothwell & Arnold, 2007). Findings have shown that perceived employability is related to individual motivation at work (Fugate at al., 2004), general wellbeing (De Cuyper et al., 2008), proactive coping with change, and performance (Fugate & Kinicki, 2008). We consider perceived employability to be an outcome of career competencies, because mastering these competencies should lead individuals to have a more positive perception of their ability to find and retain employment. As such, we view perceived employability as conceptually distinct from, but positively related to, career competencies.

4.3.2. Method

Participants and Procedure

The data from Study 2 were obtained from intermediate vocational students in two different Dutch educational institutions. The participants were on full-time internships at the end of their intermediate vocational education. After obtaining informed consent, the participants filled out the questionnaires during school hours with at least one researcher present. A total of 214 questionnaires were distributed, of which 212 were returned (response rate = 99.1%). The mean age in Study 2 was 19.5 years (*SD* = 1.8), with 46.2% female. The participants worked an average of 27.0 hours per

week (*SD* = 11.2), with the majority of this group employed in the fields of Health and Wellbeing (54.7%) and General Industry (22.2%).

Measurement Instruments

All items were measured on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*).

Career competencies were measured with the 21-item CCQ. Reflection on motivation, self-profiling, and work exploration were each measured with three items, while reflection on qualities, networking, and career control were each measured with four items. All items are shown in Table 2. Cronbach's alphas of the scales are presented in Table 3.

Career motivation was measured using a self-constructed 5-item scale based on Ajzen (2005) and Day and Allen (2004). An example of an item is, "I believe it is important to think about my career" (α = .87, indicating a good internal consistency, according to John & Benet-Martinez, 2000). This scale was positively related to the six career competencies and the other scales that were used, but no extremely high values were found, supporting the validity of this scale. Detailed information can be found in Table 3.

General self-efficacy was measured using a validated Dutch adaptation of a 10-item scale designed by Teeuw, Schwarzer, and Jerusalem (1994). This scale has been shown to be positively related to positive emotions and work engagement (Ouweneel, 2012), and to wellbeing, stress appraisal, and social relationships (Luszczynska, Gutiérrez-Doña, & Schwarzer, 2005). A sample item is, "Whatever happens, I will manage" (α = .89).

Task Performance was measured using a validated 9-item scale based on the questionnaire designed for this concept by Goodman and Svyantek (1999). This scale has been shown to be related to the organizational climate and person-job fit (Goodman & Svyantek, 1999), to be positively related to general health and job satisfaction, and negatively related to emotional exhaustion (Akkermans, Brenninkmeijer, Blonk, & Koppes, 2009). A sample item is, "You achieve the goals in your job" (α = .86).

Finally, *perceived employability* was measured using an adapted

version of the validated questionnaire from De Cuyper and De Witte (2008). This scale has been shown to be positively correlated with job satisfaction and employee wellbeing, and negatively correlated with job insecurity (De Cuyper et al., 2008; De Cuyper & De Witte, 2008). We changed some minor words from Flemish to Dutch, retaining the original content. The scale consisted of eight items. Sample items from this scale are, "I would be able to find a different, equivalent job" and "I am able to get different jobs with my current employer" (α = .84).

4.3.3. Results

Factorial Validity

The first step of the confirmatory factor analyses (CFA) included the 21 items in the first-order measurement model of the six proposed career competencies. Multiple indices were used to test the adequacy of fit based on their frequent use in the CFA literature and their suitability for comparing models (Tabachnik & Fidell, 2007). We tested three possible CFA models: a one-factor model (with all 21 items loading onto one latent factor), a three-factor model (with latent reflective, communicative, and behavioral factors), and a six-factor model (with the six individual career competencies). The one-factor model showed a poor fit to the data: χ^2 (189) = 665.08, p < .001), CFI = .75, TLI = .72, GFI = .75, RMSEA = .11. The three-factor model also showed poor model fit: χ^2 (186) = 484.46, p < .001, CFI = .84, TLI = .82, GFI = .81, RMSEA = .09. The hypothesized six-factor model showed the best fit to the data: χ^2 (174) = 253.45, p < .001, CFI = .96, TLI = .95, GFI = .91, RMSEA = .046. This model fitted the data significantly better than the one-factor and the three-factor models ($\Delta\chi^2$ (15) = 411.63, p < .001, and $\Delta\chi^2$ (12) = 231.01, p < .001, respectively). As shown in Table 2, the regression weights of all of the variables loading onto their respective factors are between .58 and .84. In line with Hypothesis 2a, the six-factor model was confirmed to be the best fitting first-order model.

In the second step, we performed a second-order CFA to see whether the six proposed career competencies would constitute an overarching

construct of career competencies (i.e., whether career competencies constitute a multidimensional construct). The fit indices of the second-order model were χ^2 (171) = 261.69, $p < .001$, CFI = .95, TLI = .94, GFI = .90, RMSEA = .05. The first-order factor loadings onto the second-order construct were all between .67 and .85 (see Table 2 for details of the first-order and second-order CFA analyses). These results confirm Hypothesis 2b, stating that the six first-order factors all load onto a common second-order factor, the overarching construct of career competencies.

Table 2

*Means, standard deviations, squared multiple correlations, and standardized loadings of the first-order and second-order confirmatory factor analysis (*N *= 212).*

Items	*M*	*SD*	R^2	Loadings 1st Order	Loadings 2nd Order
Reflection on Motivation	4.03	0.66			0.77
I know what I like in my work			0.39	0.63	
I know what is important to me in my career			0.66	0.61	
I can clearly see what my passions are in my work			0.53	0.82	
Reflection on Qualities	3.85	0.63			0.73
I know my strengths in my work			0.66	0.66	
I am familiar with my shortcomings in my work			0.38	0.64	
I am aware of my talents in my work			0.62	0.73	
I know which skills I possess			0.54	0.74	
Networking	3.61	0.67			0.74
I know a lot of people within my work who can help me with my career			0.47	0.62	
I know a lot of people outside of my work who can help me with my career			0.25	0.59	
I know how to ask for advice from people in my network			0.48	0.78	
I am able to approach the right persons to help me with my career			0.56	0.71	

Table 2 (CONTINUED)

Items	*M*	*SD*	R^2	Loadings 1st Order	Loadings 2nd Order
Self-Profiling	3.72	0.65			0.83
I can clearly show others what my strengths are in my work			0.36	0.67	
I am able to show others what I want to achieve in my career			0.66	0.78	
I can show the people around me what is important to me in my work			0.62	0.73	
Work Exploration	3.49	0.73			0.67
I know how to find out what my options are for becoming further educated			0.55	0.67	
I know how to search for developments in my area of work			0.56	0.68	
I am able to explore my possibilities on the labor market			0.48	0.58	
Career Control	3.41	0.72			0.70
I can make clear career plans			0.55	0.84	
I know what I want to have achieved in my career a year from now			0.42	0.74	
I can create a layout for what I want to achieve in my career			0.54	0.80	
I am able to set goals for myself that I want to achieve in my career			0.59	0.72	

Table 3

*Correlation matrix of the six career competencies with career motivation, general self-efficacy, performance, and employability (*N *= 212).*

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Career competencies	3.68	0.51	*.90*										
2. Reflection on motivation	4.03	0.66	0.76**	*.77*									
3. Reflection on qualities	3.85	0.63	0.53**	0.73**	*.82*								
4. Networking	3.61	0.67	0.51**	0.41**	0.76**	*.76*							
5. Self-profiling	3.72	0.65	0.51**	0.54**	0.52**	0.76**	*.77*						
6. Work exploration	3.49	0.73	0.36**	0.40**	0.41**	0.42**	0.67**	*.77*					
7. Career control	3.46	0.72	0.58**	0.42**	0.49**	0.54**	0.54**	0.80**	*.81*				
8. Career motivation	3.97	0.70	0.35**	0.28**	0.41**	0.38**	0.37**	0.33**	0.49**	*.87*			
9. General self-efficacy	3.60	0.56	0.41**	0.47**	0.50**	0.55**	0.39**	0.44**	0.23**	0.49**	*.89*		
10. Performance	3.72	0.49	0.38**	0.52**	0.39**	0.50**	0.36**	0.43**	0.38**	0.53**	0.60**	*.86*	
11. Perceived Employability	3.46	0.63	0.32**	0.36**	0.48**	0.40**	0.35**	0.38**	0.29**	0.39**	0.52**	0.50**	*.84*

Note. *$p < .05$; **$p < .01$. Cronbach's alphas are displayed italicized on the diagonal.

Discriminant Validity

We calculated bivariate correlations for the career competencies scales using the constructs of career motivation, general self-efficacy, performance, and perceived employability. The means, standard deviations, and correlation matrix can be found in Table 3. All constructs were positively related to each other, but no extremely high correlations were found. This suggests that although the constructs are significantly correlated, they are distinct. To further examine the discriminant validity of career competencies we compared the overarching latent factor of career competencies with latent factors for career motivation, general self-efficacy, performance, and perceived employability. Each factor was operationalized by two indicators representing parcels of the items, except for the latent factor of career competencies (which consisted of six indicators). We tested whether a five-factor model (using all constructs as separate factors) was superior to a one-factor model (collapsing all constructs into one factor) or to four-factor models (collapsing career competencies and one other construct at a time). As expected, the one-factor model showed a poor fit to the data. Dividing the model into the hypothesized five-factor model increased the fit significantly: $\Delta\chi^2$ (16) = 365.97, $p < .001$, CFI = .96, TLI = .94, GFI = .93, RMSEA = .07. This five-factor model also fitted the data better than any of the four-factor models, as displayed in Table 4. These results suggest that career competencies are indeed conceptually distinct from career motivation, general self-efficacy, performance, and perceived employability, thereby confirming Hypothesis 3.

Table 4

*Fit statistics of discriminant validity analyses (*N *= 212).*

Model description	χ^2	*df*	CFI	TLI	GFI	RMSEA
Five-Factor Hypothesized Model	116.34	61	.96	.94	.93	.07
Four Factors: Career Competencies and Career Motivation collapsed	214.26	70	.89	.86	.89	.10
Four Factors: Career Competencies and General Self-efficacy collapsed	240.21	70	.87	.83	.88	.11
Four Factors: Career Competencies and Performance collapsed	234.40	70	.88	.84	.88	.11
Four Factors: Career Competencies and Employability collapsed	178.54	70	.92	.89	.89	.09
One-Factor Null Model	482.31	77	.69	.64	.77	.16

Note. χ^2 = chi square; df = degrees of freedom; CFI = comparative fit index; TLI = Tucker-Lewis index; GFI = goodness of fit index; RMSEA = root mean square error of approximation.

Incremental Validity

We performed linear regression with SPSS to examine the incremental validity of the career competencies construct. In the first step, we tested the effects of career motivation, general self-efficacy, and task performance on perceived employability. The effect of general self-efficacy was significant (ß = .35, $p < .001$), but the effects of career motivation and task performance were not (ß = -.04, *ns*, and ß = .08, *ns*, respectively). When the career competencies construct was added to the regression in the second step,

it showed a significant positive association with perceived employability (ß = .36, $p < .001$). The effect of general self-efficacy on perceived employability also decreased (ß = .24, $p < .001$). As initial support for incremental validity was found, Hypothesis 4 was confirmed.

4.4. General Discussion

Career competency research is a relatively new and promising research area which may be especially relevant for young employees. In the current study, we presented an integrated framework of career competencies, developing and preliminarily validating the Career Competencies Questionnaire (CCQ).

Development and Validation of the Career Competencies Questionnaire

The literature in the field of career competency research exhibits four perspectives: the boundaryless career perspective (e.g., Defillippi & Arthur, 1994), the protean career perspective (e.g., Mirvis & Hall, 1994), the career self-management perspective (e.g., King, 2004), and the human capital perspective (e.g., Kuijpers, 2003). Building on these, we developed an integrated framework consisting of six career competencies: reflection on motivation, reflection on qualities, networking, self-profiling, work exploration, and career control. Based on this framework we designed the Career Competencies Questionnaire (CCQ), which we tested and preliminarily validated in two samples of young employees in a transitional phase from education to the labor market.

The results of the exploratory and confirmatory factor analyses indicate that the six career competencies selected for our framework are indeed separate entities that together constitute the overarching multidimensional concept of career competencies. The multidimensionality of the concept also indicates that the total sum scores of the scales may be used as an indicator of individual differences in career competencies (Rubio, Berger-Weger, & Tebbs, 2001). We also found initial support for discriminant and incremental validity. The results confirmed that career competencies are associated with, but conceptually different from, related concepts in the

field of career development, such as general self-efficacy, career motivation, performance, and perceived employability. These results point to the value of career competencies in career-related research and interventions.

As Arnold and Cohen (2008) stated, more empirical research is needed with regard to understanding and measuring career competencies. This study attempted to make a contribution by integrating the available literature, and by creating and empirically testing the CCQ. A clearer understanding of career competencies could add to our knowledge of career development by providing more insight into the knowledge, skills, and abilities that individuals need to successfully navigate their careers. Gaining more knowledge about the career competencies of young employees is particularly valuable because it provides further insight into the way in which starting employees develop, or could be assisted in the development of, their careers.

Limitations and Suggestions for Future Research

A number of limitations of our study need to be addressed, as well as directions and suggestions for future studies. First, we could not examine test-retest reliability because the datasets used in this study were cross-sectional in nature. This also prevented a test of predictive validity. In addition, some of the factors identified in the final version of the CCQ only contained three items. This raises some doubts with regard to the stability of the subscales. It would therefore be useful to replicate the current study with a longitudinal design to further investigate the reliability and stability of the CCQ.

A second limitation concerns the research group used for this study. The current study focused explicitly on young workers who had just started their careers (students with full-time internships). Future studies might replicate the findings among different age groups, different educational groups, and in different industries, allowing our results to be generalized to a larger population of workers.

Third, the value of subjective measures is increasingly being

emphasized in the literature (e.g., Rothwell & Arnold, 2007), but a common method bias due to the use of subjective measures might have been a problem. We would therefore recommend future researchers include more objective outcome measures and ratings from significant others in their studies. It would, for example, be interesting to see whether career competencies are related to actual career growth (e.g., number of promotions) and whether supervisors or colleagues judge the career competencies of an employee similarly to the employee's own judgment.

Finally, although we argued that contextual factors and dispositional characteristics are conceptually distinct from career competencies, they may be important concepts for career development. For example, individuals who score high for proactive personality and extraversion may master career competencies faster. In a similar vein, individuals who have mastered career competencies may be better at managing stress and finding a healthy balance between work and home. Future studies should therefore further investigate this interplay of career competencies, contextual factors, and dispositional characteristics.

Practical Implications

The findings of the current study have important implications with respect to several practical issues. First, the CCQ may be used in educational settings and in HRM policies as a diagnostic tool to monitor intern (where "work" refers to their internship in the questionnaire) and employee progress towards and in the labor market. The questionnaire could be used to determine the specific competencies that need to be developed to make a successful transition to working life, looking at progress in each competency. In addition, monitoring the mastery of career competencies during the school-to-work transition could provide insights into specific challenges young workers face when starting their career.

The integrative framework of six career competencies offers many possibilities for use in interventions. It may, for example, be used in employability programs. Reflecting on personal motivation and qualities,

being able to effectively communicate career needs, and being able to proactively seek opportunities and set goals are all competencies that could be important predictors of employability. Training employees to master these competencies may therefore be a fruitful starting point with respect to increasing their employability. This may especially be the case when combined with interventions that increase participants' self-efficacy. Mastering career competencies and gaining an increased sense of career-related self-efficacy could be a successful basis for effective career self-management.

A career competencies perspective may also be of value to current and future career counseling practitioners, who might use the CCQ as a monitoring tool or to gather information which can be used as input for their programs and advice (e.g., determining the training programs, workshops, or lectures a particular employee should participate in). The CCQ may, for example, be used to diagnose the problem areas for employees who have lost their job and are seeking new employment, and for students who are not sure about what they want in the future but who are about to enter the labor market. It may also be used as a diagnostic tool in stimulating resilience and the optimal functioning of employees. By regularly administering the CCQ, career counselors could support employee development through advice on specific areas of career self-management.

Conclusion

The conceptualization and measurement of career competencies is still in its early stages. This study presented an integrative framework of career competencies and used this framework to develop the Career Competencies Questionnaire (CCQ), which we preliminarily validated in two samples of young employees. We hope this study will stimulate further discussion, research, and the development of interventions with respect to career competencies and career self-management, especially for young employees. Given the changes to contemporary labor markets, we believe that the concept of career competencies will become essential for understanding career development and employability in the future.

References

Ajzen, I. (2005). *Attitudes, personality and behavior* (2nd ed.). New York: OUP.

Akkermans, J., Brenninkmeijer, V., Blonk, R. W. B., & Koppes, L. L. J. (2009). Fresh and healthy? Well-being, health and performance of young employees with intermediate education. *Career Development International, 14*, 671-699.

Anakwe, U. P., Hall, J. C., & Schor, S. M. (2000). Knowledge-related skills and effective career management. *International Journal of Manpower, 21*, 566-579.

Arnold, J., & Cohen, L. (2008). The psychology of careers in industrial and organizational settings: A critical but appreciative analysis. In G. P. Hodgkinson & J. K. Ford (Eds.), *International Review of Industrial and Organizational Psychology* (pp. 1-44). Chichester: Wiley Ltd.

Arthur, M. B. (1994). The boundaryless career: A new perspective for organizational inquiry. *Journal of Organizational Behavior, 15*, 295-306.

Arthur, M. B., & Rousseau, D. M. (1996). *The Boundaryless Career: A New Employment Principle for a New Organizational Era.* Oxford: University Press.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York: Freeman.

Briscoe, J. P., & Hall, D. T. (2006). The interplay of boundaryless and protean careers: Combinations and implications. *Journal of Vocational Behavior, 69*, 4-18.

Briscoe, J. P., Hall, D. T., & DeMuth, R. L. F. (2006). Protean and boundaryless careers: An empirical exploration. *Journal of Vocational Behavior, 69*, 30-47.

Day, R., & Allen, T. D. (2004). The relationship between career motivation and self-efficacy with protégé career success. *Journal of Vocational Behavior, 64,* 72-91.

De Cuyper, N., Bernhard-Oettel, C., Berntson, E., De Witte, H., & Alarco, B. (2008). Employability and Employees' Well-Being: Mediation by Job Insecurity. *Applied Psychology: an International Review, 57*, 488-509.

De Cuyper, N., & De Witte, H. (2008). Gepercipieerde kans op een baan versus een betere baan: relaties met arbeidstevredenheid en welzijn. [Perceived chance of a job versus a better job: the relationships with job satisfaction and wellbeing]. *Gedrag & Organisatie, 21*, 475-492.

Defillippi, R. J., & Arthur, M. B. (1994). The Boundaryless Career: A Competency- Based Perspective. *Journal of Organizational Behavior, 15*, 307-324.

De Janasz, S. C., & Sullivan, S. E. (2004). Multiple mentoring in academe: Developing the professional network. *Journal of Vocational Behavior, 64*, 263-283.

De Vos, A., De Clippeleer, I., & DeWilde, T. (2009). Proactive career behaviors and career success during the early career. *Journal of Occupational and Organizational Psychology, 82*, 761-777.

Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of Success in the Era of the Boundaryless Career. *Journal of Organizational Behavior, 24*, 689-708.

Eden, D. (2001). Means efficacy: External sources of general and specific subjective efficacy. In M. Erez, U. Kleinbeck, & H. Thierry (Eds.), *Work motivation in the context of a globalizing economy*. Hillsdale, NJ: Lawrence Erlbaum.

European Commission (2012). *Employment and Social Developments in Europe 2011*. Luxembourg: Publications Office of the European Union.

Fabrigar, L. R., Wegener, D. T., MacCallum, R. C., & Strahan, E. J. (1999). Evaluating the use of exploratory factor analysis in psychological research. *Psychological Methods, 4*, 272-299.

Forrier, A., & Sels, L. (2003). The concept employability: a complex mosaic. *International Journal of Human Resources Development and Management, 3*, 102-124.

Fugate, M., & Kinicki, A. J. (2008). A dispositional approach to employability: Development of a measure and test of implications for employee reactions to organizational change. *Journal of Occupational and Organizational Psychology, 81*, 503-527.

Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior, 65*, 14-38.

Giles, M., & Rea, A. (2002). Career self-efficacy: An application of the theory of planned behavior. *Journal of Occupational and Organizational Behavior, 72*, 393-398.

Goodman, S. A., & Svyantek, D. J. (1999). Person-organization fit and contextual performance: Do shared values matter. *Journal of Vocational Behavior, 55*, 254-275.

Hall, D. T. (1996). Protean Careers of the 21st Century. *Academy of Management Executive, 10*, 8-15.

Hall, D. T., & Moss, J. E. (1998). The New Protean Career Contract: Helping Organizations and Employees Adapt. *Organizational Dynamics, 26,* 22-37.

John, O. P., & Benet-Martinez, V. (2000). Measurement: Reliability, construct validation, and scale construction. In H. T. Reis & C. M. Judd (Eds.), *Handbook of research methods in social and personality psychology* (pp. 339-369). Cambridge: University Press.

Jones, C., & Lichtenstein, B. M. (2000). The 'Architecture' of Careers: How Career Competencies Reveal Firm Dominant Logic in Professional Services. In M. A. Peiperl, M. B. Arthur, R. Goffee, & T. Morris (Eds.), *Career Frontiers: New Conceptions of Working Lives* (pp. 153-176). Oxford: University Press.

Judge, T. A., Erez, A., Bono, J. E., & Thoresen, C. J. (2002). Are measures of self-esteem, neuroticism, locus of control, and generalized self-efficacy indicators of a common core construct? *Journal of Personality and Social Psychology, 83*, 693-710.

King, Z. (2004). Career self-management: Its nature, causes and consequences. *Journal of Vocational Behavior, 65*, 112-133.

Koivisto, P., Vuori, J., & Nykyri, E. (2007). Effects of the School-to-Work Group Method among young people. *Journal of Vocational Behavior, 70*, 277-296.

Koivisto, P., Vuori, J., & Vinokur, A. D. (2010). Transition to work: Effects of preparedness and goal construction on employment and depressive symptoms. *Journal of Research on Adolescence, 20*, 869-892.

Kossek, E. E., Roberts, K., Fisher, S., & Demarr, B. (1998). Career self-management: A quasi-experimental assessment of the effects of a training intervention. *Personnel Psychology, 51*, 935-962.

Kuijpers, M. A. C. T. (2003). *Loopbaanontwikkeling.* Enschede: Twente University Press.

Kuijpers, M. A. C. T., Meijers, F., & Gundy, C. (2011). The relationship between learning environment and career competencies of students in vocational education. *Journal of Vocational Behavior, 78*, 21-30.

Kuijpers, M. A. C. T., & Scheerens, J. (2006). Career Competencies for the Modern Career. *Journal of Career Development, 32*, 303-319.

Kuijpers, M. A. C. T., Schyns, B., & Scheerens, J. (2006). Career competencies for career success. *Career Development Quarterly, 55*, 168-178.

Luszczynska, A., Gutiérrez-Doña, B., & Schwarzer, R. (2005). General self-efficacy in various domains of human functioning: Evidence from five countries. *International Journal Of Psychology*, *40*, 80-89.

Millar, R., & Shevlin, M. (2003). Predicting career information-seeking behavior of school pupils using Theory of Planned Behavior. *Journal of Vocational Behavior, 62*, 26-42.

Mirvis, P. H., & Hall, D. T. (1994). Psychological Success and the Boundaryless Career. *Journal of Organizational Behavior, 15*, 365-380.

Ng, T. W. H., Eby, L. T., Sorensen, K. L., & Feldman, D. C. (2005). Predictors of objective and subjective career success: A meta-analysis. *Personnel Psychology, 58*, 367-408.

Noe, R. A. (1996). Is career management related to employee development and performance? *Journal of Organizational Behavior, 17*, 119-133.

Ouweneel, E. (2012). *Building towards engagement: An individual perspective*. Enschede: Ipskamp Drukkers B.V.

Raad voor Werk en Inkomen (2012). *Arbeidsmarktscan 2012 [Scan of the Labor Market, 2012]*. Retrieved on 05-05-2012 from <www.rwi.nl/CmsData/arbeidsmarktscan.pdf>.

Rothwell, A., & Arnold, J. (2007). Self-perceived employability: Development and validation of a scale. *Personnel Review, 36*, 23-41.

Rubio, D. M., Berger-Weger, M., & Tebb, S. S. (2001). Using structural equation modeling to test for multidimensionality. *Structural Equation Modeling, 8*, 613-626.

Tabachnik, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed.). New York: Allyn and Bacon.

Teeuw, B., Schwarzer, R., & Jerusalem, M. (1994). *Dutch adaptation of the general perceived self-efficacy scale.* Retrieved on 06-10-2010 from <http://userpage.fu-berlin.de/~health/dutch.htm>.

Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2006). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management, 45*, 449-476.

Van Hooft, E. A. J., & De Jong, M. (2009). Predicting job seeking for temporary employment using the theory of planned behavior: The moderating role of individualism and collectivism. *Journal of Occupational and Organizational Psychology, 82*, 295-316.

Vuori, J., Toppinen-Tanner, S., & Mutanen, P. (2011). Effects of resource-building group intervention on career management and mental health in work organizations: randomized controlled field trial. *Journal of Applied Psychology, 97*, 273-286.

CHAPTER 5

FROM CAREER COMPETENCIES TO EMPLOYEE WELLBEING: INVESTIGATING THE ROLE OF CAREER COMPETENCIES IN THE JOB DEMANDS-RESOURCES MODEL

Based on:

Akkermans, J., Schaufeli, W. B., Brenninkmeijer, V., & Blonk, R. W. B. (revised and resubmitted). From Career Competencies to Employee Wellbeing: Investigating the Role of Career Competencies in the Job Demands-Resources Model.

Chapter 5

5.1. Introduction

Current developments on the labor market concerning more change and flexibility put increasing demands on employees to take responsibility for performing their job and managing their career (Segers & Inceoglu, 2012). In doing so, they need to keep up with an increasingly dynamic and changing work environment, remain healthy and motivated, and adjust to having more complex careers (Vuori, Toppinen-Tanner, & Mutanen, 2011). It is therefore crucial that employees acquire relevant resources and competencies to successfully manage their work and career. This may especially be the case for young employees, who are less accustomed to the demands of working life. Young employees often experience poor work socialization, unsatisfactory employment, unfavorable working conditions, and high dropout rates and underemployment (Akkermans, Brenninkmeijer, Blonk, & Koppes, 2009; Akkermans, Brenninkmeijer, Van den Bossche, Blonk, & Schaufeli, in press; Koivisto, Vuori, & Nykiri, 2007). Moreover, young employees have been hit hardest by the economic crisis of the past few years, leading to an alarming 20% unemployment rate in Europe (European Commission, 2012). These indicators underline the importance of gaining *career competencies*, which are competencies central to managing career development (Akkermans, Brenninkmeijer, Huibers, & Blonk, 2013). However, although several empirical studies have emphasized the importance of gaining career competencies for career success (e.g., Eby, Butts, & Lockwood, 2003; Kuijpers & Scheerens, 2006) our understanding of the role of career competencies in fostering employee wellbeing is still limited.

In this study, we therefore examined the potential role of career competencies in stimulating employee wellbeing. Specifically, we investigated whether career competencies would act in a similar way as personal resources in the Job Demands-Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) in a sample of young employees.

Career Competencies

To achieve career success in the increasingly dynamic and flexible labor market, it is important that employees acquire career competencies on top of specific work competencies. In a recent study, Akkermans et al. (2013) developed a model of career competencies and a measurement instrument to assess these competencies. The model of Akkermans et al. consisted of three dimensions: reflective, communicative, and behavioral competencies, and each dimension contained two career competencies. Reflective career competencies pertain to creating awareness of the career and to combining personal reflections with the professional career. The two competencies in this dimension are *reflection on motivation*, which refers to reflection on values, passions, and motivations with regard to the personal career, and *reflection on qualities*, which relates to reflection on strengths, shortcomings, and skills with regard to one's career. Communicative career competencies refer to being able to effectively communicate with significant others to improve one's chances of career success. The two competencies are *networking*, which pertains to the awareness of the presence and professional value of one's network, and the ability to expand this network for career-related purposes, and *self-profiling*, which refers to presenting and communicating one's personal knowledge, abilities, and skills to the internal and external labor market. Finally, behavioral career competencies refer to being able to actually shape one's career by taking action and being pro-active. *Work exploration*, which relates to actively exploring and searching for work-related and career-related opportunities on the internal and external labor market, and *career control*, which relates to actively influencing learning processes and work processes related to one's career by setting goals and planning how to reach these goals, are the two behavioral competencies. Based on this model, Akkermans et al. (2013) developed the Career Competencies Questionnaire (CCQ), which assesses the perceived degree to which employees have mastered these six career competencies. The authors demonstrated that the CCQ had good content, factorial, discriminant, and incremental validity.

We argue that career competencies are also a relevant concept in studying employee wellbeing. Specifically, mastering reflective, communicative, and behavioral competencies may contribute to personal development and goal achievement. For example, individuals who know what they value in their work and career, and who know what their strengths are, may be better able to develop themselves and consequently experience more engagement at work. Similarly, individuals who are good at making action plans and setting goals may be better at achieving their goals, subsequently leading to more engagement. In this way, career competencies could stimulate wellbeing of employees. To examine whether career competencies indeed contribute to employee wellbeing, we used the Job Demands-Resources (JD-R) model (Demerouti et al., 2001), which is described below.

The Job Demands-Resources Model

The JD-R model (Demerouti et al., 2001) distinguishes itself from other models of employee wellbeing in that it focuses both on the negative and the positive factors of work. In addition, it is a heuristic model that is widely applicable across occupations and industries (Schaufeli & Taris, in press). The basic assumption of the JD-R model is that every work environment is characterized by occupation-specific *job resources* and *job demands*, which can lead to motivation (e.g., work engagement) or strain (e.g., emotional exhaustion) at work (Demerouti et al., 2001).. Job resources are those physical, psychosocial, social, or organizational aspects of the job that are either functional in achieving work goals, reducing job demands, or stimulating personal growth, learning, and development. Job demands are those physical, psychological, social, and organizational aspects of the job that require sustained physical and/or psychological effort or skills and are therefore associated with certain physical and/ or psychological costs (Bakker & Demerouti, 2007). Two psychological processes underlie the JD-R model. In the *motivational process*, job resources lead to increased levels of motivation, in the form of work engagement (Schaufeli & Bakker, 2004). Work engagement is defined as

a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli, Salanova, González-Roma, & Bakker, 2002). In the health impairment process, high levels of job demands lead to a depletion of the mental and physical reserves, possibly leading to strain in the form of emotional exhaustion (Schaufeli & Bakker, 2004). Emotional exhaustion is a core component of burnout (Schaufeli & Taris, 2005), and refers to feelings of being overextended and exhausted by the emotional demands of one's work (Demerouti et al., 2001).

Our study was performed among young employees aged 16-30 years. Two earlier studies among young workers (Akkermans et al., 2009; Akkermans et al., in press) showed that autonomy and social support from colleagues may be especially important job resources, whereas work pressure, emotional workload, and physical workload were relevant job demands. Because career competencies are closely linked to personal development, we also included opportunities for development as a job resource in this study. The job characteristics in our study are all commonly used in research using the JD-R model (Bakker & Demerouti, 2007). Furthermore, we used work engagement as an indicator of motivation and emotional exhaustion as an indicator of strain.

Career Competencies and Personal Resources

In order to examine the potential role of career competencies in stimulating wellbeing, we need to consider how individual factors may influence employee wellbeing. Research indicates that the concept of *personal resources* may be relevant for work-related wellbeing (Hobfoll, 1989; Judge, Locke, & Durham, 1997). Personal resources are positive self-evaluations that are linked to resilience and refer to individuals' sense of their ability to control and impact upon their environment successfully (Hobfoll, Johnson, Ennis, & Jackson, 2003). According to Conservation of Resources (COR) theory (Hobfoll, 1989), people seek to obtain and protect resources, and stress occurs when resources are threatened, or when individuals fail to gain resources after substantive resource investment. An important

presumption of COR theory is that individuals not only strive to protect their resources, but also strive to accumulate them. In a process where resources tend to create resources (i.e., gain cycles), so-called resource caravans are created, which can lead to improved motivation and wellbeing (Hobfoll, 2002). Personal resources are functional in achieving goals, and in stimulating personal growth and development (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Thus far, personal resources have mostly been conceptualized as psychological capital, which consists of self-efficacy, resiliency, hope, and optimism (Avey, Luthans, & Jensen, 2009; Luthans, Avey, Avolio, Norman, & Combs, 2006).

Based on COR theory, Xanthopoulou, Bakker, Demerouti, and Schaufeli (2007) investigated the role of personal resources in the JD-R model. Xanthopoulou et al. (2007) studied the role of three personal resources: self-efficacy, organizational-based self-esteem, and optimism. These personal resources were found to mediate the relationship between job resources and work engagement, and between job resources and emotional exhaustion. In another study, Xanthopoulou et al. (2009) again found support for the mediating role of these three personal resources in the motivational process of the JD-R model. Moreover, they found support for cyclical processes in which job resources and personal resources mutually reinforce each other. Similar results were found by Llorens, Schaufeli, Bakker, and Salanova (2007), who demonstrated that efficacy beliefs mediated the relationship between job resources and work engagement. In line with COR theory, they also found reciprocal relationships between job resources, personal resources, and work engagement. These findings all suggest that personal resources are an important individual factor in the motivational process of the JD-R model.

Following the conceptualization of personal resources, career competencies may work in a similar way. Hobfoll et al. (2003) argued that personal resources are positive self-evaluations that refer to individuals' sense of their ability to control and impact upon their environment successfully, and Xanthopoulou et al. (2009) characterized personal

resources as being functional in achieving goals, and stimulating personal growth and development. Individuals who develop their career competencies will gain a better sense of what they value and what they are good at with regard to their career. Moreover, they will know how to relate to significant others and how to proactively take action in exploring opportunities and setting career goals. It is therefore likely that mastering these career competencies would lead to an enhanced evaluation of one's ability to control and impact upon one's work and career. In line with this reasoning, Akkermans et al. (2013) found a positive relationship between career competencies and self-efficacy, a concept that is generally considered to be a personal resource (e.g., Avey et al., 2009). Finally, Xanthopoulou et al. (2007) noted that personal resources are, to some extent, malleable and open to development. This characterization is similar to that of Akkermans et al. (2013) who underlined that career competencies are malleable and can be actively developed by individuals. Based on this argumentation, career competencies may be expected to act in a similar way as personal resources in stimulating employee wellbeing.

The Current Study

In this study, we investigated whether career competencies may play a similar role as personal resources in motivational and health impairment processes that are assumed by the JD-R model. First, we examined whether career competencies are associated with job resources and work engagement. Previous research has shown that personal resources are positively related to job resources (Xanthopoulou et al., 2007; 2009). If career competencies and personal resources indeed work in a comparable way, we would expect to find similar positive relationships. For instance, developing reflective competencies may go hand in hand with better identification of opportunities for development as employees have a better understanding of their own values and skills. In a similar vein, being better at networking and self-profiling may enable employees to recognize or mobilize social support more effectively. Finally, higher levels of autonomy

could be associated with mastery of career control, because it enables the individual to set personal goals and strive to fulfill these goals. Previous research has also shown that personal resources are positively related to work engagement (Xanthopoulou et al., 2007; 2009). It is likely that this would also be the case for career competencies. For example, being able to effectively set personal goals and striving to fulfill these goals may increase the dedication and motivation at work. Also, actively communicating with significant others at work about career-related opportunities may create a positive and energetic work environment that would make employees more engaged in their job. Based on these arguments, we formulated our first two hypotheses:

Hypothesis 1a. *Career competencies are positively related to job resources.*

Hypothesis 1b. *Career competencies are positively related to work engagement.*

Second, we investigated the process through which career competencies would be related to work engagement. Previous studies have shown that personal resources may act as a mediator in the motivational process of the JD-R model (e.g., Llorens et al., 2007; Luthans et al., 2006; Xanthopoulou et al., 2007). That is, job resources can activate personal resources, which can subsequently lead to higher levels of work engagement. We hypothesize that career competencies may also, at least in part, mediate the relationship between job resources and work engagement. For instance, it is likely that having more opportunities for development may stimulate an employee to reflect on his or her ambitions (reflection on motivation) and to actively set goals (career control), which could subsequently foster higher levels of work engagement because they have a clearer view of their personal growth and development. However, Xanthopoulou et al. (2009) argue that this process may also work the other way around. That is, employees may use their personal resources to actively craft a better work environment and

to perceive that environment as having more job resources. That, in turn, may foster work engagement. Job resources and personal resources may therefore be mutually enhancing in stimulating work engagement (Bakker & Demerouti, 2008; Xanthopoulou et al., 2009). This implies that the reverse logic may also be applicable, meaning that job resources can mediate the relationship between personal resources and work engagement. Therefore, we hypothesize that job resources may also mediate the relationship between career competencies and work engagement. For example, experiencing opportunities for development may lead individuals to actively search for ways to become further educated and to formulate an action plan with goals for personal development (behavioral competencies). This could make them more engaged in their work because they can learn new skills and enjoy their work more. If both hypothesized mediation effects would be found, this would signify that job resources and career competencies are mutually reinforcing in stimulating employee wellbeing. Taken together, this leads to our next hypotheses:

Hypothesis 2a*. Career competencies act as a mediator in the relationship between job resources and work engagement.*

Hypothesis 2b*. Job resources act as a mediator in the relationship between career competencies and work engagement.*

Third, we investigated whether career competencies played a role in the health impairment process of the JD-R model. COR theory (Hobfoll, 1989) states that loss of resources may lead to so-called loss-cycles in which resources are depleted and demands are enhanced, as was recently demonstrated by Ten Brummelhuis, Ter Hoeve, Bakker, and Peper (2011). However, because personal resources are associated with motivation and positive self-evaluations, they may be expected to be particularly relevant for motivational processes, compared with health impairment processes. Xanthopoulou et al. (2007) found no support for a role of

personal resources in the relationship between job demands and emotional exhaustion. The same could be argued for career competencies: mastering these competencies should go hand in hand with an increased sense of self-efficacy and motivation (Akkermans et al., 2013). Based on this reasoning and the findings of Xanthopoulou et al. (2007), there is no reason to assume that career competencies play a part in the health impairment process of the JD-R model. This leads to our final hypothesis:

Hypothesis 3. *Career competencies are not related to job demands and emotional exhaustion.*

Finally, we also assessed potential cross-relationships in our study. Crawford, Lepine, and Rich (2010) recently showed in a meta-analysis that job resources were negatively related to burnout, and job demands were negatively related to work engagement when considered as hindrances, and positively related to work engagement when considered as challenges. Therefore, we also examined the cross-relationships between job resources and emotional exhaustion, and between job demands and work engagement in our models.

5.2. Method

Participants and Procedure

Our study was conducted among young interns and employees (aged 16-30 years) in two Dutch organizations: a large educational institution and a Dutch multinational. The participants from the educational institution were interns who were finishing their education with an internship of three or four days per week for at least three consecutive months. The participants in the multinational were temporary employees who were given a job in a special program that aimed to return them to work. After obtaining informed consent, participants received a paper-and-pencil questionnaire from one of the researchers. All questionnaires were handed out prior to school lessons in the educational institution, and during group sessions in

the multinational. The researcher or an assistant was present to answer any questions and to check the filled-out questionnaires for completeness. All 305 employees who received a questionnaire completed it, resulting in a 100% response rate. The majority of the participants was male (57.7%) and most of the participants had intermediate vocational education level (76.4%). The mean age of the participants was 22 years (*SD* = 3.84), and the mean number of working hours per week was 32 (*SD* = 10.63). The participants of the multinational worked in General Industry (31.1%), and the interns from the educational institution predominantly worked in Trade (12.5%), Health and Wellbeing (11.5%), and Business Services (11.1%).

Measurement Instruments

Job resources. Three types of job resources were measured in this study. All items of social support from colleagues and autonomy were measured with a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*), and the items of opportunities for development were measured with a 5-point Likert scale ranging from 1 (*completely disagree*) tot 5 (*completely agree*). Social support from colleagues was measured with four items from Peeters, Buunk, and Schaufeli (2005). An example item is, "If necessary, my colleagues will help me with a specific task" (α = .83). Autonomy was measured with four items based on Van Veldhoven, De Jonge, Broersen, Kompier, and Meijman (2002). A sample item is, "Can you decide the order of your tasks?" (α = .79). Opportunities for development were measured with four items from the Job Content Questionnaire (Karasek, Brisson, Kawakami, Houtman, Bongers, & Amick, 1998). An example item from this scale is, "My work offers me enough opportunities to learn new things" (α = .80).

Job demands. Three types of job demands were measured based on Van Veldhoven et al. (2002). Work pressure and physical workload were measured with four items and emotional workload was measured with three items, all on a 5-point Likert scale ranging from 1 (*never*) to 5 (*always*). A sample item of work pressure was, "Do you have to work hard to get things done?" (α = .82), a sample item of emotional workload was, "Do you encounter

emotional situations on your work?" (α = .79), and a sample item of physical workload was, "do you perform physically demanding work?" (α = .88).

Work engagement was measured with the nine-item version of the Utrecht Work Engagement Scale (UWES; Schaufeli, Bakker, & Salanova, 2006). The items were measured on a 7-point Likert scale ranging from 0 (*never*) to 6 (*always*). The UWES items reflect three underlying dimensions, which are measured with three items each: vigor (e.g., "At work I feel bursting with energy"; α = .77), dedication (e.g., "My work inspires me"; α = .88), and absorption (e.g., "I get carried away when I am working"; α = .81).

Emotional exhaustion was measured with the five-item subscale from the Utrecht Burnout Scale (UBOS; Schaufeli & Van Dierendonck, 2000). The items were measured on a 7-point Likert scale ranging from 0 (*never*) tot 6 (*always*). One item was deleted from the scale because it clearly reduced the internal consistency of the scale. An example item from this scale is, "I feel mentally exhausted because of my work" (α = .88).

Career competencies were measured with the 21-item Career Competencies Questionnaire (CCQ; Akkermans et al., 2013). The items were measured on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). The CCQ items reflect six underlying career competencies: *reflection on motivation* was measured with 3 items (e.g., "I know what I like in my work"; α = .83), *reflection on qualities* was measured with 4 items (e.g., "I know my strengths in my work"; α = .92), *networking* was measured with 4 items (e.g., "I know how to ask for advice from members of my network"; α = .87), *self-profiling* was measured with 3 items (e.g., "I am able to show others what I want to achieve in my career" (α = .86), *work exploration* was measured with 3 items (e.g., "I can actively search for the developments in my area of work"; α = .86), and *career control* was measured with 4 items (e.g., "I can make clear career plans"; α = .88).

Strategy of Analysis

We analyzed the data with structural equation modeling (SEM) using AMOS 20 (Arbuckle, 2011), which is a preferable way to analyze mediation models

with latent constructs (Baron & Kenny, 1986). To examine the fit of the data we used the comparative fit index (CFI), the Tucker-Lewis index (TLI), and the root mean square error of approximation (RMSEA). CFI and TLI values of > .90, and RMSEA values of < .08 represent acceptable fit, whereas values of > .95 and < .06 represent a good fit (Hu & Bentler, 1999). We used bootstrapping to test whether career competencies mediated the path between job resources and work engagement (H2a), and whether job resources mediated the path between career competencies and work engagement (H2b). Bootstrapping is a statistical re-sampling method estimating the parameters of a model strictly from the sample (Preacher & Hayes, 2008). Bootstrapping computes more accurate confidence intervals of indirect effects than the more commonly used causal step strategy (Baron & Kenny, 1986), because it does not assume a normal distribution of the variables (Preacher & Hayes, 2008). This is especially relevant here because indirect effects have distributions that skew away from zero (Shrout & Bolger, 2002).

We performed latent-variable structural path analyses with maximum likelihood estimation. To test the models, we included the latent variables *job resources* (represented by the manifest variables social support from colleagues, autonomy, and opportunities for development), *job demands* (represented by the manifest variables work pressure, emotional workload, and physical workload), *work engagement* (represented by the manifest variables vigor, dedication, and absorption), *emotional exhaustion* (represented by four manifest items), and *career competencies* (represented by the manifest variables reflection on motivation, reflection on qualities, networking, self-profiling, work exploration, and career control).

5.3. Results

Descriptive Statistics

Table 1 shows the means, standard deviations, and intercorrelations of the study variables. Career competencies were positively correlated with job resources (except for reflection on motivation and self-profiling) and work

engagement. Furthermore, networking was the only career competency that was significantly correlated with job demands, but none of the career competencies were significantly correlated with emotional exhaustion. With the exception of the correlation between networking and self-profiling ($r = .69$), no high correlations (i.e., $> .60$) were present, which indicates that multicollinearity is unlikely to bias the results of our analyses.

Table 1

Means, standard deviations, and intercorrelations of study variables.

	M	*SD*	1	2	3	4	5	6	7	8	9	10	11
Job Resources	3.68	0.60	-										
Job Demands	2.47	0.75	0.08	-									
Work Engagement	3.90	0.99	0.48**	0.03	-								
Emotional Exhaustion	1.76	1.08	-0.16**	0.27**	-0.22**	-							
Career Competencies	3.47	0.71	0.20**	0.14*	0.29**	0.02	-						
Reflection on Motivation	3.60	0.78	0.08	0.08	0.24**	0.01	-	-					
Reflection on Qualities	3.58	0.84	0.19**	0.06	0.35**	0.02	-	0.58**	-				
Networking	3.41	0.89	0.25**	0.17**	0.32**	0.02	-	0.53**	0.51**	-			
Self-profiling	3.42	0.80	0.09	0.07	0.20**	0.07	-	0.49**	0.50**	0.55**	-		
Work Exploration	3.51	0.79	0.21**	0.05	0.28**	-0.04	-	0.55**	0.48**	0.69**	0.50**	-	
Career Control	3.41	0.85	0.20**	0.04	0.36**	0.01	-	0.50**	0.49**	0.58**	0.55**	0.58**	-

Note. Significance levels: * $p < .05$; ** $p < .01$. $n = 305$.

Before testing the structural paths, we tested the measurement model with all manifest factors loading onto their corresponding latent factors. The model fit was good: $\chi^2(142) = 265.76$, $p < .01$; TLI = .94; CFI = .95; RMSEA = .05. All factor loadings were significant onto their proposed factor for job resources (between .60 and .75), job demands (between .64 and .78), work engagement (between .75 and .91), emotional exhaustion (between .77 and .89), and career competencies (between .68 and .80).

Career Competencies in the JD-R model

We tested three structural models to determine the role of career competencies in the JD-R model. All models included career competencies, job resources, job demands, work engagement, and emotional exhaustion. We tested whether career competencies mediated the relationship between job resources and work engagement (H2a). We also tested the cross-relationships between job resources and emotional exhaustion, and between job demands and work engagement. In the second model we tested whether job resources mediated the relationship between career competencies and work engagement (H2b). In the third model we tested whether career competencies mediated the relationship between job demands and emotional exhaustion (H3).

Career Competencies in the Motivational Process (Model 1). As expected, we found significant positive relationships between job resources and work engagement ($\beta = .54$, $p < .001$) and between job demands and emotional exhaustion ($\beta = .28$, $p < .001$). A significant positive relationship was found between job resources and career competencies ($\beta = .32$, $p < .001$), and between career competencies and work engagement ($\beta = .23$, $p < .001$). These results confirm Hypothesis 1a by showing a positive, significant relationship between job resources and career competencies, and Hypothesis 1b by showing a positive, significant relationship between career competencies and work engagement. We also tested the cross-relationships between job resources and emotional exhaustion, and between job demands and work engagement. These associations

were not significant: β = -.13, *p* = .06 and β = .02, *p* = .79, respectively.

We extracted 2,000 new samples with bootstrapping to test the indirect effect of job resources on work engagement through career competencies (Hypothesis 2a). Next, we compared three structural models to determine the best fit to the data: a direct effect only model, a full mediation model, and a partial mediation model. The full mediation model showed the worst fit of these three models: $\chi^2(146) = 325.56$, $p < .01$; TLI = .92; CFI = .93; RMSEA = .06. The direct effect only model fitted the data significantly better than the full mediation model: $\Delta\chi^2(3) = 17.26$, $p < .01$; TLI = .93; CFI = .94; RMSEA = .06. The partial mediation model fitted the data significantly better than the direct effect only model: $\Delta\chi^2(2) = 44{,}86$, $p < .01$; TLI = .95; CFI = .96; RMSEA = .05. The standardized total effect of job resources on work engagement was significant: β = 0.62, $p < .001$, 95% CI [.50, .71]. The standardized direct effect was significant, β = 0.54, $p < .001$, 95% CI [.41, .65], and the standardized indirect effect was also significant, β = .08, $p < .001$, 95% CI [.03, .13]. This final model explained 43% of the variance in work engagement and 13% of the variance in emotional exhaustion. These results confirm Hypothesis 2a.

Job Resources as Mediators (Model 2). To test the indirect of career competencies on work engagement through job resources, we also tested a direct effect only model, a full mediation model, and a partial mediation model. This time, the direct effect only model showed the worst fit to the data: $\chi^2(147) = 346.79$, $p < .01$; TLI = .91; CFI = .93; RMSEA = .07. The full mediation model fitted the data significantly better: $\Delta\chi^2(1) = 70{,}63$, $p < .01$; TLI = .94; CFI = .95; RMSEA = .054. The partial mediation model fitted the data better than the full mediation model: $\Delta\chi^2(1) = 14{,}37$, $p < .01$; TLI = .95; CFI = .96; RMSEA = .051. The standardized total effect of career competencies on work engagement was significant: β = 0.40, $p < .001$, 95% CI [.28, .51]. The standardized direct effect was significant, β = 0.23, $p = .002$, 95% CI [.12, .34], and the standardized indirect effect was also significant, β = .17, $p < .001$, 95% CI [.09, .27]. These results confirm Hypothesis 2b. Figure 1 depicts the final model of Model 1.

A graphical representation of Model 2 can be obtained from the corresponding author.

Career Competencies in the Health Impairment Process (Model 3). The relationships between job demands and career competencies, and between career competencies and emotional exhaustion were not significant (β = 0.10, *ns*, and β = -0.03, *ns*, respectively). Furthermore, there was no significant indirect effect of job demands on emotional exhaustion (β = -0.003, *ns*). These results indicate that career competencies do not play a role in the health impairment process, thereby confirming Hypothesis 3.

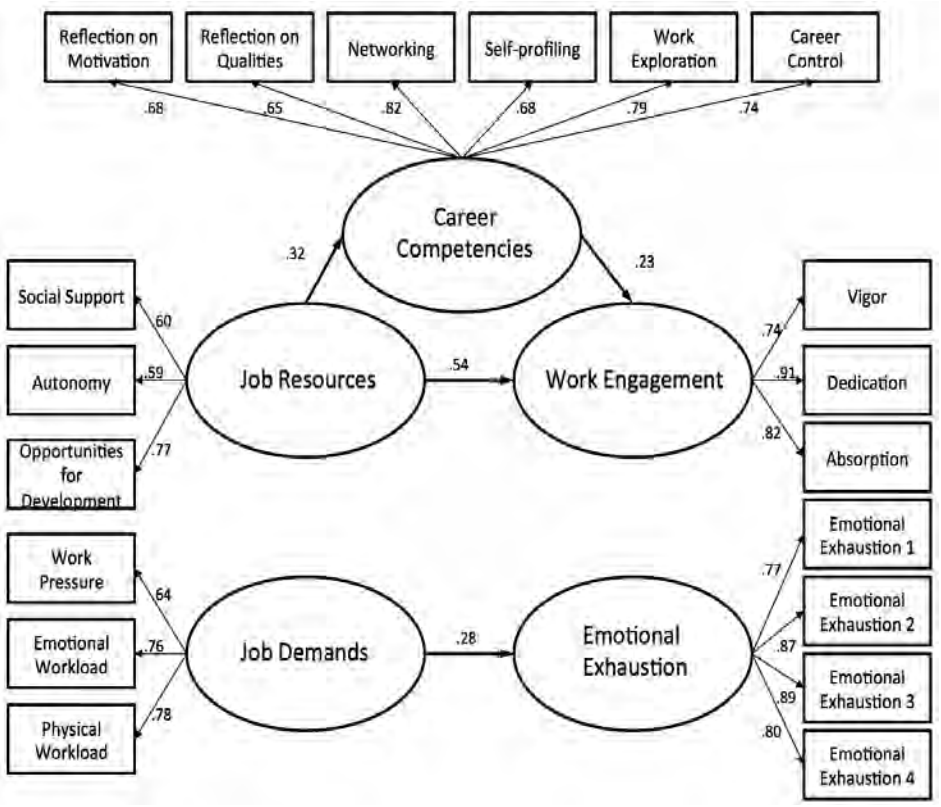

Figure 1. *Career competencies as mediator in the motivational process. Entries represent standardizes regression weights. All structural pathways are significant at the p < .01 level.* N *= 305.*

5.4. Discussion

The main purpose of our study was to investigate whether career competencies may act in a similar way as personal resources in motivating young employees and stimulating their wellbeing at work. Specifically, we tested whether career competencies could play a role in motivational and health impairment processes assumed by the Job Demands-Resources (JD-R) model (Demerouti et al., 2001). The findings of our study offer support for the role of career competencies as a mediator in motivational processes, and they suggest that job resources and career competencies may be mutually enhancing in stimulating work engagement. We also found that career competencies were uniquely related to motivational processes, as they were not related to job demands and emotional exhaustion. Although caution is required because our sample consisted of young persons employed in a temporary job, these results support the notion that career competencies are a relevant concept for stimulating employee wellbeing. Furthermore, our findings underline the value of combining research on career development and employee wellbeing (Hall & Las Heras, 2010).

Career Competencies in the JD-R Model

Career Competencies in Motivational Processes. As expected, we found a positive relationship between career competencies and job resources (Hypothesis 1a), and between career competencies and work engagement (Hypothesis 1b). We also found that career competencies mediated the relationship between job resources and work engagement (Hypothesis 2a). That is, a work environment with sufficient amounts of social support, autonomy, and opportunities for development can stimulate the development of career competencies, which can subsequently foster higher levels of work engagement. In addition, we found that job resources mediated the relationship between career competencies and work engagement (Hypothesis 2b), indicating that the development of reflective, communicative, and behavioral career competencies can activate employees to recognize and mobilize the resources that are present in their work

environment, which can subsequently make them more engaged in their work. These findings suggest that job resources and career competencies may have a mutually reinforcing effect on employee wellbeing, similar to earlier findings with regard to job resources and personal resources (e.g., Xanthopoulou et al., 2009). These findings are in line with the principles of COR theory (Hobfoll, 2002), which states that so-called resource caravans may develop in which resources can create additional resources, which, in turn, foster work engagement. In addition, although our cross-sectional data prevented us from testing causal and reciprocal effects, our findings are in line with the notion that job resources and personal resources may form a gain spiral that contributes to engagement (Xanthopoulou et al., 2009). Therefore, we conclude that career competencies may indeed be relevant concept in stimulating employee wellbeing, and they have a similar effect as personal resources in motivational processes. However, research on personal resources and career competencies, and their relationship with the JD-R model, is still in its infancy and more research is needed to further solidify our findings.

Another noteworthy result is that the relationship between job resources and work engagement was *partially* mediated by career competencies, and that the relationship between career competencies and work engagement is *partially* mediated by job resources. This finding is in line with COR theory and with earlier findings which indicated that job resources and personal resources both have unique contributions to employee wellbeing and should not be studied as isolated predictors of work engagement (Xanthopoulou et al., 2009).

Career Competencies in Health Impairment Processes. Our results demonstrated that, in accordance with Hypothesis 3, career competencies are neither associated with job demands nor with emotional exhaustion. In general, the health impairment process seemed to be weaker than the motivational processes in our sample. These findings suggest that career competencies are not relevant for the health impairment process and it consolidates the unique importance of career competencies in the

motivational process. These results are, to some extent, in line with earlier findings that showed the importance of job resources and motivational processes, as opposed to job demands and health impairment processes, for young workers with lower levels of education (Akkermans et al., 2009; 2013).

Cross-Relationships. Finally, we also tested for potential cross-relationships between job resources and emotional exhaustion, and between job demands and work engagement. Contrary to the findings of Crawford et al. (2010) and Xanthopoulou et al. (2007), who found significant cross-relationships, our results indicated no such relationships for either process. Our results may be due to our research group as we studied young employed persons who were just starting their career, and whose work has a focus on personal development besides a focus on production. Emotional exhaustion may be less likely to occur in this group, thereby reducing the chance of finding cross-relationships. This line of reasoning would also explain the rather low relationship between job demands and emotional exhaustion. Therefore, further research on the generalizability of our findings is warranted.

Taken together, it appears that motivational processes are more important to young workers' wellbeing than health impairment processes. It may therefore be important to strengthen job resources and additional factors such as career competencies and personal resources. It is tempting to conclude that in order to enhance wellbeing at work the focus should be on resources and motivational processes when considering young employees, and on demands and health impairment process in the case of older employees. This line of reasoning may lead to more customized and more effective interventions aimed at enhancing wellbeing. However, as noted above, more research is needed on the specific factors that influence motivational and health impairment processes among specific groups of employees.

Chapter 5

Limitations and Suggestions for Future Research

Our study has three limitations that need to be addressed. First, the cross-sectional nature of the study prevents conclusions about causal and reciprocal relationships among the variables, and it limits the interpretation of indirect relationships (Taris & Kompier, 2006). To fully understand the direction of the effects and the causal relationships between our variables, longitudinal analyses are necessary. Ideally, a three-wave design should be used in future studies to investigate the causal and mediated relationships between job resources, career competencies, and work engagement. This could provide more insight into the dynamic nature of these concepts, and could further explore the effect that career competencies have in stimulating employee wellbeing.

A second limitation concerns potential common method bias due to the exclusive use of self-report measures. We attempted to minimize this problem by following the suggestions of Podsakoff, MacKenzie, Lee, and Podsakoff (2003) in that we only used carefully constructed and validated measures and we attempted to reduce participants' evaluation apprehension by emphasizing there were no right or wrong answers. Moreover, it can be argued that constructs such as personal resources and work engagement are nearly impossible to measure in any other way than by self-reports (Mäkikangas, Kinnunen, & Feldt, 2004). Still, it is important to also look at objective measures, most notably for job resources. For instance, future studies could investigate the relationship between formal opportunities for professional development (e.g., personal budget for training and development) and the mastery of career competencies.

Finally, the current study was specifically aimed at young employed persons between 16 and 30 years of age with lower educational levels. Because of the specific working conditions and relationships at work the generalizability of our results is at stake. First, further research is needed on young workers in regular jobs, and second, additional research is needed among cohorts of older workers. Investigating the role of career competencies in other working populations could provide a deeper

understanding of the ways in which career competencies can contribute to wellbeing at work.

Theoretical Implications

Our study contributes to the literature in several ways. First, we provide further validation for the integrative framework of six career competencies that was developed by Akkermans et al. (2013). In addition, this study expands that framework by demonstrating that career competencies are associated with job resources and work engagement, but not with job demands and emotional exhaustion. This is an important finding because it shows that career competencies are not only important for career development, but also for motivational processes in the workplace. These findings underline the arguments of Hall and Las Heras (2010) with regard to combining research on career development and job design. Career competency development may be a fruitful basis for creating so-called "smart jobs", which are designed to stimulate both employee wellbeing and career development.

To the best of our knowledge, our study is the first to integrate career competencies in the Job Demands-Resources model (Demerouti et al., 2001). With our findings we show that career competencies may influence employee wellbeing in a similar way as personal resources. We contribute to the existing knowledge of the JD-R model by demonstrating that career competencies and job resources may be mutually enhancing in stimulating work engagement. These results are also in line with Conservation of Resources (COR) theory (Hobfoll, 1989), which suggests that resources can build additional resources, thereby subsequently fostering wellbeing.

Practical Implications

Our results suggest that career competencies and job resources may be mutually reinforcing in stimulating work engagement of employees. This means that HR policies and employability programs could focus on simultaneously stimulating job-related resources and career competencies

of employees to increase their wellbeing. For example, creating opportunities for professional development can have a positive effect on wellbeing and motivation by itself. However, additional effects may be gained when employees have a better understanding of their values and qualities (reflective competencies), are better at communicating with significant others (communicative competencies), and know how to find ways to become further educated and set realistic goals (behavioral competencies). Interventions aimed at increasing both job resources and career competencies may therefore be a promising addition to stimulate wellbeing and career development at work.

Career counselors may also profit from our findings. Stimulating career competencies of employees may enhance wellbeing in the current job and in the professional career as a whole. In addition, career counseling programs may benefit from monitoring career competencies on a regular basis, thereby providing specific guidelines to enhance employees' wellbeing at work. For example, a mentor or coach could be assigned to a young worker who has not sufficiently mastered his or her behavioral competencies. Moreover, interventions (e.g. training sessions, coaching sessions) could be implemented to enhance these competencies, thereby strengthening both work engagement and career development. This may be especially helpful for young workers who are just starting their career.

Conclusion

Faced with many changes and new responsibilities in a brief period of time, it is crucial that young workers acquire proper resources to effectively manage their job and professional career. Our study demonstrated that career competencies are a relevant concept for employee wellbeing and may play a similar role as personal resources in motivational processes. That is, career competencies and job resources may be mutually enhancing and may, in this way, stimulate work engagement. Career competencies may therefore offer a fruitful basis for designing so-called "smart jobs", which are specifically designed to foster

both wellbeing and career development at work. Although personal development is relevant at all ages in working life, it may be especially important for young employees. A focus on developing career competencies may foster their development and wellbeing at work.

References

Akkermans, J., Brenninkmeijer, V., Blonk, R. W. B., & Koppes, L. L. J. (2009). Fresh and healthy? Wellbeing, health and performance of young employees with intermediate education. *Career Development International, 14*, 671-699.

Akkermans, J., Brenninkmeijer, V., Huibers, M., & Blonk, R. W. B. (2013). Competencies for the contemporary career: Development and preliminary validation of the Career Competencies Questionnaire. *Journal of Career Development*. *Journal of Career Development, 40*, 244-266.

Akkermans, J., Brenninkmeijer, V., Van den Bossche, S. N. J., Blonk, R. W. B., & Schaufeli, W. B. (in press). Young and Going Strong? A Longitudinal Study on Occupational Health Among Young Employees of Different Educational Levels. Career Development International.

Arbuckle, J. L. (2011). *IBM SPSS AMOS 20 user's guide*. Springhouse, PA: Amos Development Corporation.

Avey, J. B., Luthans, F., & Jensen, S. (2009). Psychological capital: A positive resource for combating employee stress and turnover. *Human Resource Management, 48*, 677–693.

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology, 22*, 309-328.

Bakker, A. B., & Demerouti, E. (2008). Towards a model of work engagement. *Career Development International, 13*, 209-223.

Baron, R. M., & Kenny, D. A. (1986). The moderator-mediator variable distinction in social-psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173-1182.

Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology, 95*, 834-848.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The Job Demands-Resources model of burnout. *Journal of Applied Psychology, 85*, 499-512.

Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of Success in the Era of the Boundaryless Career. *Journal of Organizational Behavior, 24*, 689-708.

European Commission (2012). *Employment and Social Developments in Europe 2011*. Luxembourg: Publications Office of the European Union.

Hall, D. T., & Las Heras, M. (2010). Reintegrating job design and career theory: Creating not just good jobs but smart jobs. *Journal of Organizational Behavior, 31*, 448-462.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*, 513-524.

Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology, 6*, 307-324.

Hobfoll, S. E., Johnson, R. J., Ennis, N., & Jackson, A. P. (2003). Resource loss, resource gain, and emotional outcomes among inner city women. *Journal of Personality and Social Psychology, 84*, 632-643.

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 1*, 1-55.

Judge, T. A., Locke, E. A., & Durham, C. C. (1997). The dispositional causes of job satisfaction: A core evaluations approach. *Research in Organizational Behavior, 19*, 151-188.

Karasek, R., Brisson, C., Kawakami, N., Houtman, I., Bongers, P., & Amick, B. (1998). The Job Content Questionnaire (JCQ): an instrument for internationally comparative assessments of psychosocial job characteristics. *Journal of Occupational Health Psychology, 3*, 322-355.

Koivisto, P., Vuori, J., & Nykiri, E. (2007). Effects of the school-to-work group method among young people. *Journal of Vocational Behavior, 70*, 277-296.

Kuijpers, M. A. C. T., & Scheerens, J. (2006). Career Competencies for the Modern Career. *Journal of Career Development, 32*, 303-319.

Llorens, S., Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2007). Does a positive gain spiral of resources, efficacy beliefs, and engagement exist? *Computers in Human Behavior, 23*, 925-841.

Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: toward a micro-intervention. *Journal of Organizational Behavior, 27*, 387-393.

Mäkikangas, A., Kinnunen, U., & Feldt, T. (2004). Self-esteem, dispositional optimism, and health: Evidence from cross-lagged data on employees. *Journal of Research in Personality, 38*, 556-575.

Peeters, M. C. W., Buunk, B. P., & Schaufeli, W. B. (1995). Social interactions, stressful events and negative affect at work: A micro-analytic approach. *European Journal of Social Psychology, 12,* 391-401.

Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and the recommended remedies. *Journal of Applied Psychology, 88*, 879-903.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879-891.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement. *Journal of Organizational Behavior, 25*, 293-325.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire. A cross-national study. *Educational and Psychological Measurement, 66*, 701-716.

Schaufeli, W. B., Salanova, M., González-Roma, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: a two sample confirmatory factor analytic approach. *The Journal of Happiness Studies, 3*, 71-92.

Schaufeli, W. B., & Taris, T. W. (2005). The conceptualization and measurement of burnout: common grounds and worlds apart. *Work & Stress, 19*, 256-262.

Schaufeli, W. B., & Taris, T. W. (in press). A critical review of the Job Demands-Resources Model: Implications for improving work and health. In G. F. Bauer & O. Hämmig (Eds), *Bridging occupational, organizational and public health*. Amsterdam: Springer.

Schaufeli, W. B., & Van Dierendonck, D. (2000). *Handleiding van de Utrechtse Burnout Schaal (UBOS)* [Manual of the Utrecht Burnout Scale]. Lisse: Swets & Zeitlinger.

Segers, J., & Inceoglu, I. (2012). Exploring supportive and developmental career management through business strategies and coaching. *Human Resource Management, 51*, 99–120.

Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and non-experimental studies: New procedures and recommendations. *Psychological Methods, 7*, 422-445.

Taris, T. W., & Kompier, M. A. J. (2006). Games researchers play – Extreme-groups analysis and mediation analysis in longitudinal occupational health research. *Scandinavian Journal of Work, Environment, and Health, 32*, 463-472.

Ten Brummelhuis, L. L., Ter Hoeven, C. L., Bakker, A. B., & Peper, B. (2011). Breaking through the loss cycle of burnout: The role of motivation. *Journal of Occupational and Organizational Psychology, 84*, 268-287.

Van Veldhoven, M., De Jonge, J., Broersen, S., Kompier, M., & Meijman, T. (2002). Specific relationships between psychosocial job conditions and job-related stress: A three-level analytic approach. *Work & Stress: An International Journal of Work, Health, and Organizations, 16,* 207-228.

Vuori, J., Toppinen-Tanner, S., & Mutanen, P. (2011). Effects of resource-building group intervention on career management and mental health in work organizations: randomized controlled field trial. *Journal of Applied Psychology, 97*, 273-286.

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*, 121-141.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior, 74*, 235-244.

CHAPTER 6

IT'S ALL ABOUT CAREERSKILLS: EFFECTIVENESS OF A CAREER DEVELOPMENT INTERVENTION FOR YOUNG EMPLOYEES

Based on:

Akkermans, J., Brenninkmeijer, V., Schaufeli, W. B., & Blonk, R. W. B. (revised and resubmitted). It's All About CareerSKILLS: Effectiveness of a Career Development Intervention for Young Employees.

Chapter 6

6.1. Introduction

In the last decades several changes have taken place in the labor markets of Western countries. Labor has become more knowledge-based and service-oriented, and employee wellbeing and career development are becoming increasingly important (Diener & Seligman, 2004; Nieuwenhuis, Coenen, Fouarge, Harms, & Oosterling, 2012). In addition, the labor market has become much more flexible. Temporary jobs have become more prominent in all labor market sectors ranging from construction to scientific research. As a consequence, careers are also becoming more dynamic, and employees need to keep up with a growing amount of changes in work and working organizations. Moreover, employees are increasingly expected to take their own responsibility for managing their career (Segers & Inceoglu, 2012; Vuori, Toppinen-Tanner, & Mutanen, 2011). Faced with these challenges, employees proactively need to seek career opportunities within as well as outside of their current organization. Therefore, gaining resources and competencies to successfully manage one's career is essential. For these reasons, Vuori et al. (2011) argued that more empirical studies are needed that examine the effectiveness of interventions supporting career development. In line with Vuori et al. (2011), Hall and Las Heras (2010) emphasized that these interventions may be also include so-called "smart jobs"; jobs that are designed in such a way that they may facilitate both employee wellbeing and career development. In this study we empirically tested a career development intervention and focused on its effects on career competencies and work-related wellbeing of young workers.

Thus far research on employee wellbeing and career development has focused mainly on adult, more experienced employees (e.g., Buyens, Van Dijk, Dewilde, & De Vos, 2009). Relatively few studies have solely focused on young employees. This is a surprising result, in particular because young employees encounter many career-related activities in a brief period of time that may have important consequences for their future career, health, and wellbeing (see Akkermans, Brenninkmeijer, Blonk, & Koppes, 2009; Akkermans, Brenninkmeijer, Van den Bossche, Blonk, & Schaufeli, in press; Elfering,

Semmer, Tschan, Kälin, & Bucher, 2007). Besides finding a first occupation and exploring possibilities for further professional development, these also include experiencing unsatisfactory employment, work socialization, and under-employment (Koivisto, Vuori, & Nykiri, 2007; Koivisto, Vuori, & Vinokur, 2010). Moreover, young employees have been hit hardest by the economic crisis of the past few years, leading to an alarming 20% unemployment rate of young employees in Europe (European Commission, 2012).

All these indicators emphasize the importance of research on the role of *career competencies* in the career development of young workers. To study the role of career competencies, a number of steps need to be taken. The first would be to examine what competencies are important and how to assess these competencies. In a recent study, Akkermans, Brenninkmeijer, Huibers, and Blonk (2013a) developed a model and assessment instrument of career competencies. The authors showed that career competencies can be reliably and validly measured. A second step in studying the role of career competencies would be to investigate whether career competencies can be enhanced by brief interventions.

This issue of career competencies and career-related interventions may be especially important for young employees with lower levels of education. European labor market studies show increasing differences between educational groups concerning health, sickness absence, and unemployment (European Commission, 2012). In these studies, employees with lower educational levels report the least favorable outcomes. In addition, educational and professional levels are polarizing in the sense that more jobs are being created for highly skilled workers, and wages are increasing more among highly skilled workers (European Commission, 2012). Research also indicates that a lower educational level can result in an extended job search for the first job and in lower job security (Nieuwenhuis et al., 2012). In addition, lower-skilled jobs are becoming ever more complex due to increasing certificate and diploma demands, an increasing emphasis on flexibility and social skills, and the growing role of ICT (Nieuwenhuis et al., 2012). Therefore, in our study we focused on young employees with intermediate

vocational education (i.e., between 13 and 16 years od education; non-college).

In this study, we tested the short-term effectiveness of a brief intervention that aims to stimulate career competencies and work-related wellbeing of young employees. The methodology of this intervention was derived from the JOBS program (Caplan, Vinokur, Price, & Van Ryn, 1989), an empirically supported intervention that was originally developed to reintegrate recently unemployed individuals. Our intervention, the CareerSKILLS intervention (Akkermans, Lagerveld, Brenninkmeijer, & Blonk, 2010), employs active learning processes (Caplan, Vinokur, & Price, 1997) in which the learner has a central role in identifying personal and professional development, and creative problem solving. Empirically testing this career development intervention may provide us with additional understanding of how to stimulate career competencies, employability, and work-related wellbeing of young workers.

The CareerSKILLS Intervention

The CareerSKILLS intervention was developed to stimulate career competency development and work-related wellbeing of young employees. Its methodology is based on the JOBS intervention (Caplan et al., 1989), which was developed at the Michigan Prevention Research Centre as a preventive intervention for recently unemployed job seekers. The JOBS program is a short, intensive group course that follows a strict protocol. In five consecutive four hour meetings, the participants work with themes such as reflecting upon future wishes, expanding professional networks, and setting goals. Two facilitators lead the sessions, which consist of 12 to 20 participants. The JOBS program sets itself apart from other interventions because of its methodology and its theoretical background, which is detailed below. The methodology is based both on skill acquisition and on strengthening self-efficacy and problem solving skills. The effectiveness of JOBS and JOBS derived interventions has been studied in a number of empirical field studies. In the United States, several studies with unemployed individuals

demonstrated that both short term and long term effectiveness on problem solving skills, finding a job, job satisfaction, and income earned (Caplan et al., 1989; Vinokur, Price, & Schul, 1995). Similar results were found in Finland (Vuori, Silvonen, Vinokur, & Price, 2002; Vuori & Vinokur, 2005) and The Netherlands (Brenninkmeijer & Blonk, 2011). Vinokur and Schul (1997) found that these interventions were especially effective because of the active working ingredients of self-efficacy (Bandura, 1997) and inoculation against setbacks (Meichenbaum, 1985). In focusing on enhancing both self-efficacy and skill acquisition, participants gained a sense of mastery. Moreover, by preparing participants for potential setbacks they were better able to overcome these setbacks. These two working ingredients of self-efficacy and inoculation against setbacks were the methodological fundament in developing the CareerSKILLS program. Further, the exercises of this intervention were aimed at enhancing the career competencies that were brought forward in the model of Akkermans et al. (2013a).

Career Competencies

The main building blocks of the CareerSKILLS intervention are *career competencies*. As mentioned above, Akkermans et al. (2013a) recently formulated a model of career competencies, which was used as a basis for the Career Competencies Questionnaire (CCQ). Using qualitative pilot studies and quantitative analyses with structural equation modeling, they showed that the CCQ had good content, factorial, discriminant, and incremental validity. Akkermans et al. (2013a) characterized career competencies as knowledge, skills, and abilities central to career development that can be developed by the individual. Their model was divided into three dimensions: *reflective*, *communicative*, and *behavioral* competencies, and each of these dimensions contained two competencies. Reflective career competencies pertain to creating awareness of the career and to combining personal reflections with the professional career. The two competencies that comprise this dimension are *reflection on motivation*, which refers to reflection on values, passions, and motivations with regard to the personal

career, and *reflection on qualities*, which refers to reflection on strengths, shortcomings, and skills with regard to the personal career. Communicative career competencies relate to being able to effectively communicate with significant others to improve one's chances of career success. The two competencies are *networking*, which refers to the awareness of the presence and professional value of one's network, and the ability to expand this network for career-related purposes, and *self-profiling*, which refers to presenting and communicating one's personal knowledge, abilities and skills to the internal and external labor market. Finally, behavioral career competencies pertain to being able to actually shape one's career by taking action and being pro-active. *Work exploration*, which refers to actively exploring and searching for work-related and career-related opportunities on the internal and external labor market, and *career control*, which refers to actively influencing learning processes and work processes related to one's career by setting goals and planning how to reach these goals, are the two behavioral competencies.

During the CareerSKILLS intervention, participants first work on their reflective competencies by focusing on what they like and dislike in work, what their qualities are, and what kind of job or working environment they would like to achieve. Next, they work out strategies involving significant others (i.e., communicative competencies) to arrive at that preferred situation. Finally, these strategies are further refined with an action plan and an active search for opportunities to implement their plans (i.e., behavioral competencies).

Self-efficacy and Resilience against Setbacks

In line with the JOBS program, CareerSKILLS is built on two active ingredients that interact with the active learning processes in the intervention (Vinokur & Schul, 1997): self-efficacy and inoculation against setbacks. *Self-efficacy* (Bandura, 1997; 2012) refers to individuals' judgment of their capability of meeting demands in a specific context. Self-efficacy has been shown to increase individuals' motivation for performing specific goal-related

behavior (Van Ryn & Vinokur, 1992; Vuori et al., 2011). Applied to the working context, it can be defined as the confidence in one's abilities to successfully perform work-related and career-related activities. Self-efficacy is an important ingredient of CareerSKILLS because it contributes to defining personal strengths and interests (related to reflective career competencies), social relations at work (related to communicative career competencies), and seeking possibilities and shaping one's career in the desired direction (related to behavioral career competencies; Vuori et al., 2011). Akkermans et al. (2013a) also demonstrated that self-efficacy is related to career competencies and perceived employability. The CareerSKILLS intervention aims to enhance self-efficacy by adopting an approach that centers around positive reinforcement and specific positive feedback in active learning exercises. Referent power of the trainers and emphasizing that participants are experts themselves, combined with social support, further strengthens self-efficacy.

The concept of *inoculation against setbacks* refers to the ability to anticipate setbacks and the skills to cope with them (Meichenbaum, 1985; 2007). According to Meichenbaum, inoculation against setbacks can be achieved by providing an individual with experience in potential stressors and setbacks. By preparing against setbacks, individuals increase their resilience and develop a sense of mastery in problem solving skills when confronted with real-life obstacles. Because setbacks are accepted as learning opportunities, individuals will maintain their motivation to carry out difficult behaviors when faced with real setbacks (Meichenbaum, 2007). As argued above, young workers face many new challenges and difficult choices in a brief period of time. They are often confronted with obstacles such as finding a suitable job and getting used to the responsibilities and social relations in working life. Therefore, it is essential to inoculate these young employees against setbacks, in order to keep them motivated and more resilient. For this reason, every session in the program contains several "inoculation against setbacks" exercises, where participants help each other to recognize potential obstacles, and subsequently to find solutions for these obstacles.

Because the exercises in the CareerSKILLS program were explicitly formulated to increase the six career competencies discussed above (Akkermans et al., 2013a), we expect that the intervention will enhance the career competencies of the participants. As the CareerSKILLS intervention is built around two active ingredients, self-efficacy (Bandura, 1997) and inoculation against setbacks (Meichenbaum, 2007), we also expect participants to gain increased levels of work-related self-efficacy and become more resilient against setbacks. For these reasons, we formulated the following hypotheses:

Hypothesis 1*: The CareerSKILLS intervention will increase the level of career competencies in the intervention group compared with the control group.*

Hypothesis 2*: The CareerSKILLS intervention will increase the level of work-related self-efficacy and resilience against setbacks in the intervention group compared with the control group.*

As the CareerSKILLS program is aimed at increasing career self-management behaviors of young employees through the mastery of career competencies, an integral part of the CareerSKILLS program focuses on activating and encouraging participants to add concrete career-related behaviors to their intentions. Consequently, we expect participants to report more career-related behaviors after completing the intervention. For example, one exercise specifically focuses on drawing an individual's network and on actually asking a relevant person from that network for career opportunities (e.g., a job offer). Because these skills are trained during the intervention, we expect participants to perform these behaviors more frequently after the CareerSKILLS intervention.

Another outcome of our intervention study is perceived *employability.* In recent years, the concept of employability has received much attention both in research and in practice, and it has been linked to career competency development (e.g., Akkermans et al., 2013a; Kuijpers, 2003). Although

different definitions exist, the common denominator in these definitions is the ability to gain equal or better employment in the present and in the future (e.g.; Fugate, Kinicki, & Ashforth, 2004; Van der Heijde & Van der Heijden, 2006). The definition that we used in this study is that employability is "the ability to keep the job one has or to get the job one desires" (Rothwell & Arnold, 2007, p.25). Recent studies have also focused on perceived employability (e.g., De Cuyper, Bernhard-Oettel, De Witte, & Alarco, 2008), emphasizing the importance of a subjective sense of being able to obtain and retain equal or better employment. As we have discussed above, the CareerSKILLS program is built around the two working ingredients of self-efficacy and resilience against setbacks. In fostering participants' confidence in their ability to perform career-related activities and their sense of resilience against obstacles, it is likely that they will also experience more positive perceptions of their ability to succeed in their career, and thus in their chances of obtaining and retaining employment. This is especially the case because they gain additional mastery of career competencies during the intervention, which has been linked to perceived employability (Akkermans et al., 2013a). This leads to our next hypothesis:

Hypothesis 3: *The CareerSKILLS intervention will increase the levels of career-related behaviors and perceived employability in the intervention group compared with the control group*.

As noted above, CareerSKILLS was also developed to increase employee wellbeing. Recent findings indicated that career competencies are related to job resources and work engagement, but not to job demands and emotional exhaustion (Akkermans, Schaufeli, Brenninkmeijer, & Blonk, 2013b), thus showing a resemblance to personal resources that can stimulate employee wellbeing (Hobfoll, 1989; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007; 2009). For this reason we also included work engagement and emotional exhaustion in our analyses, as indicators of motivation and strain, respectively. Work engagement is defined as a

positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli, Salanova, González-Roma, & Bakker, 2002). Emotional exhaustion is a core component of burnout, which refers to feelings of being overextended and exhausted by the emotional demands of one's work (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). As noted above, career competencies have been positively linked to work engagement, which indicates that mastering these competencies may be positively associated with motivation at work. On the contrary, earlier findings have shown no relationship between career competencies and emotional exhaustion, suggesting that the mastery of these competencies may not act as a buffer against strain. Because the CareerSKILLS program is built around increasing these career competencies, it is likely that similar effects would be found. Therefore, we formulated the following hypothesis:

Hypothesis 4: *The CareerSKILLS intervention will increase the levels of work engagement, but not of emotional exhaustion, in the intervention group compared with the control group*.

6.2. Method

Participants and Procedure

Our design was a quasi-randomized control trial with two conditions: an intervention group and a control group. Data for this study were collected in two organizations: a Dutch educational institution (Sample 1) and a Dutch multinational (Sample 2). Participants in the intervention groups followed the program during school hours in Sample 1, and during work hours in Sample 2. Participants of the control group did not receive a specific course or a placebo intervention. They followed the regular curriculum of their school (Sample 1) and organization (Sample 2). In this way we could investigate whether the CareerSKILLS program would have added value on top of the regular programs. Due to practical restraints of the participating organizations, we could not fully randomize the groups.

We derived the first sample from a large Dutch educational institution. These students received intermediate vocational education (i.e., between 13 and 16 years of total education; non-college): they followed a study of 3 to 4 years, in which they all had an educational specialization (e.g., healthcare, metal industry, administrative work). During their vocational training they did multiple internships which increased in length and intensity each time. The participants in this study were in their final year of training, in which they did an extensive internship for 1 to 4 days per week. This was our primary test of effectiveness, because the CareerSKILLS intervention was specifically developed for this group.

The majority of participants in Sample 1 was male (69.4%) , with a mean age of 19 years (83.8% was between 16 and 20 years). The average tenure with their current working organization was 8.7 months and they worked an average of 28.8 hours per week. Allocation to the two groups was based on the school class in which the interns were following their lessons: a class was appointed to either the intervention group or the control group. The composition of the two conditions was matched with regard to educational specialization (e.g., ICT, healthcare, administrative work). A total of 112 out of 135 participants followed the entire program and filled out questionnaires at three points in time (84% participation rate; 100% response rate). In the control group, 61 out of 89 students filled out questionnaires (69% response rate) at two points in time, corresponding with the first and third measurement in the intervention group. We checked for selective attrition both in the intervention group and the control group, but we did not find any significant differences with regard to gender ($F(1, 133) = 1.18$, $p = .28$, and $F(1, 87) = 2.86$, $p = .10$, respectively) or educational specialization ($F(1, 133) = 1.47$, $p = .23$, and $F(1, 87) = 1.55$, $p = .22$, respectively).

The second sample consisted of participants in a reemployment program provided by a large Dutch multinational. These participants had been unemployed but were given a temporary job in a special program that aimed to return them to work. The reemployment program was part of the corporate social responsibility agenda of this multinational company. This

second sample was used to assess the robustness of our findings and to be able to generalize our results to a larger group of employees, as we expected the CareerSKILLS intervention to be useful for other groups of employees as well. A slight majority of the participants in Sample 2 was female (51.3%). The mean age in this sample was 33 years but roughly half of them were younger than 30 years and had received intermediate vocational education. On average, they were working in this reemployment program for 6.7 months and they worked 35.9 hours per week. Full demographic details of the participants are displayed in Table 1. In this sample, allocation to intervention or control group was determined based on department location, as the organization consisted of four participating departments spread out over The Netherlands. In every department the participants were appointed to either the intervention or the control group. A total of 72 out of 84 participants completed the entire program (86% response rate; 100% participation rate). In the control group, 41 out of 75 participants filled out both questionnaires (55% response rate). The composition of the two conditions was matched with regard to how long the participants had been part of the reintegration program, the working location, age, and educational level. We checked for selective attrition both in the intervention group and the control group, but we did not find any significant differences with regard to gender ($F(1, 82) = 1.13$, $p = .29$, and $F(1, 73) = 2.55$, $p = .12$, respectively) or age ($F(1, 82) = 1.14$, $p = .29$, and $F(1, 73) = 2.72$, $p = .10$, respectively).

Participants in the intervention groups received three questionnaires in both samples: immediately before the start of the intervention (Time 1), immediately after the four-day program two weeks later (Time 2), and after the final fifth day (i.e., the return day) of the program, six weeks after the start (Time 3). Questionnaires were handed out to the participants, so they could immediately be filled out on the spot. A research-assistant was present when participants filled out the questionnaire. This assistant briefly explained the procedure and was available for answering questions. The assistant also stated that there were no right or wrong answers and that the data would be processed anonymously, thereby reducing the risk of

evaluation apprehension (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Participants in the control group received two questionnaires: a first questionnaire at a set time and location (Time 1), and a second questionnaire after six weeks (Time 3 of the intervention group). The second questionnaire (Time 2) was left out for the control group due to practical concerns of the participating organizations. In sample 2, the control group filled out online questionnaires instead of paper-and-pencil surveys. They received an invitation via e-mail, and a reminder a week later.

Table 1

Participant characteristics and demographic data.

	Study 1 (N = 173)		Study 2 (N = 113)	
	N	**Percentage**	**N**	**Percentage**
Gender				
Male	120	69.4%	55	48.7%
Female	53	30.6%	58	51.3%
Age				
16-20 years	145	83.8%	2	1.9%
21-30 years	27	15.6%	53	46.9%
31-40 years	1	0.6%	30	26.5%
41-50 years	0	0.0%	17	15.0%
>50 years	0	0.0%	11	9.7%
Level of Education				
Intermediate Vocational Level 2	5	2.9%	23	20.4%
Intermediate Vocational Level 3	11	6.3%	26	23.0%
Intermediate Vocational Level 4	157	90.8%	29	25.7%
Higher Vocational	0	0.0%	6	5.3%
University	0	0.0%	5	4.4%
Other	0	0.0%	24	21.2%
Number of work/internship hours				
0-20 hours	46	26.6%	4	3.5%
21-30 hours	13	7.5%	5	4.5%
31-40 hours	101	58.4%	92	81.4%
> 40 hours	13	7.5%	12	10.6%

The CareerSKILLS Intervention

The first part of the CareerSKILLS intervention consisted of four sessions during the course of two weeks: two sessions in the first week and two sessions in the second week. The participants followed a return day (the fifth session) six weeks after starting the intervention. All sessions lasted 4 hours, adding up to 20 hours of total intervention time.

Participants also received homework assignments to increase transfer to their daily life situation. The intervention used methods such as an active learning process, brainstorming (both in plenary sessions and in subgroup sessions), social modeling, a socially supportive environment, and role playing. Inoculation against setbacks exercises were built around all the core themes of the intervention by brainstorming about potential obstacles and solutions for these obstacles.

The composition of the exercises in the sessions was based on the six career competencies described above. Session 1, entitled "Who am I and what am I good at?", contained exercises with reflection on motivation and reflection on qualities. Participants reflected upon the values that were important to them in their career, and brainstormed about their personal qualities. At the end of the first session, participants drew a personal emblem in which they elaborated upon their achievements, their hidden talents, and their values.

Session 2, entitled "My passions and my future", again focused on both reflective career competencies. Participants brainstormed about possible jobs that fitted their values, passions, and skills. They were asked to step into a figurative time machine to discover their dream jobs. The second session also focused on career control: participants started an action plan in which they formulated career-related goals on the short term (up to 6 months), the middle-long term (1 to 2 years), and the long term (3 to 5 years).

Session 3, entitled "My network and my action plan", was built around career control as well. Participants reflected upon their action plans and they further refined them. Networking was also a central component of the third session: participants drew an elaborate map of their network and they brainstormed about the importance of networking and the possibilities for increasing their personal and professional network.

Session 4, entitled "How do I search for possibilities and how do I present myself?", focused on self-profiling and work exploration. Participants were asked about their values and skills, and the ways in which

they exhibited these competencies to significant others. In roleplaying exercises, they attempted to present themselves as convincingly as possible to each other. Participants also did an exercise in which they were asked to think of ways to search for career-related opportunities both inside their current organization, inside their current industry, and outside of their current industry. The fourth session ended with a ceremony during which the trainers complimented all participants personally on their active role during the intervention.

Session 5, the return day, was held approximately six weeks after the first session. Participants reflected upon their experiences in daily life outside of the intervention and they brainstormed about ways to retain their learning experiences in the future. In this way, they practiced with repeating and retaining information about all six career competencies. After completing the fifth session, participants received an official CareerSKILLS certificate.

The development of the intervention followed the five components for effective group interventions as used in the JOBS program (Price, Friedland, Choi, & Caplan, 1998). These guidelines constitute didactic techniques and delivery methods to maximize active learning processes, and to stimulate self-efficacy and inoculation against setbacks (Vinokur & Schul, 1997). Moreover, their applicability to and relevance for job-related and career-related interventions has been demonstrated (Vuori, Price, Mutanen, Malmberg-Heimonen, 2005; Vuori et al., 2011). First, *career self-management skills* were developed through the incorporation of career competencies, for example by defining one's strengths and interests, and by finding means to achieve career goals. This component is important because most individuals have insufficient knowledge and skills in this area (Vuori et al., 2005). Second, *active teaching and learning methods* were used. This means that instead of lecturing, the trainers make use of the participants' own knowledge and their context, for instance in discussions and role plays. An advantage of active learning is that it takes place in the career context of the participants, which makes the content very specific and applicable to

their real-life situation (El-Tannir, 2002). Third, *certified trainers* who lead the sessions are well trained to build trust and facilitate group processes. Fourth, trainers attempt to create a *supportive training environment* in which participants learn from and support each other. This occurs through modeling and rewarding supportive behaviors (Vuori et al., 2011). A supportive environment is crucial for learning and facing challenges (Vuori et al., 2005). Finally, *preparation against setbacks* is used to brainstorm about potential career-related obstacles and how to overcome these obstacles. This component is important in providing a buffer to potential risks because of fail experiences.

Measurement Instruments

Career competencies were measured with the 21-item Career Competencies Questionnaire (CCQ; Akkermans et al., 2013a). The items were measured on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). The total scale of career competencies showed excellent internal consistency with α values between .94 and .95. This scale included six subscales: (1) *Reflection on motivation* was measured with 3 items, a sample item being, "I know what I like in my work" (α values ranging from .81 to .87); (2) *Reflection on qualities* was measured with 4 items. An example of an item is, "I know my strengths in my work" (α values ranging from .85 to .92); (3) *Networking* was measured with 4 items, a sample item being, "I know how to ask for advice from members of my network" (α values ranging from .78 to .88); (4) *Self-profiling* was measured with 3 items. A sample item was, "I am able to show others what I want to achieve in my career" (α values ranging from .75 to .87); (5) *Work exploration* was measured with 3 items. An example of an item is, "I can actively search for the developments in my area of work" (α values ranging from .72 to .88); (6) *Career control* was measured with 4 items, a sample item being, "I can make clear career plans" (α values ranging from .82 to .93)

Work-related self-efficacy was measured with 5 items based on the criteria as formulated by Bandura (2012). The items were reformulated

for use in an occupational setting. The items of this scale, as well of those of all scales below, were measured on a 5-point Likert scale ranging from 1 (*completely disagree*) to 5 (*completely agree*). Similar scales based on these criteria have been shown to be positively related to wellbeing, stress appraisals, and social relations (Luszczynska, Gutiérrez-Doña, & Schwarzer 2005). A sample item from this scale is, "If difficult problems arise at work I know how to solve them" (α values ranging from .82 to .90).

Resilience against setbacks was measured with a 4-item scale based on Brenninkmeijer, Cremer, & Blonk (2005). These items have been used in several studies related to the JOBS methodology (Brenninkmeijer et al., 2005). The scale was adapted to be used in a career setting. An example item from this scale is, "I would find a good solution if things would go wrong in my career" (α values ranging from .81 to .90).

Career-related behaviors were measured with a self-constructed 5-item scale. Example items from this scale were, "I actively shape my career" and "I search for possibilities to positively influence my career" (α values ranging from .85 to .95). This scale was positively related to the other study variables, but no extremely high values were found, thereby supporting the validity of this scale.

Perceived employability was measured with a Dutch version of the 8-item scale of De Cuyper and De Witte (2008). This scale has been shown to be positively correlated with job satisfaction and employee wellbeing, and negatively correlated with job insecurity (De Cuyper et al., 2008; De Cuyper & De Witte, 2008). A sample item from this scale is, "I could find a different, better, job if I would want to" (α values ranging from .81 to .93).

Work engagement was measured with the nine-item version of the Utrecht Work Engagement Scale (UWES; Schaufeli, Bakker, & Salanova, 2006). The items were measured on a 7-point Likert scale ranging from 0 (*never*) to 6 (*always*). The UWES items reflect three underlying dimensions, which are measured with three items each: vigor (e.g., "At work I feel bursting with energy"; α = values ranging from .73 to .85), dedication (e.g., "My work inspires me"; α = values ranging from .73 to .89), and absorption

(e.g., "I get carried away when I am working"; α = values ranging from .75 to .87).

Emotional exhaustion was measured with the five-item subscale from the Utrecht Burnout Scale (UBOS; Schaufeli & Van Dierendonck, 2000). The items were measured on a 7-point Likert scale ranging from 0 (*never*) tot 6 (*always*). One item was deleted from the scale because it clearly reduced the internal consistency of the scale. An example item from this scale is. "I feel mentally exhausted because of my work" (α = values ranging from .83 to .94).

Satisfaction with the intervention was assessed by asking participants to rate each day of the CareerSKILLS intervention on a 5-point Likert scale ranging from 1 (*very bad*) tot 5 (*very good*). These self-constructed items were formulated as follows: "How would you rate [session number]: [*session title*]?". Cronbach's alpha for the scale score was .77 in both samples.

Strategy of Analysis

Repeated measures MANOVAs were used to test whether there were significant changes in each of the outcome variables across the two conditions between Time 1 (pretest) and Time 3 (six weeks later). We tested for main effects of time and condition, as well as for interaction effects of time x condition. The outcome variables that were used included the six career competencies (reflection on motivation, reflection on qualities, networking, self-profiling, work exploration, and career control), work-related self-efficacy, resilience against setbacks, career-related behaviors, perceived employability, work engagement, and emotional exhaustion as outcome measures. The analyses were performed separately for the two samples in our study.

6.3. Results

Descriptive Statistics

Analyses of the descriptive statistics revealed some interesting results. First, participants in the first sample rated the CareerSKILLS

intervention on average 4.08 (*SD* = 0.57). Of all 112 participants, 49.1% scored the intervention “very good”, 47.3% scored it “good”, 3.6% scored it “neutral”, and none of the participants scored it “bad” or “very bad”. In Sample 2, the results were comparable (*M* = 4.11, *SD* = 0.55). Of the 71 participants, 50.0% rated the intervention “very good”, 47.2% scored it “good”, and 2.8% scored it “neutral”. Again, none of the participants scored the program “bad” or “very bad”. These results indicate that the CareerSKILLS intervention was highly appreciated by the participants. Detailed information about the mean scores and standard deviations of the other study variables can be found in Table 2. Further information about the correlations between the study variables can be obtained from the corresponding author.

Table 2

Means and standard deviations of the study variables (IG = Intervention Group; CG = Control Group)

	IG T1		IG T2		IG T3		CG T1		CG T3	
Sample 1	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Reflection on motivation	3.26	0.84	4.21	0.74	4.19	0.65	3.19	0.88	3.54	0.46
Reflection on qualities	3.22	0.77	4.19	0.68	4.14	0.65	3.35	0.88	3.63	0.48
Networking	3.16	0.74	4.10	0.67	4.04	0.68	3.15	0.75	3.27	0.58
Self-profiling	3.22	0.71	4.09	0.69	4.00	0.75	3.11	0.80	3.44	0.57
Work exploration	3.24	0.67	4.10	0.68	4.04	0.70	3.23	0.66	3.42	0.51
Career Control	3.00	0.72	4.05	0.73	4.08	0.74	3.14	0.70	3.34	0.62
Work-related self-efficacy	3.21	0.66	4.03	0.68	3.91	0.70	3.29	0.67	3.37	0.47
Resilience against setbacks	3.15	0.71	4.04	0.70	3.99	0.71	3.11	0.62	3.25	0.46
Career-related behaviors	3.09	0.83	4.10	0.65	4.06	0.72	3.10	0.80	3.25	0.61
Perceived Employability	3.09	0.70	4.00	0.68	3.92	0.67	3.06	0.78	3.36	0.55
Work Engagement	3.83	0.96	4.20	0.92	4.51	0.81	3.73	1.05	3.60	0.86
Emotional Exhaustion	1.64	1.04	1.82	1.21	1.61	1.01	1.67	1.11	1.80	0.93

Table 2 (CONTINUED)

	IG T1		IG T2		IG T3		CG T1		CG T3	
Sample 2	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Reflection on motivation	3.40	0.87	4.43	0.48	4.23	0.64	3.62	0.69	3.37	0.57
Reflection on qualities	3.29	0.78	4.30	0.56	4.18	0.60	3.57	0.70	3.45	0.67
Networking	2.88	0.74	4.20	0.59	3.91	0.68	3.02	0.70	3.07	0.60
Self-profiling	3.14	0.75	4.25	0.56	4.03	0.61	3.48	0.69	3.33	0.54
Work exploration	3.12	0.77	4.27	0.52	4.11	0.65	3.42	0.49	3.46	0.54
Career Control	3.08	0.74	4.28	0.53	4.13	0.58	3.45	0.66	3.28	0.71
Work-related self-efficacy	3.40	0.68	4.11	0.55	3.96	0.57	3.48	0.42	3.37	0.57
Resilience against setbacks	3.26	0.73	4.17	0.63	3.95	0.64	3.46	0.40	3.35	0.54
Career-related behaviors	3.37	0.69	4.26	0.60	4.30	0.65	3.70	0.60	3.45	0.71
Perceived Employability	2.76	0.67	3.87	0.66	3.74	0.68	2.89	0.50	3.06	0.55
Work Engagement	3.80	1.07	4.09	1.13	4.66	0.87	3.85	1.02	3.98	1.13
Emotional Exhaustion	1.40	1.21	1.33	1.12	1.44	1.26	1.42	0.87	1.54	1.27

CareerSKILLS Effectiveness in Sample 1

We found a significant main effect of time and group on all six career competencies (see Table 3). More importantly, all six time x condition interaction effects were significant and were in the expected direction: the mean scores significantly increased in the intervention group, but not in the control group, supporting Hypothesis 1. There were significant main effects of time and group for work-related self-efficacy and for resilience against setbacks. Moreover, the time x condition interaction effects were significant for both outcome variables, showing a significant increase in mean values for the intervention group, but not for the control group. These findings confirm Hypothesis 2. Significant main effects were also found of time and group for career-related behaviors and for perceived employability. Both time x condition interaction effects were significant and in the expected direction, thereby supporting Hypothesis 3. Finally, for work engagement there was a significant effect of time and of group. There was also a significant time x group interaction effect in favor of the intervention group. However, no significant effects were found for emotional exhaustion. These results support Hypothesis 4.

CareerSKILLS Effectiveness in Sample 2

The results in Sample 2 were similar to those in Sample 1 (see Table 3). We found main effects of time for all six career competencies, demonstrating the positive increase of mean scores between T1 and T3. Significant main effects of group were also found, although the effects for self-profiling and work exploration were only marginally significant. All six interaction effects were significant and in favor of the intervention group, thereby supporting Hypothesis 1. We also found significant main effects of time and group for work-related self-efficacy and resilience against setbacks. The interaction effects were significant and in favor of the intervention group, thereby supporting Hypothesis 2. Main effects of time and group were found for perceived employability and career-related behaviors. Moreover, the interaction effects were significant, supporting Hypotheses 3.

Finally, there was a significant effect of time and a significant time x group interaction effect in favor of the intervention group for work engagement, but no significant effects were found for emotional exhaustion. These results support Hypothesis 4.

Because Sample 2 consisted of employees from different age categories, we ran additional analyses to examine whether there were differences in the effectiveness of CareerSKILLS between the group younger than 30 years (identical to Sample 1) and older than 30 years. None of the outcome variables developed differently for the two groups. The only one that came very close to being significant was the group x outcome variable interaction effect of perceived employability ($F(1, 111) = 3.88$, $p = 0.051$). Hence, CareerSKILLS was generally as effective for participants older than 30 years as it was for those younger than 30 years.

Table 3

Results of Repeated Measures MANOVA of all outcome variables.

	Sample 1			Sample 2		
Variable	**F(1, 171)**	**Wilks' λ**	**η_p^2**	**F(1, 112)**	**Wilks' λ**	**η_p^2**
Reflection on Motivation						
Time	68.36***	0.71	0.29	7.59***	0.94	0.06
Group	16.77***	-	0.09	12.22***	-	0.10
Time X Group	13.72***	0.93	0.07	25.53***	0.81	0.19
Reflection on Qualities						
Time	53.04***	0.76	0.24	14.17***	0.89	0.11
Group	6.17***	-	0.04	6.42*	-	0.06
Time X Group	15.22***	0.92	0.08	24.61***	0.82	0.18
Networking						
Time	39.32***	0.81	0.19	32.92***	0.77	0.23
Group	26.45***	-	0.13	12.89***	-	0.10
Time X Group	22.86***	0.88	0.12	27.89***	0.80	0.20
Self-profiling						
Time	48.04***	0.78	0.22	18.92***	0.85	0.15
Group	17.15***	-	0.09	3.62	-	0.03
Time X Group	7.93***	0.96	0.04	38.18***	0.74	0.26
Work Exploration						
Time	46.94***	0.79	0.22	49.05***	0.74	0.26
Group	17.33***	-	0.09	3.16	-	0.03
Time X Group	17.72***	0.91	0.09	33.16***	0.77	0.23
Career Control						
Time	71.50***	0.72	0.30	25.91***	0.81	0.19
Group	13.23***	-	0.07	5.81*	-	0.05
Time X Group	32.95***	0.84	0.16	49.88***	0.69	0.31

Note. ***: $p < 0.001$; **: $p < 0.01$; *: $p < 0.05$.

Table 3 (CONTINUED)

	Sample 1			Sample 2		
Variable	**F(1, 171)**	**Wilks' λ**	**η_p^2**	**F(1, 112)**	**Wilks' λ**	**η_p^2**
Work-related Self-efficacy						
Time	29.58***	0.85	0.15	6.69***	0.94	0.06
Group	10.17***	-	0.06	10.92***	-	0.12
Time X Group	17.74***	0.91	0.09	15.17***	0.88	0.12
Resilience against Setbacks						
Time	51.87***	0.77	0.23	11.36***	0.91	0.09
Group	23.82***	-	0.12	5.87*	-	0.05
Time X Group	26.15***	0.87	0.13	20.79***	0.84	0.16
Career-related Behaviors						
Time	46.87***	0.79	0.22	17.73***	0.86	0.14
Group	20.38***	-	0.11	6.38***	-	0.05
Time X Group	25.70***	0.87	0.13	54.44***	0.67	0.33
Perceived Employability						
Time	55.07***	0.76	0.24	53.22***	0.77	0.32
Group	13.88***	-	0.08	8.53***	-	0.07
Time X Group	12.40***	0.93	0.07	26.68***	0.81	0.19
Work Engagement						
Time	9.34**	0.95	0.05	17.98***	0.86	0.14
Group	19.67***	-	0.10	3.87	-	0.03
Time X Group	19.73***	0.90	0.10	9.99**	0.92	0.08
Emotional Exhaustion						
Time	0.28	1.00	0.02	0.47	1.00	0.04
Group	0.71	-	0.04	0.10	-	0.01
Time X Group	0.62	1.00	0.04	0.14	1.00	0.01

Note. ***: $p < 0.001$; **: $p < 0.01$; *: $p < 0.05$.

6.4. Discussion

Our study aimed to investigate the effectiveness of the CareerSKILLS program, an intervention aiming to stimulate career career development and work-related wellbeing and work-related wellbeing of young employees. This intervention was developed based on the principles of the JOBS program (Caplan et al., 1989). Its exercises are based on the concept of career competencies (Akkermans et al., 2013a), and its working ingredients are self-efficacy (Bandura, 1997), and inoculation against setbacks (Meichenbaum, 1985).

CareerSKILLS distinguishes itself from other career development interventions in several ways. First, the CareerSKILLS program focuses primarily on young employees who are starting their career, a group that has received relatively little research attention so far despite the many challenges they face in a brief period of time. Second, CareerSKILLS is an intervention program that focuses both on prevention of negative outcomes (e.g., under-employment) and the promotion of positive outcomes (e.g., employability and work engagement). In this sense, it also bears similarities to amplitive interventions (Ouweneel, Schaufeli, & Le Blanc, 2009), which specifically focus on stimulating positive outcomes for all employees, and to a strength-based approach (Hodges & Clifton, 2004), which centers around positive reinforcement of the strengths that individuals possess, rather than their weaknesses. This may be especially important for our target group of young employees, as a recent study showed that career competencies may act similar to personal resources in stimulating motivation and wellbeing (Akkermans et al., 2013b). Third, CareerSKILLS aims to stimulate career development of all young employees, not only of specific "problem groups" (e.g., the unemployed or drop-outs). Last but not least, we expanded the methodology of the JOBS program, which has been shown to be effective in various empirical studies (e.g., Vinokur et al., 1995), with the concept of career competencies (Akkermans et al., 2013a).

In a quasi-randomized control trial, we examined to what extent the intervention influenced career competencies, self-efficacy, resilience

against setbacks, career-related behaviors, perceived employability, work engagement, and emotional exhaustion. We tested the intervention in two independent samples: one consisting of students who did extensive internships, and another consisting of participants in a special reintegration program. The first sample was a homogeneous group of young employees with intermediate vocational education. A significant increase was present in the mastery of all career competencies (Hypothesis 1), in work-related self-efficacy and resilience against setbacks (Hypothesis 2), and in career-related behaviors and perceived employability (Hypothesis 3), compared with the control group. Moreover, there was a significant increase in the intervention group of work engagement, but no effect of emotional exhaustion, compared with the control group (Hypothesis 4). These results indicate that the CareerSKILLS intervention is beneficial both in enhancing career self-management and work-related wellbeing of young workers. Overall, these results demonstrate the short-term effectiveness of the CareerSKILLS intervention for young employees with lower educational levels.

We cross-validated our results in a second, heterogeneous, independent sample consisting of temporary employees in a reemployment program. The results in this second sample were also in line with our hypotheses. We found a significant increase among participants of the program in their mastery of career competencies (Hypothesis 1), in self-efficacy and resilience against setbacks (Hypothesis 2), and in career-related behaviors and perceived employability (Hypothesis 3), compared with the control group. We also found a significant increase in work engagement, but no effect of emotional exhaustion (Hypothesis 4). We also tested for possible age differences in the second sample. The results show that the intervention was equally effective for employees younger than 30 years and those older than 30 years. These results provide additional support for the short-term effectiveness of the CareerSKILLS intervention, further solidifying the robustness of the findings.

Theoretical Implications

Our findings have several theoretical implications. First, we provided additional support for the notion that career competencies are malleable and may therefore be an important building block of career development interventions. Moreover, and in line with Akkermans et al. (2013a), we showed that career competencies and perceived employability are closely and positively related, which indicates that career competencies may be important in fostering employability of the young workforce. These results also further support the validity of the framework of career competencies that was brought forward by Akkermans et al. (2013a).

Second, we heed the call of Vuori et al. (2011) in developing and empirically testing a career development intervention. Our results demonstrate that an intervention using the psychological concept of career competencies (Akkermans et al., 2013a) in combination with the active working ingredients of self-efficacy (Bandura, 1997) and inoculation against setbacks (Meichenbaum, 1985), and the five components for effective group interventions used in the JOBS program (Price et al., 1998), may be an effective means of activating young workers to proactively manage their career. This may be especially effective when combined with the active learning processes that are part of the intervention (Caplan et al., 1997). As such, this study also further supports to the effectiveness of the JOBS methodology. Moreover, our results imply that gaining career competencies, being self-efficacious, and being resilient against potential obstacles may be important concepts in the career development of young workers who are starting their career.

A third implication concerns the effect of the CareerSKILLS program on work engagement, but not on emotional exhaustion. In line with Akkermans et al. (2013b), this indicates that career competencies are uniquely related to motivation as opposed to strain. Moreover, these findings support the assumption that career competencies are not exclusively related to career development, but also to employee wellbeing (Akkermans et al., 2013b). Career competency development may therefore contribute to the

development of so-called “smart jobs” (Hall & Las Heras, 2010), as they can stimulate learning, growth, and employability. This further underlines the importance of combining research on job design and career development (Hall & Las Heras, 2010).

Limitations and Suggestions for Future Research

A number of limitations and suggestions for future research need to be addressed. First, although our current results indicate that the effects of the CareerSKILLS intervention remain stable after six weeks, we only have a short-term measure of effectiveness. Burke and Hutchins (2007) emphasized that individuals need time and opportunity to absorb the content of interventions and to implement their new skills and knowledge in practice. According to these researchers, it would be important to use longer retention intervals, preferably even more than 1 year, to ascertain the transfer effect of intervention designs. Because we developed the CareerSKILLS intervention to stimulate long-term career development and wellbeing of young employees, it is important that the effectiveness of the intervention is also tested with a longer-term measure, for example with a 12-month follow-up (e.g., Koivisto et al., 2007).

A second important limitation is that our study only included self-report measures. Although the value of subjective measures with respect to work-related themes of research is increasingly emphasized (e.g., De Cuyper, van der Heijden, & De Witte, 2011), it only provides limited insight into the actual effectiveness of the CareerSKILLS intervention. This is also a limitation of the CCQ that we used to assess career competencies as it measures perceived competency mastery. An important addition to our current study would be to investigate objective career outcomes of the participants, for example objective employability measures, such as the actual number of job shifts and/or internal promotions. Moreover, it would be interesting to have supervisors and co-workers fill out the CCQ to gain a better understanding of the actual career competency mastery of employees. We therefore believe it is important to include these kinds of

objective outcome measures in future studies on the CareerSKILLS program in order to investigate the actual effects it has on career development and wellbeing of young employees.

Although CareerSKILLS was primarily developed for young employees, in order to further validate the effectiveness of the program it would be interesting to test it among other groups of employees. As our findings in Sample 2 indicated that the program was equally effective for employees younger than 30 years and older than 30 years, future studies may implement CareerSKILLS among older workers to examine whether they would also experience enhanced career development and wellbeing after participating in the intervention. Moreover, as especially our second sample was rather small, it would be important to further validate our findings among larger groups of young workers as well.

To be most effective, interventions should focus simultaneously on the individual and the organization level (e.g., Sockoll, Kramer, & Bödeker, 2008). It is therefore interesting to include employees' organizations (schools and working organizations) in future intervention programs, for example by training supervisors and managers to consolidate the changes in competencies and behaviors (i.e., the transfer) of the participants.

Practical Implications

The CareerSKILLS intervention offers an opportunity for employees to gain additional career competencies and increased self-confidence and resilience. It can also stimulate motivation at work, thereby providing the tools for long-term career self-management and employee wellbeing. This intervention may therefore be a valuable addition to HR and career guidance programs in organizations. An added advantage is that it is organized in groups, which means that teams or groups of colleagues could potentially be trained simultaneously. In addition, CareerSKILLS may be used as an organizational socialization tactic for newcomers (Saks & Gruman, 2011). This is a practical and effective way of intervening that also fosters the transfer and implementation in daily life because participants can support

each other like they do during the program. HR departments could also implement the CareerSKILLS program when faced with downsizing or outplacement programs. For these reasons, the CareerSKILLS intervention could be integrated with career-related HR practices in organizations.

The CareerSKILLS intervention can also be a valuable addition to career guidance programs in intermediate vocational schools. Training students in career competencies and stimulating their self-confidence and resilience in self-managing their career may provide them with a solid basis to complete the school-to-work transition in a healthy and effective way. The CareerSKILLS program may be incorporated in curricula of schools, stimulating students' preparedness for managing their career and supporting them in gaining relevant competencies.

Conclusion

This study provides an empirical intervention study that attempts to bridge a gap between career development and organizational behavior. Specifically, we focus on increasing the career self-management and wellbeing of young employees through the mastery of career competencies, and through increasing their self-efficacy and resilience against potential setbacks. This career development intervention can contribute both to preventing negative outcomes such as underemployment, and to promoting positive outcomes such as engagement and employability. Therefore, the CareerSKILLS program can be valuable for all young employees, making it broadly applicable in educational settings and in HRM policies. With our study, we hope to provide a contribution both to theory and to practice with regard to career development and employee wellbeing in the ever changing contemporary career, and we hope to stimulate further research and interventions with regard to career self-management of the young workforce.

References

Akkermans, J., Brenninkmeijer, V., Blonk, R. W. B., & Koppes, L. L. J. (2009). Fresh and healthy? Well-being, health and performance of young employees with intermediate education. *Career Development International, 14*, 671-699.

Akkermans, J., Brenninkmeijer, V., Huibers, M., & Blonk, R. W. B. (2013a). Competencies for the contemporary career: Development and preliminary validation of the Career Competencies Questionnaire. *Journal of Career Development*. *Journal of Career Development, 40*, 244-266

Akkermans, J., Brenninkmeijer, V., Van den Bossche, S. N. J., Blonk, R. W. B., & Schaufeli, W. B. (in press). Young and going strong? A longitudinal study on occupational health among young employees of different educational levels. *Career Development International.*

Akkermans, J., Lagerveld, S., Brenninkmeijer, V., & Blonk, R. W. B. (2010). *CareerSKILLS: Protocol van een interventie gericht op het versterken van loopbaancompetenties van jonge werknemers.* [CareerSKILLS: Protocol of an intervention aimed at strengthening career competencies of young employees]. Hoofddorp: TNO.

Akkermans, J., Schaufeli, W. B., Brenninkmeijer, V., & Blonk, R. W. B. (2013b). Engaging your career: Career competencies as personal resources. *Manuscript submitted for publication*.

Bandura, A. (1997). Self-efficacy: The exercise of control. New York, NY: Freeman.

Bandura, A. (2012). Information on self-efficacy. Retrieved from http://www.des.emory.edu/mfp/self-efficacy.html

Brenninkmeijer, V., & Blonk, R. W. B. (2011). The effectiveness of the JOBS program among the long-term unemployed: A randomized experiment in the Netherlands. *Health Promotion International*, *27*, 220-229.

Brenninkmeijer, V., Cremer, R., & Blonk, R. W. B. (2005). *Werken met SKILLS-interventies. Overzicht van een onderzoekslijn.* [Working with SKILLS interventions. Overview of a research program]. Hoofddorp: TNO Kwaliteit van Leven.

Burke, L. A., & Hutchins, H. M. (2007). Training transfer: An integrative literature review. *Human Resource Development Review, 6*, 263-296.

Buyens, D., Van Dijk, H., Dewilde, T., & De Vos, A. (2009). The aging workforce: Perceptions of career ending. *Journal of Managerial Psychology, 24*, 102-117.

Caplan, R. D., Vinokur, A. D., & Price, R. H. (1997). From job loss to reemployment: Field experiments in prevention-focused coping. In G. W. Albee & T. P. Gullotta (Eds.), *Primary prevention works: Issues in children's and families' lives* (Vol. 16, pp. 341-379). Thousand Oaks, CA: Sage.

Caplan, R. D., Vinokur, A. D., Price, R. H., & Van Ryn, M. (1989). Job-seeking, reemployment and mental health: A randomized field experiment in coping with job loss. *Journal of Applied Psychology, 74*, 759-769.

Chapter 6

De Cuyper, N., Bernhard-Oettel, C., Berntson, E., De Witte, H., & Alarco, B. (2008). Employability and Employees' Well-Being: Mediation by Job Insecurity. *Applied Psychology: an International Review, 57*, 488-509.

De Cuyper, N., Van der Heijden, B. I. J. M., & De Witte, H. (2011). Associations between perceived employability, employee well-being, and its contribution to organizational success: a matter of psychological contracts? *The International Journal of Human Resource Management, 22*, 1486-1503.

De Cuyper, N., & De Witte, H. (2008). Gepercipieerde kans op een baan versus een betere baan: relaties met arbeidstevredenheid en welzijn. [Perceived of a job versus a better job: the relationships with job satisfaction and wellbeing]. *Gedrag & Organisatie*, *21*, 475-492.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The Job Demands-Resources model of burnout. *Journal of Applied Psychology, 85*, 499-512.

Diener, E., & Seligman, M. E. P. (2004). Beyond Money. *Psychological Science in the Public Interest, 5*, 1-31.

Elfering, A., Semmer, N. K., Tschan, F., Kälin, W., & Bucher, A. (2007). First years in job: A three-wave analysis of work experiences. *Journal of Vocational Behavior, 70*, 97-115.

El-Tannir, A. A. (2002). The corporate university model for continuous learning, training and development. *Education + Training, 44*, 76-81.

European Commission (2012). *Employment and Social Developments in Europe 2011*. Luxembourg: Publications Office of the European Union.

Fugate, M., Kinicki, A. J., & Ashforth, B.E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior, 65*, 14-38.

Hall, D. T., & Las Heras, M. (2010). Reintegrating job design and career theory: Creating not just good jobs but smart jobs. *Journal of Organizational Behavior, 31*, 448-462.

Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist, 44*, 513-524.

Hodges, T. D., & Clifton, D. O. (2004). *Strength based development in practice*. In P.A. Linley and S. Joseph (Eds.), International handbook of positive psychology in practice: from research to application (pp. 256-268). New Jersey: Wiley and Sons.

Koivisto, P., Vuori, J., & Nykiri, E. (2007). Effects of the school-to-work group method among young people. *Journal of Vocational Behavior, 70*, 277-296.

Koivisto, P., Vuori, J., & Vinokur, A. D. (2010). Transition to work: Effects of preparedness and goal construction on employment and depressive symptoms. *Journal of Research on Adolescence, 20*, 869-892.

Kuijpers, M. A. C. T. (2003). *Loopbaanontwikkeling.* Enschede: Twente University Press.

Luszczynska, A., Gutiérez-Doña, B., & Schwarzer, R. (2005). General self-efficacy in various domains of human functioning: Evidence from five countries. *International Journal Of Psychology, 40*, 80-89.

Meichenbaum, D. (1985). *Stress inoculation training: A clinical guidebook.* Elmsford, NY: Pergamon Press.

Meichenbaum, D. (2007). *Stress inoculation training: A preventative and treatment approach*. In P. M. Lehrer, R. L. Woolfolk, and W. S. Sime (Eds.), Principles and practice of stress management (3rd ed., pp. 407-410). New York, NY: Guilford Press.

Nieuwenhuis, L., Coenen, J., Fouarge, D., Harms, T., & Oosterling, M. (2012). *De creatie van publieke waarde in het middelbaar beroepsonderwijs.* [The creation of public value in intermediate vocational education.] Retrieved from http://www.nwo.nl/files.nsf/pages/NWOP_8YRECJ/$file/PubliekewaardevanhetMBO.pdf

Ouweneel, E., Schaufeli, W. B., & Le Blanc, P. M. (2009). Van preventie naar amplitie: interventies voor optimaal functioneren. [From prevention to amplition: interventions for functioning optimally]. *Gedrag and Organisatie, 22*, 118-135.

Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and the recommended remedies. *Journal of Applied Psychology, 88*, 879-903.

Price, R. H., Friedland, D. S., Choi, J. N., & Caplan, R. D. (1998). *Job loss and work transitions in a time of global economic change*. In X. Arriaga and S. Oskamp (Eds.), Addressing community problems (pp. 195-222). Thousand Oaks, CA: Sage.

Rothwell, A., & Arnold, J. (2007). Self-perceived employability: Development and validation of a scale. *Personnel review, 36*, 23-41.

Saks, A. M., & Gruman, J. A. (2011). Getting newcomers engaged: the role of socialization tactics. *Journal of Managerial Psychology, 26*, 383-402.

Schaufeli, W. B., Bakker, A. B., & Salanova, M. (2006). The measurement of work engagement with a short questionnaire. A cross-national study. *Educational and Psychological Measurement, 66*, 701-716.

Schaufeli, W. B., Salanova, M., González-Roma, V., & Bakker, A. B. (2002). The measurement of engagement and burnout: a two sample confirmatory factor analytic approach. *The Journal of Happiness Studies, 3*, 71-92.

Schaufeli, W. B., & Van Dierendonck, D. (2000). *Handleiding van de Utrechtse Burnout Schaal (UBOS)* [Manual of the Utrecht Burnout Scale]. Lisse: Swets & Zeitlinger.

Segers, J., & Inceoglu, I. (2012). Exploring supportive and developmental career management through business strategies and coaching. *Human Resource Management, 51*, 99–120.

Sockoll, I., Kramer, I., & Bödeker, W. (2008). *Effectiveness and economic benefits of workplace health promotion and prevention. Summary of scientific evidence 2000-2006* (IGA Report No. 13e). Retrieved from http://www.iga-info.de/fileadmin/Veroeffentlichungen/iga-Reporte_Projektberichte/iga-Report_13e_effectiveness_workplace_prevention.pdf

Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2006). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management, 45,* 449-476.

Van Ryn, M., & Vinokur, A.D. (1992). How did it work? An examination of the mechanisms through which an intervention for the unemployed promoted job-search behavior. *American Journal of Community Psychology, 20*, 577-597.

Vinokur, A. D., Price, R. H., and Schul, Y. (1995). Impact of the JOBS intervention on unemployed workers varying in risk for depression. *American Journal of Community Psychology, 23*, 39-74.

Vinokur, A., & Schul, Y. (1997). Mastery and inoculation against setbacks as active ingredients in the JOBS intervention for the unemployed. *Journal of Consulting and Clinical Psychology, 65*, 867-877.

Vuori, J., Price, R. H., Mutanen, P., & Malmberg-Heimonen, I. (2005). Effective group training techniques in job-search training. *Journal of Occupational Health Psychology, 10*, 261-275.

Vuori, J., Silvonen, J., Vinokur, A., & Price, R. (2002). The Työhön Job Search Program in Finland: Benefits for the unemployed with risk of depression or discouragement. *Journal of Occupational Health Psychology, 7*, 5-19.

Vuori, J., Toppinen-Tanner, S., & Mutanen, P. (2011). Effects of resource-building group intervention on career management and mental health in work organizations: randomized controlled field trial. *Journal of Applied Psychology, 97*, 273-286.

Vuori, J., & Vinokur, A. D. (2005). Job-search preparedness as a mediator of the effects of the Työhön Job Search intervention on re-employment and mental health. *Journal of Organizational Behavior, 26*, 275-291.

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*, 121-141.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior, 74*, 235-244.

CHAPTER 7

GENERAL DISCUSSION

Chapter 7

7.1. Introduction

Young workers are faced with many unique challenges in a brief period of time when they start their professional careers. Among other things, they need to take on new roles and identities, adjust to having more responsibilities, and make many important vocational choices (Elfering, Semmer, Tschan, Kälin, & Bucher, 2007; Savickas, 1998). Especially young workers with lower levels of education[1] may need support in managing their work and career as certificate demands are increasing, work is becoming more service-oriented, and those with lower levels of education are receiving increasingly fewer work-related and career-related opportunities compared with their higher educated colleagues (Nieuwenhuis, Coenen, Fouarge, Harms, & Oosterling, 2012; Raad voor Werk en Inkomen, 2009; Ryan, 2001). However, a lack of knowledge seems to exist with regard to the factors that underlie work-related wellbeing and career development of these young employees. Therefore, in this thesis we aimed to gain a better understanding of the work and career of young employees with lower levels of education, (i.e., 16 years of total education or less; non-college degree). To achieve this goal, we formulated five research questions. First, we set out to investigate in which ways job characteristics are relevant for determining the wellbeing, health, and performance of young employees with lower levels of education. Second, we examined potential differences between educational groups with regard to job characteristics, wellbeing, health, performance, and the inter-relations between these aspects. Third, we investigated which career competencies may be relevant for young employees with lower levels of education. We therefore developed a theoretical model and a measurement instrument for career competencies, and we tested whether this model had good reliability and validity. Fourth, because careers and daily work life are becoming increasingly integrated, we investigated whether career competencies may be a relevant concept in stimulating wellbeing of young employees. Finally, we developed and empirically tested a career development intervention which aimed to

[1] see Appendix I for a further explanation of the Dutch educational system.

stimulate career competencies, career development and wellbeing of young employees.

In this final chapter, we will summarize and discuss our main findings, we will reflect upon strengths and limitations of this thesis, and we will discuss theoretical and practical implications. We start by discussing the main results for each of our research questions.

7.2. Main Results and Conclusions

7.2.1. In which ways are job characteristics relevant for determining the wellbeing, health, and performance of young employees with lower levels of education (Research Question 1)?

We used the Job Demands-Resources (JD-R) model (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001) as our heuristic model to study the role of job characteristics in determining wellbeing, health, and performance of young workers. In Chapters 2 and 5 we used cross-sectional designs, whereas in Chapter 3 we studied these associations with a longitudinal design.

In Chapter 2, we examined motivational and health impairment processes (Bakker, Demerouti, & Schaufeli, 2003b) in a large cross-sectional sample of young employees aged 18-25 years with intermediate educational level (N = 1,477). This sample was representative of the Dutch workforce (Van den Bossche, Koppes, Granzier, De Vroome, & Smulders, 2008). As predicted by the JD-R model, we found positive associations between job resources (i.e., autonomy and social support) and job satisfaction, general health, and performance, as well as between job demands (i.e., work pressure and emotional demands) and emotional exhaustion. Results for task variation (assumed to be a job resource), mental demands (assumed to be a job demand), and the hypothesized association between job demands and general health and performance, were somewhat ambiguous. The findings in Chapter 5 mostly underline those found in Chapter 2 as job resources (i.e., autonomy, social support, and opportunities for development) were positively related to work engagement, and job demands

(i.e., work pressure, emotional workload, and physical workload) were positively related to emotional exhaustion.

In Chapter 2 we also found significant mediation effects as predicted by the motivational process of the JD-R model: job satisfaction mediated the positive effect of social support on general health and the positive effect of autonomy on performance. However, we did not find evidence for the health impairment process of the JD-R model as there were no direct effects of job demands on general health, and only a small direct effect of mental demands on performance, which was not mediated by emotional exhaustion. These results suggest that these young workers are relatively resistant to the harmful effects of job demands. A possible explanation is that they did vocational trainings prior to entering the labor market, meaning that they did extensive internships as part of their vocational education and thus were gradually exposed to these demanding situations. Another possible explanation is that these young workers generally have more repetitive and monotonous tasks (as opposed to higher educated young workers) that do not strongly impact upon emotional exhaustion. These results suggest that demanding work does not seem to be an immediate risk factor for the general health and performance of young workers with intermediate educational level, but that they especially need resources at work in order to experience wellbeing.

In Chapter 3, we investigated motivational and health impairment processes among young workers with a two-wave longitudinal design, which was a follow-up study of the study described in Chapter 2. This time, we used a sample of young employees aged 16-30 with lower levels of education (N = 643), which was representative of the Dutch labor market (Koppes, De Vroome, & Van den Bossche, 2010). We used structural equation modeling and found that job resources (i.e., autonomy and social support) were positively related to dedication over time, and dedication, in turn, was positively related to health and performance over time. In addition, job demands (i.e., work pressure, emotional workload, and physical workload) were positively related to emotional exhaustion over time, and

emotional exhaustion was negatively related to health and performance over time. The results in Chapter 3 thereby provided longitudinal support for motivational and health impairment processes among young workers with lower educational levels. However, it is important to note that the associations in the motivational process were stronger than the associations in the health impairment process among young workers with lower levels of education. In line with our findings from Chapter 2, these results indicate that motivational processes are especially important for young employees with lower levels of education.

Although most of the job characteristics that we studied were relevant in determining wellbeing of young workers with lower levels of education, not all of them showed such straightforward results. Task variation (Chapter 2) was positively related to job satisfaction, but negatively related to task performance. It may be that young employees with lower educational levels still need to develop their craftsmanship and are therefore hindered by too much variation in their tasks, which could subsequently result in decreased performance (see also: Goodwin & O'Connor, 2007). Although it has received limited empirical support and some critical evaluations (e.g., De Jonge & Schaufeli, 1998; Taris, 2006), Warr's (1990) Vitamin Model may provide another explanation. It is possible that, in accordance with the basic principles of the Vitamin Model, a curvilinear relationship exists between task variation and performance, in which task variation can be a resource up until a certain optimum amount, after which it becomes detrimental to an employee's functioning. A second job characteristic that produced mixed results was mental demands (Chapter 2), which showed no association with emotional exhaustion, but an unexpected positive association with job satisfaction. A possible explanation could be that mental demands are considered as challenges as opposed to hindrances (Crawford, LePine, & Rich, 2010), thereby leading to positive associations with motivational outcomes early in the career of young workers with lower levels of education. If we would speculate further on our former argument that these young workers still need to grow in their craftsmanship, it is likely that their tasks should not

contain too much variation, but also need to be challenging at the same time.

In summary, as an answer to Research Question 1, we generally found support for the motivation and health impairment processes as proposed by the JD-R model. In addition, we found that autonomy, social support, and opportunities for development are relevant job resources, whereas work pressure, emotional workload, and physical workload are relevant job demands for young employees with lower levels of education. However, we found mixed results for task variation and mental demands. These results raise questions and contribute to our understanding of the work environment of young employees with lower levels of education in that these young workers especially need job resources to foster their wellbeing, health, and performance during the early years of their careers. This would suggest that interventions aimed at young workers with lower educational levels should focus especially on providing resources.

7.2.2. Do young employees with different educational levels differ with respect to job characteristics, wellbeing, health, performance, and the relations between these aspects (Research Question 2)?

Our next step was to investigate potential differences between educational groups. Therefore, in Chapters 2 and 3 we examined potential differences with regard to mean scores on and associations between job characteristics, wellbeing, health, and performance. An important finding in Chapter 2 was that the groups with low and intermediate educational level differed from the highly educated group on almost all of the study variables in favor of the latter, but did not differ from each other. Based on these results we created two groups that we compared in our study: those with lower educational levels (i.e., low and intermediate) and those with high educational levels. We found that employees with lower educational levels experienced fewer job resources, less dedication, and poorer health compared with those with high educational levels. In addition, young employees with lower educational levels reported more physical demands, which makes sense because lower

skilled jobs are generally characterized by physical work aspects. In Chapter 3 we also found that employees with lower levels of education reported more emotional exhaustion and worse performance compared with their higher educated colleagues. These results are in accordance with European labor market studies (European Commission, 2012; Raad voor Werk en Inkomen, 2010). The findings are also in line with research on the *social class gradient* (e.g., Borg & Kristensen, 2000), which states that individuals in lower social classes, and thus in less favorable working conditions, generally experience poorer wellbeing and self-rated health.

The results with regard to the other job demands in our studies were somewhat ambiguous. In Chapter 2 we found that young employees with lower educational levels reported less work pressure and emotional workload compared with their higher educated colleagues. However, in Chapter 3 we did not find these differences. A possible explanation is that our sample in Chapter 3 contained employees with a mean age (25.5 years) that was higher than the maximum age in Chapter 2 (25 years). It could be that job demands become more pronounced when employees are older and have gained more working experience because they are generally faced with more responsibilities and higher expectations. In a similar vein, young workers who have just made the transition to the labor market are generally allowed to learn and make mistakes, which could indicate that they experience fewer job demands at work.

In Chapter 3 we examined potential differences between educational groups with regard to the inter-relationships of job characteristics, wellbeing, health, and performance. Although previous studies had not found differences (e.g., Korunka, Kubicek, Schaufeli, & Hoonakker, 2009; Toppinen-Tanner, Kalimo, & Mutanen, 2002), we did find differences between educational groups. The relationship between job demands and emotional exhaustion was weaker for young employees with lower educational levels. This result is, to some extent, in line with our findings in Chapter 2 that job demands, compared with job resources, were less important for wellbeing, health, and performance of young employees with lower levels of education.

For this group, we also found reciprocal relationships between dedication and performance, and between emotional exhaustion and performance. These results may point towards a gain cycle where dedication improves performance, which subsequently increases dedication, and a loss cycle where emotional exhaustion undermines performance, which subsequently increases exhaustion. These ideas are in line with Conservation of Resources (COR) theory (Hobfoll, 1989), which states that individuals actively build resources that can reinforce each other, but that loss of resources can also set in motion a mutually reinforcing loss cycle (e.g., Ten Brummelhuis, Ter Hoeven, Bakker, & Peper, 2011). It also supports a multi-directional view of work and mental health (De Lange, De Witte, & Notelaers, 2008), as it indicates that we should study causal and reciprocal relationships when studying determinants of employee wellbeing and mental health.

In summary, the answer to Research Question 2 is that we indeed found differences between educational groups. Taken together, young workers with lower educational levels experienced less favorable working conditions than their higher educated counterparts. They also reported poorer wellbeing and health, and worse performance at work, which is in line with earlier findings regarding social class gradients (e.g., Borg & Kristensen, 2000). In addition, it seems that for those with lower levels of education motivational processes are especially important for their wellbeing at work, whereas health impairment processes have a smaller impact on their wellbeing. Finally, we found signs of a gain cycle involving dedication and performance, and a loss cycle with regard to emotional exhaustion and performance.

7.2.3. Which career competencies are relevant for young employees with lower levels of education, and how can we measure these competencies (Research Question 3)?

In addition to gaining a better understanding of the factors underlying wellbeing, health, and performance of young workers with lower educational levels, it is also important to investigate the competencies that they need

to navigate their career. Chapter 4 therefore presented a conceptualization of career competencies and the development of the Career Competencies Questionnaire (CCQ). We defined career competencies as knowledge, skills, and abilities central to career development, which can be influenced and developed by the individual. This implies that we characterized career competencies from a developmental perspective, that is, employees can develop these competencies through practical experience and exercise. This developmental perspective is important, as it points to the value of interventions and training activities for helping individuals to develop their career competencies.

After reviewing the literature, we found that four perspectives are discernible that focus on career competencies: the boundaryless career perspective (Defillippi & Arthur, 1994), the protean career perspective (Mirvis & Hall, 1994), the career self-management perspective (De Vos & Soens, 2008; Kossek, Roberts, Fisher, & Demarr, 1998), and the human capital perspective (Kuijpers, 2003; Kuijpers, Meijers, & Gundy, 2011). Taking the various perspectives into account, we arrived at an integrative framework that consists of three dimensions: *reflective career competencies, communicative career competencies,* and *behavioral career competencies*. For each dimension, we discerned two competencies. Reflective career competencies contain *reflection on motivational* aspects such as values with regard to the personal career, and *reflection on qualities* such as strengths and shortcomings. Communicative career competencies consist of *networking* and *self-profiling*. Networking refers to the awareness of the individual network, and the ability to expand this network for career-related purposes. Self-profiling is about effectively presenting oneself to the internal and external labor market. Behavioral career competencies contain *work exploration* and *career control*. Work exploration concerns actively exploring work-related and career-related opportunities (e.g., opportunities for further education and employment). Career control refers to actively setting goals and planning how to fulfill them. Taken together, young workers need to know what they value and what they are good at, how to

communicate about their skills and passions with relevant others, and how to set goals and effectively search for possible career steps.

In Chapter 4, we presented a pilot study and a consultation with a panel of experts in order to verify the content validity of our framework. This resulted in a preliminary version of the CCQ. Next, to test the six-factor structure, we performed exploratory factor analysis (EFA) within a sample of young employees with intermediate vocational education (*N* = 219), and confirmatory factor analyses (CFA) within another sample of young employees with intermediate vocational education (*N* = 212). These analyses provided further support for our framework. Not only did the items of the CCQ provide a good fit to the data, we also found support for discriminant validity in demonstrating that career competencies are related to, but conceptually distinct from, career motivation, general self-efficacy, perceived performance, and perceived employability. We also found initial support for its incremental validity, which suggests that career competencies have unique added value up and above related concepts in career-related research. We concluded that our integrative framework of six career competencies divided over three dimensions was a solid conceptualization of career competencies for young employees with lower levels of education.

In sum, in answering Research Question 3 we discerned six career competencies that are especially relevant for young employees: reflection on motivation, reflection on qualities, networking, self-profiling, work exploration, and career control. Based on this framework, we designed the CCQ, a 21-item questionnaire that can be used to assess career competencies of young employees. The two studies described above provided support for the validity of the CCQ.

7.2.4. Are career competencies a relevant concept in predicting wellbeing of young employees with lower levels of education (Research Question 4)?

After developing a model of career competencies and demonstrating its reliability and validity, an important next step is to examine whether career competencies may also be relevant for employee wellbeing. Therefore, in

Chapter 5 we hypothesized that career competencies may be a relevant concept in fostering employee wellbeing, similar to personal resources, which are positive self-evaluations that refers to individuals' sense of their ability to control and impact upon their environment successfully (Hobfoll, Johnson, Ennis, & Jackson, 2003), and that are functional in achieving goals and stimulating personal growth and development (Llorens, Schaufeli, Bakker, & Salanova, 2007; Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Specifically, we expected that career competencies, similar to personal resources (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007; Xanthopoulou et al., 2009), would play a role in motivational processes. We used structural equation modeling with data from 305 young employees aged 16-30 to examine whether career competencies were indeed relevant in fostering wellbeing at work. We found that career competencies and job resources were both related to enhanced levels of work engagement. On the one hand, the presence of sufficient job resources can stimulate the mastery of career competencies to subsequently foster engagement. On the other hand, mastering career competencies may enable employees to experience more job resources, subsequently increasing their work engagement. Developing career competencies and having sufficient job resources may therefore create a mutually reinforcing process that can foster employee wellbeing. Career competencies were not related to job demands and to emotional exhaustion, indicating that career competencies do not seem to impact upon the health impairment process of the JD-R model. These findings emphasize the value of career competencies to motivational processes in the workplace, as opposed to health impairment processes.

In summary, the answer to Research Question 4 is that career competencies are indeed a relevant concept in determining employee wellbeing, but only in motivational processes. We conclude that career competencies seem to work in a similar way as personal resources. These outcomes offer a new theoretical understanding of the value of career competencies in the sense that these competencies are not only related to

career development, but also to employee wellbeing. Our findings emphasize the importance of combining research on work-related wellbeing and career development in order to create "smart jobs" that focus on individual learning, growth, and wellbeing (Hall & Las Heras, 2010).

7.2.5. Can a career development intervention, which focuses on mastering career competencies, enhance career development and wellbeing of young employees (Research Question 5)?

The final objective in this thesis was to develop an intervention for young workers that can support them in managing their career and being well at work. For this reason, in Chapter 6 we developed and empirically tested the effectiveness of the CareerSKILLS program, an intervention designed to stimulate career development and wellbeing of young employees. The methodology of our intervention was primarily based on the principles of the JOBS training program (Caplan, Vinokur, Price, & Van Ryn, 1989), an intervention originally used for the unemployed of which the effectiveness has been demonstrated in several countries, such as The Netherlands (Brenninkmeijer & Blonk, 2011) and Finland (Vuori, Silvonen, Vinokur, & Price, 2002). The CareerSKILLS intervention centered around strengthening career competencies (as developed in Chapter 4 of this thesis), self-efficacy (Bandura, 1997), and resilience against setbacks (Meichenbaum, 1985; 2007). The program consisted of four 4-hour sessions, followed by a return day six weeks after the first session. We hypothesized that participants would be stimulated in mastering career competencies, becoming more self-efficacious and more resilient against setbacks, performing more career-related behaviors, gaining higher levels of perceived employability, and becoming more engaged at work.

Our results supported the short-term effectiveness of the CareerSKILLS intervention. We tested the program in two samples: a sample of intermediate vocational students who were working four days per week, and a sample of participants of a reemployment program who were working for a large Dutch multinational. In these two independent samples we

found that participants of the intervention (*N* = 112 and *N* = 71), compared with a control group (*N* = 61 and *N* = 41), had increased their mastery of career competencies, had become more self-efficacious, and had become more resilient against potential obstacles. Moreover, they also reported an increase in career-related behaviors and they perceived themselves as being more employable. These findings provide support for the short-term effectiveness of the CareerSKILLS intervention. In addition, our results further support the developmental perspective of career competencies that we brought forward in Chapter 4 by demonstrating the malleable nature of these career competencies.

We also found that participants of the intervention in both samples, as opposed to the control groups, experienced a significant increase in work engagement, but not a decrease in emotional exhaustion. These findings are in line with our results from Chapter 5, as they demonstrate that career competencies are a relevant concept in stimulating employee wellbeing. The findings are also concordant with our findings throughout this thesis that motivational processes seem to be especially valuable in stimulating wellbeing and career development of young workers with lower levels of education.

In conclusion, the answer to Research Question 5 is that the CareerSKILLS intervention seems to be a promising intervention for stimulating both career development and wellbeing of young employees. This intervention may be a good starting point to offer young employees support during the first years of their professional lives, and to remain engaged at work and employable on the labor market.

7.3. Limitations and Strengths of this Thesis

This thesis has a number of limitations as well as strengths that will be discussed below.

7.3.1. Limitations

Use of self-report measures. A first limitation in this thesis is that our data are almost exclusively based on self-report measures, which may have led to common method bias. Recent studies have argued that the negative effects of common method bias may be overestimated in organizational research (Semmer, Grebner, & Elfering, 2004; Spector, 2006), and it has been argued that variables such as personal resources and work engagement are nearly impossible to measure in any other way than self-reports (Mäkikangas, Kinnunen, & Feldt, 2004). The exclusive use of self-report measures may also have led to social desirability responses (Zerbe & Paulhus, 1987). We followed the advice of Podsakoff, MacKenzie, Lee, and Podsakoff (2003) and attempted to minimize evaluation apprehension by using validated scales and testing one-factor models in our analyses. However, we believe that future studies could also use other sources of data, such as objective employability and performance measures, and peer ratings from colleagues and supervisors.

Measurement of wellbeing. A second limitation concerns the way in which we measured wellbeing throughout this thesis. We used three indicators of motivation in this thesis: job satisfaction (Chapter 2), dedication (Chapter 3), and work engagement (Chapter 5 and 6). The most commonly used indicator in motivational processes is work engagement (Schaufeli & Bakker, 2004). Similarly, throughout this thesis we used emotional exhaustion as an indicator of strain in health impairment processes, whereas it is more common to include burnout, of which emotional exhaustion is an indicator (Schaufeli & Taris, 2005). To further support the strength and validity of our findings, it is important that motivational and health processes will be tested with work engagement and burnout as central concepts. In this way we can further increase our understanding of the unique processes at work for young employees with lower levels of education.

Time frame of measurements. In Chapters 2, 4, and 5 we used cross-sectional data, which limits the possibilities for testing causal and indirect relationships (Taris & Kompier, 2006). Because of the cross-sectional nature

of our data in Chapter 4, we could not examine the test-retest reliability and predictive validity of the CCQ. Likewise, we could not adequately test full mediation models in Chapter 2 and 5 because of the cross-sectional data that we used, which means that we could not test causal and reciprocal relationships. To be able to further solidify our findings, future studies should use three-wave longitudinal designs to test motivational and health impairment process, and to be able to assess causal, indirect, and reciprocal effects.

Effectiveness of CareerSKILLS. A final limitation of this thesis is the way in which we tested the CareerSKILLS intervention for effectiveness. First, for practical reasons we could only use a quasi-experimental design instead of a randomized controlled trial (RCT). This design may have influenced our results, as we cannot fully exclude a selection bias in our experimental and control groups. Second, we only had a measure of short-term effectiveness. Although we did find support for the short-term effectiveness of CareerSKILLS, it is essential that the intervention is also tested for longer-term effectiveness. The effectiveness should at least be tested after a six month or a twelve month interval. With an RCT design and a long-term follow-up measurement, the CareerSKILLS intervention could receive stronger empirical support for its effectiveness.

7.3.2. Strengths

Focus on young employees. Most research with regard to work and career development has focused on older, more experienced employees (e.g., Buyens, Van Dijk, Dewilde, & De Vos, 2009; Van der Heijden, De Lange, Demerouti, & Van der Heijde, 2009). However, it is also crucial to gain a better understanding of the work and career of the young workforce. These young workers have increasingly longer and more complex careers (Vuori, Toppinen-Tanner, & Mutanen, 2011), which implies that it is essential that they learn to effectively manage their work and career in the long term. The results of this thesis suggest that it is especially important to stimulate sufficient job resources and career competencies in order for young

employees to effectively foster their wellbeing and career development. It is crucial that they develop career competencies so that they can become and remain employable on the labor market. Taken together, this thesis adds to our understanding of the work and career of young employees, who constitute the future of our labor markets.

Increased understanding of career competencies. A second strength of this thesis is its addition to the theoretical understanding of career competencies. Arnold and Cohen (2008) argued that more empirical research is necessary on the topic of career competencies. We have expanded our knowledge of the competencies that are necessary for young employees to successfully manage a career by integrating the literature into a conceptual framework of six career competencies covering three core dimensions. These include reflective (i.e., reflection on motivation and reflection on qualities), communicative (i.e., networking and self-profiling), and behavioral (i.e., work exploration and career control) career competencies. This framework was formulated from a developmental perspective and was validated in Chapter 4. Chapters 5 and 6 provided further support for the relevance of our framework for employee wellbeing and career development.

Integration of research on employee wellbeing and career development. A third strength of this thesis is that it attempts to build a bridge between Occupational Health Psychology (OHP) and Career Development, as has been done in several other studies on employability, employee wellbeing, and job insecurity (e.g., De Cuyper, Bernhard-Oettel, Berntson, De Witte, & Alarco, 2008; De Cuyper, Notelaers, & De Witte, 2009), and as has been advocated by Hall and Las Heras (2010). Specifically, in this thesis we aimed to combine research on employee wellbeing and career competencies. We found that career competencies can contribute to wellbeing of young employees in a similar way as personal resources. In addition, we found that an intervention that focuses on the mastery of career competencies stimulated both career-related outcomes (e.g. perceived employability) and work-related outcomes (e.g. work engagement). Because career transitions are becoming increasingly common for today's employees (Vuori et al., 2011),

it seems likely that effective self-management of their career will also become a more prominent part of individuals' daily work life.

Combination of research methods. Another strength is that we have used several different approaches in examining the work and career of young employees, encompassing literature reviews, interviews and focus group sessions, cross-sectional and longitudinal research in multiple samples, and an intervention study in two samples. In addition, in Chapters 2 and 3 we were able to use large samples of young employees that were representative of the Dutch labor market. Finally, all of our studies were field studies, thereby creating a high external validity for our results. This integration of research methods places the results of this thesis both in a strong practical and empirical context.

Development of practical tools. A fifth asset of our thesis is that we provided a new measurement instrument for career competencies and a career development intervention for young employees. We developed the Career Competencies Questionnaire (CCQ) and validated the instrument, by demonstrating its content, factorial, and incremental validity. The CCQ offers a comprehensive tool to assess the development of career competencies and it can be used in HR instruments and career guidance programs. We also developed the CareerSKILLS program, an intervention based on the JOBS methodology (Caplan et al., 1989). After testing the program in two independent samples, we provided empirical support for its short-term effectiveness. Moreover, we demonstrated that the program is an asset to career development but also to employee wellbeing. Both the CCQ and the CareerSKILLS program may be valuable additions to future studies that examine career self-management and employee wellbeing.

7.4. Theoretical Implications and Recommendations for Future Research

The results presented in this thesis have theoretical implications and lead to recommendations for future studies with regard to the work and career of young employees. We will discuss these theoretical implications and recommendations below.

7.4.1. Factors Influencing Wellbeing of Young Employees

Job characteristics in the JD-R model. Our findings in Chapters 2, 3, and 5 indicate that most of the job characteristics (i.e., autonomy, social support, opportunities for development, work pressure, emotional workload, and physical workload) that are generally used in JD-R-related studies (Bakker & Demerouti, 2007) are also relevant for young employees with lower levels of education. However, we found unexpected results for task variation and mental workload. Too much variation in tasks may actually act as a stressor, and high levels of mental workload may act as a resource for young employees with lower levels of education. These findings indicate that certain job characteristics may have different effects among young employees with lower levels of education. For example, it is possible that these job characteristics have curvilinear effects, which would be in line with Warr's (1990) Vitamin Model. Although findings on curvilinear effects have been mixed (Taris, 2006), it is possible that too little variation and too few mental challenges, but also too much of these factors may both lead to reduced wellbeing among young workers. Our findings imply that it is important to closely examine the specific job characteristics that are relevant for young workers with lower levels of education, and to further investigate possible curvilinear effects of job characteristics.

Motivational and health impairment processes in the JD-R model. The findings in Chapter 2 and 3 were generally in line with motivational and health impairment processes as assumed in the JD-R model (e.g., Bakker, Demerouti, De Boer, & Schaufeli, 2003a; Bakker, Hakanen, Demerouti, & Xanthopoulou, 2007; Hakanen, Bakker, & Schaufeli, 2006). We found that although young employees with lower levels of education experienced fewer job resources, these resources may be especially important in stimulating their wellbeing, health, and performance. This is somewhat unexpected, because we started our thesis from the notion that these young workers may be an especially vulnerable group due to unfavorable working conditions and higher health risks (Smulders, 2005; Van den Bossche, Hupkens, De Ree, & Smulders, 2006). It seems that these young workers may actually be

relatively resistant to high demands at work, and that they especially need to be motivated in order to experience wellbeing at work.

Lower levels versus higher levels of education. In line with earlier studies (e.g., Adler & Ostrove, 1999; Smulders, 2005) young employees with lower educational levels experienced fewer job resources, more physical demands, and poorer wellbeing, health, and performance when compared to their higher educated counterparts. Taken together, these findings demonstrate the need to further examine and support this group. In addition, and contrary to our expectations, we found that health impairment processes were less prominent for young workers with lower educational levels compared with their higher educated colleagues. Although the robustness of the JD-R model has been demonstrated in several studies (e.g., Bakker et al., 2007; Korunka et al., 2009; Toppinen-Tanner et al., 2002), these findings indicate that the impact of motivational and health impairment processes may not be identical across educational groups of young employees. It is possible that educational level, and thus the required skill-level and complexity of a job, has an impact on the processes leading to motivation and strain of young employees. It would be interesting to investigate whether these educational differences also exist among older employees. Future studies should further examine this impact of educational level in order to gain a deeper understanding of motivational and health impairment processes in the workplace.

Gain and loss cycles. An important finding in Chapter 3 was that we found indications of a gain spiral between dedication and performance, and a loss spiral between emotional exhaustion and performance, but only for those with lower levels of education. For these employees it may be particularly important to perceive themselves as competent in their work, possibly as a compensation for the lower levels of job resources in their work environment that we demonstrated in Chapter 2 and 3. In addition, our findings further support a multi-directional view of work and mental health (De Lange et al., 2008; Hobfoll, 1989). We believe it is important to investigate these potential gain and loss cycles in more detail. Specifically,

it would be interesting to examine the underlying psychological processes of perceived competence for young workers with lower levels of education. Subsequently, future studies could focus on finding ways to strengthen the gain cycle and to buffer the loss cycle.

7.4.2. Conceptualizing Career Competencies for Young Workers

Conceptualization and measurement of career competencies. Our conceptualization of career competencies adds to the literature in several ways. First, it provides a theoretical overview and integration of the available literature on career competencies in a comprehensive framework. We showed that young employees especially need reflective, communicative, and behavioral career competencies in order to successfully develop their career. Second, this thesis presents the development and preliminary validation of the Career Competencies Questionnaire (CCQ). We demonstrated that the CCQ had good reliability and validity, and that the six competencies together form a multidimensional construct. Third, we showed that career competencies are not only important in stimulating career development, but also in employee wellbeing. With these findings, we aimed to respond to the call of Arnold and Cohen (2008) for more empirical research in the domain of career competencies. However, we do believe that more research is needed on this topic. First, the CCQ should be tested in longitudinal samples to ascertain its test-retest reliability and its predictive validity. Second, our framework could be implemented in different groups to examine its validity among other types of employees (e.g., older employees). Finally, it is interesting to investigate the relative importance of the six career competencies. This would especially be interesting to study in conjunction with research on differences between educational groups, as we did in Chapter 2 and 3. We hope that future research will answer these questions.

Competencies, individual characteristics, and context. In Chapter 4 we characterized career competencies as knowledge, skills, and abilities that can be developed by an individual. An important assumption in this

characterization was the malleable nature of career competencies. This developmental perspective on career competencies was supported by our findings in Chapter 6, where we found that participants of the CareerSKILLS intervention showed significant increases in career competencies after six weeks. A second assumption of our characterization was that career competencies are related to, but different from personality traits (e.g., proactive personality) and contextual variables (e.g., work-home balance, mentoring). In future studies, the relationships with personality and contextual variables should be examined to deepen our understanding of the exact interplay between these factors. For example, studies could include the Big Five personality traits (Costa & McCrea, 1992), proactive personality (Bateman & Crant, 1993), and contextual variables such as stress management and mentoring (Eby, Butts, & Lockwood, 2003).

Career competencies and employee wellbeing. In Chapter 5 we demonstrated that career competencies can also play a role in stimulating employee wellbeing. Specifically, career competencies and job resources may be mutually reinforcing in stimulating work engagement of employees. These results indicate that career competencies seem to function in a similar way as personal resources (e.g., Xanthopoulou et al., 2009). In addition, and in line with earlier findings regarding personal resources (Xanthopoulou et al., 2007), we found that career competencies were not related to job demands and emotional exhaustion. We also found that an intervention that is built on the mastery of career competencies increased participants' levels of work engagement, but did not decrease their levels of emotional exhaustion. Cotton, Dollard, & De Jonge (2007) argued that research on the JD-R model should also incorporate personal variables in its basic processes. Our findings add to studies on the JD-R model and on personal resources (e.g., Xanthopoulou, 2007; Xanthopoulou et al., 2009) by showing that career competencies are also a relevant personal variable to include in research using the JD-R model. Moreover, our findings are also in line with COR theory (Hobfoll, 1989) by showing that job resources and career competencies may be mutually reinforcing, which could potentially create

resource caravans (Hobfoll, 2011). That is, experiencing sufficient resources at work can enable employees to develop their career competencies, and developing career competencies can also enable individuals to actively craft their work, thereby experiencing more resources. These findings further underline the importance of a multi-directional view when studying employee wellbeing (e.g., De Lange et al., 2008). Future studies could examine the exact interplay between job resources, personal resources, and career competencies in their relation with employee wellbeing. Future studies may for instance investigate the influence of Psychological Capital (i.e., hope, optimism, resiliency, and self-efficacy beliefs; Luthans, Avey, Avolio, Norman, & Combs, 2006) in conjunction with career competencies.

7.4.3. Interventions for Career Development and Employee Wellbeing

This thesis contributes to our theoretical understanding of career development interventions in several ways. First, our results indicate that an intervention that is built around career competencies, self-efficacy (Bandura, 1997), and inoculation against setbacks (Meichenbaum, 1985) may be a promising tool for increasing career development and wellbeing of young employees. We thereby provided additional empirical support to the effectiveness of the JOBS methodology of training (Caplan et al., 1989). Second, our findings imply that an intervention that is built on developing career competences is not only important for increasing successful career development, but also for employee wellbeing. Training young workers to develop their career competencies, and to become more efficacious and resilient, seem to be important factors in fostering their career development and wellbeing at work. Third, this thesis demonstrates that a career development intervention aimed at the individual level can be an effective way to stimulate career development and wellbeing of young workers. This is in line with the argument that self-initiated learning and intrinsic motivation are important ingredients for achieving empowerment of young individuals (e.g., Judge, Locke, Durham, & Kluger, 1998; Ng, Sorensen, & Eby, 2006; Spector, Cooper, Sanchez, O'Driscoll, & Sparks, 2002; Spreitzer, 1995).

To further consolidate our findings, future studies should investigate the effectiveness of the CareerSKILLS program with a long-term follow-up measure (e.g., a six-month or a twelve-month time lag) and with relevant objective outcome measures (e.g., finding a job after school, number of promotions). Moreover, it is important to include the social and organizational context in future studies (Fugate, Kinicki, & Ashforth, 2004; Sockoll, Kramer, & Bödeker, 2008; Van der Heijde & Van der Heijden, 2006). For example, self-ratings of effectiveness could be combined with ratings of colleagues and supervisors. In addition, future studies could include training supervisors and could taking organizational variables into account, such as formal opportunities for development.

7.5. Practical Implications

Our findings have practical implications for Human Resource Management (HRM), career counseling, Occupational Health Psychology (OHP), and education.

7.5.1. HRM and Career Counseling

Attention for career competencies. We have argued throughout this thesis that young workers increasingly need to take responsibility for managing their own career, also during the turbulent first years of their professional lives (e.g., Koivisto, Vuori, & Nykyri, 2007; Savickas, 1998). We showed that career competencies are important for career development and perceived employability (Chapter 4), as well as for increasing employee wellbeing (Chapter 5 and 6). With these arguments in mind, HRM departments and career counselors would benefit from paying attention to the career competencies of their employees or clients. Specifically, HR departments may use career competencies as a fruitful basis for building “smart jobs” (Hall & Las Heras, 2010) for young workers. These are jobs that can help individuals learn and grow in their current jobs, thereby creating career success and positive career-related outcomes, as well as good functioning in their current jobs. Paying attention to the career competencies of young

workers could therefore foster their wellbeing and performance, and could aid these young workers in managing their career and remaining employable.

Monitoring career competencies. This thesis provided a measurement instrument to assess career competencies, the Career Competencies Questionnaire (CCQ). HRM departments and career counselors may use the CCQ in several ways. The instrument could be used as a diagnostic tool to monitor the career progress of young employees. It may be useful to have new employees regularly fill out the CCQ in order to monitor their progress, as career competencies are important for an organization's productivity and development (Rodriguez, Patel, Bright, Gregory, & Gowing, 2002). In this way, implementing the CCQ could help organizations in gaining a more complete picture of the career development of their young workforce. In addition, by indicating specific obstacles or learning challenges for young employees, the CCQ may serve as a starting point for further interventions.

Employability programs. This thesis also demonstrated that an intervention built around career competencies, the CareerSKILLS program, may stimulate career development and employee wellbeing (Chapter 6). We therefore advise HRM departments to integrate the CareerSKILLS program in their employability programs and in their policies for young employees. For example, CareerSKILLS could be implemented as an organizational socialization tactic (Saks & Gruman, 2011), possibly with additional support from a mentor or a supervisor. Being a group training course, CareerSKILLS may be an efficient way for HRM departments to stimulate the career development and wellbeing of young employees entering an organization. Another advantage is that the intervention follows a recent trend of positive psychological interventions (e.g., Bakker & Schaufeli, 2008; Ouweneel, 2012) by focusing on all young workers, as opposed to certain high-risk groups only (e.g., potential dropouts), which makes it applicable in a broad context.

7.5.2. Occupational Health Psychology

Matching specific needs. In order to provide a stimulating work environment for young employees, organizations should match the work environment

with the specific needs of young workers. The findings in this thesis indicate that young employees respond differently to certain job characteristics depending on their educational level. Young workers with lower levels of education seem to be exposed to an imbalance in their work environment: they experience fewer job resources, while at the same time these resources are highly relevant for their motivation, health, and performance. Young employees with lower levels of education could therefore be supported by providing them with more job resources to increase their wellbeing. However, they should not be overloaded with too much variation in their work, as this may hinder them rather than help them. In addition, they may actually benefit from the potential challenge of experiencing mental demands.

Integrating work and career. A practical implication that is important for OHP and HRM is that policies on employee wellbeing and career development should be integrated more intensively. We found that career competencies seem to function in a similar way as personal resources in stimulating wellbeing of young employees. We also demonstrated that the CareerSKILLS program stimulated both career development and employee wellbeing. Organizational health psychologists and HR professionals could therefore focus on creating a stimulating work environment, and on providing young employees with opportunities to develop career competencies, thereby adopting a dual focus on work ánd career.

7.5.3. Education

This thesis may help educational institutions to prepare their students for the school-to-work transition. Stimulating the development of career competencies early in the career of students, before the final step to the labor market, could help them to successfully complete the school-to-work transition. Vocational schools may therefore incorporate the CCQ to monitor career competencies of interns who are about to make the school-to-work transition. In addition, by demonstrating the effectiveness of the CareerSKILLS intervention among intermediate vocational students who do

extensive internships, this thesis points to the value of this intervention for vocational education. This intervention, which is based on the development of career competencies and the principles of self-efficacy and resilience against setbacks, may increase the preparedness of vocational students to successfully complete the school-to-work transition (Koivisto et al., 2007; Pinquart, Juang, & Silbereisen; 2003).

7.6. Concluding Note

Young individuals experience many unique changes and challenges during the first years of their professional careers, and they need to adapt to daily working life. Those with lower educational levels seem to be especially at risk and may need support in managing their work and career. This thesis examined the underlying psychological processes of young employees' wellbeing, and investigated the career competencies they need to thrive early in their career. The results point out that it is especially important to stimulate young workers' motivation and provide them with adequate resources in the workplace. This thesis also presents the Career Competencies Questionnaire and the CareerSKILLS intervention as concrete tools that can be used in supporting young employees to successfully manage their work and career. Taken together, the results in this thesis add to our understanding of the psychological processes underlying wellbeing of the young workforce. Moreover, we have shown that mastering career competencies can be a strong foundation both for increasing wellbeing and career development of young workers. Finally, this thesis underlines the importance of integrating research and practice on employee wellbeing and career development. The key to a good start of the professional career may lie in gaining sufficient motivation and wellbeing through resources a work, and in mastering relevant career competencies. If those conditions are met, it seems that well begun may indeed be half done.

References

Adler, N. E., & Ostrove, J. M. (1999). Socioeconomic status and health: What we know and what we don't. *Annals of the New York Academy of Sciences*, *896*, 3-15.

Arnold, J., & Cohen, L. (2008). The psychology of careers in industrial and organizational settings: A critical but appreciative analysis. In G. P. Hodgkinson & J. K. Ford (Eds.), *International Review of Industrial and Organizational Psychology* (pp. 1-44). Chichester: Wiley Ltd.

Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology, 22*, 309-328.

Bakker, A. B., Demerouti, E., De Boer, E., & Schaufeli, W. B. (2003a). Job demands and job resources as predictors of absence duration and frequency. *Journal of Vocational Behavior, 62*, 341-356.

Bakker, A., Demerouti, E., & Schaufeli, W. (2003b). Dual processes at work in a call centre: An application of the Job Demands-Resources model. *European Journal of Work and Organizational Psychology, 12*, 393-417.

Bakker, A. B., Hakanen, J. J., Demerouti, E., and Xanthopoulou, D. (2007). Job resources boost work engagement, particularly when job demands are high. *Journal of Educational Psychology, 99*, 274-284.

Bakker, A. B., & Schaufeli, W. B. (2008). Positive organizational behaviour: Engaged employees in flourishing organizations. *Journal of Organizational Behavior, 29*, 147-154.

Bandura, A. (1997). *Self-efficacy: The exercise of control.* New York, NY: Freeman.

Bateman, T. S., & Crant, J. M. (1993). The proactive component of organizational behavior. *Journal of Organizational Behavior, 14*, 103–118.

Borg, V., & Kristensen, T. S. (2000). Social class and self-rated health: can the gradient be explained by differences in life style or work environment? *Social Science and Medicine*, *51*, 1019-1030.

Brenninkmeijer, V., & Blonk, R. W. B. (2011). The effectiveness of the JOBS program among the long-term unemployed: A randomized experiment in the Netherlands. *Health Promotion International*, *27*, 220-229.

Buyens, D., Van Dijk, H., Dewilde, T., & De Vos, A. (2009). The aging workforce: Perceptions of career ending. *Journal of Managerial Psychology*, *24*, 102-117.

Caplan, R. D., Vinokur, A. D., Price, R. H., & Van Ryn, M. (1989). Job-seeking, reemployment and mental health: A randomized field experiment in coping with job loss. *Journal of Applied Psychology, 74*, 759-769.

Costa, P. T., Jr, & McCrae, R. (1992). *NEO-PI-R and NEO-FFI professional manual*. Odessas, FL: Psychological Assessment Resources.

Cotton, S., Dollard, M. F., & De Jonge, J. (2007). *A review of the Job Demands–Resources (JD-R) model: A move towards wellness*. University of South Australia, Adelaide: Work & Stress Research Group.

Crawford, E. R., LePine, J. A., & Rich, B. L. (2010). Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test. *Journal of Applied Psychology, 95*, 834-848.

De Cuyper, N. D., Bernhard-Oettel, C., Berntson, E., De Witte, H. D., & Alarco, B. (2008). Employability and Employees' Well-Being: Mediation by Job Insecurity. *Applied Psychology, 57*, 488–509.

De Cuyper, N., Notelaers, G., & De Witte, H. (2009). Job insecurity and employability in fixed-term contractors, agency workers, and permanent workers: Associations with job satisfaction and affective organizational commitment. *Journal of Occupational Health Psychology, 14*, 193-205.

De Jonge, J., & Schaufeli, W. B. (1998). Job characteristics and employee well-being: A test of Warr's Vitamin Model in health care workers using structural equation modelling. *Journal of Organizational Behavior*, *19*, 387-407.

De Lange, A. H., De Witte, H., & Notelaers, G. (2008). Should I stay or should I go?

Examining the longitudinal relation between job resources and work engagement for

stayers versus movers. *Work & Stress, 22*, 201-233.

De Vos, A., & Soens, N. (2008). Protean attitude and career success: The mediating role of self-management. *Journal of Vocational Behavior, 73,* 449-456.

Defillippi, R. J., & Arthur, M. B. (1994). The Boundaryless Career: A Competency-Based Perspective. *Journal of Organizational Behavior, 15,* 307-324.

Demerouti, E., Bakker, A.B., Nachreiner, F., & Schaufeli, W.B. (2001). The Job Demands-Resources model of burnout, *Journal of Applied Psychology, 85*, 499-512.

Eby, L. T., Butts, M., & Lockwood, A. (2003). Predictors of Success in the Era of the Boundaryless Career. *Journal of Organizational Behavior, 24,* 689-708.

Elfering, A., Semmer, N. K., Tschan, F., Kälin, W., & Bucher, A. (2007). First years in job: A three-wave analysis of work experiences. *Journal of Vocational Behavior, 70*, 97-115.

European Commission (2012). *Employment and Social Developments in Europe 2011*. Luxembourg: Publications Office of the European Union.

Fugate, M., Kinicki, A. J., & Ashforth, B. E. (2004). Employability: A psycho-social construct, its dimensions, and applications. *Journal of Vocational Behavior, 65*, 14-38.

Goodwin, J., & O'Connor, H. (2007). Continuity and change in the experiences of transition from school to work. *International Journal of Lifelong Education, 26*, 555-72.

Hakanen, J. J., Bakker, A. B., & Schaufeli, W. B. (2006). Burnout and work engagement among teachers. *Journal of School Psychology, 43*, 495-513.

Hall, D. T., & Las Heras, M. (2010). Reintegrating job design and career theory: Creating not just good jobs but smart jobs. *Journal of Organizational Behavior, 31*, 448-462.

Hobfoll, S. E. (1989). Conservation of Resources. A New Attempt at Conceptualizing Stress *American Psychologist, 44*, 513-524.

Hobfoll, S. E. (2011). Conservation of resource caravans and engaged settings. *Journal of Occupational and Organizational Psychology*, *84*, 116-122.

Hobfoll, S. E., Johnson, R. J., Ennis, N., & Jackson, A. P. (2003). Resource loss, resource gain, and emotional outcomes among inner city women. *Journal of Personality and Social Psychology, 84*, 632-643.

Judge, T. A., Locke, E. A., Durham, C. C., & Kluger, A. N. (1998). Dispositional effects on job and life satisfaction: The role of core evaluations. *Journal of Applied Psychology*, *83*, 17-34.

Koivisto, P., Vuori, J., & Nykiri, E. (2007). Effects of the school-to-work group method among young people. *Journal of Vocational Behavior, 70*, 277-296.

Koppes, L. L. J., De Vroome, E. M. M., & Van den Bossche, S. N. J. (2010). *The Netherlands Working Conditions Cohort Study*. Hoofddorp: TNO.

Korunka, C., Kubicek, B., Schaufeli, W. B., & Hoonakker, P. (2009). Work engagement and burnout: testing the robustness of the Job-Demands Resources model. *The Journal of Positive Psychology, 4*, 243-255.

Kossek, E. E., Roberts, K., Fisher, S., & Demarr, B. (1998). Career self-management: A quasi-experimental assessment of the effects of a training intervention. *Personnel Psychology, 51,* 935-962.

Kuijpers, M. A. C. T. (2003). *Loopbaanontwikkeling.* Enschede: Twente University Press.

Kuijpers, M. A. C. T., Meijers, F., & Gundy, C. (2011). The relationship between learning environment and career competencies of students in vocational education. *Journal of Vocational Behavior, 78*, 21-30.

Llorens, S., Schaufeli, W., Bakker, A., & Salanova, M. (2007). Does a positive gain spiral of resources, efficacy beliefs, and engagement exist? *Computers in Human Behavior, 23*, 825-841.

Luthans, F., Avey, J. B., Avolio, B. J., Norman, S. M., & Combs, G. M. (2006). Psychological capital development: toward a micro-intervention. *Journal of Organizational Behavior, 27*, 387-393.

Mäkikangas, A., Kinnunen, U., & Feldt, T. (2004). Self-esteem, dispositional optimism, and health: Evidence from cross-lagged data on employees. *Journal of Research in Personality, 38*, 556-575.

Meichenbaum, D. (1985). *Stress inoculation training: A clinical guidebook.* Elmsford, NY: Pergamon Press.

Meichenbaum, D. (2007). Stress inoculation training: A preventative and treatment Approach. In P. M. Lehrer, R. L. Woolfolk, and W. S. Sime (Eds.), *Principles and practice of stress management* (3rd ed., pp. 407-410). New York, NY: Guilford Press.

Mirvis, P. H., & Hall, D. T. (1994). Psychological Success and the Boundaryless Career. *Journal of Organizational Behavior, 15,* 365-380.

Ng, T. W. H., Sorensen, K. L., & Eby, L. T. (2006). Locus of control at work: A meta-analysis. *Journal of Organizational Behavior*, *27*, 1057-1087.

Nieuwenhuis, L., Coenen, J., Fouarge, D., Harms, T., & Oosterling, M. (2012). *De creatie van publieke waarde in het middelbaar beroepsonderwijs.* [The creation of public value in intermediate vocational education.] Retrieved from http://www.nwo.nl/files.nsf/pages/NWOP_8YRECJ/$file/PubliekewaardevanhetMBO.pdf

Ouweneel, E. (2012). *Building towards engagement: An individual perspective*. Enschede: Ipskamp Drukkers B.V.

Pinquart, M., Juang, L. P., & Silbereisen, R. K. (2003). Self-efficacy and successful school-to-work transition: A longitudinal study. *Journal of Vocational Behavior, 63*, 329-346.

Podsakoff, P. M., MacKenzie, S. B., Lee, J., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and the recommended remedies. *Journal of Applied Psychology, 88*, 879-903.

Raad voor Werk en Inkomen (2009). *Arbeidsmarktanalyse 2009* [Analysis of the labor market 2009]. Raad voor Werk en Inkomen.

Raad voor Werk en Inkomen (2010), *Arbeidsmarktanalyse 2010.* [Analysis of the labor market 2010.]. Raad voor Werk en Inkomen.

Rodriguez, D., Patel, R., Bright, A., Gregory, D., & Gowing, M. K. (2002). Developing competency models to promote integrated human resource practices. *Human Resource Management, 41*, 309-324.

Ryan, P. (2001). The school-to-work transition: a cross-national perspective. *Journal of Economic Literature, 39*, 34-92.

Saks, A. M., & Gruman, J. A. (2011). Getting newcomers engaged: the role of socialization tactics. *Journal of Managerial Psychology, 26*, 383-402.

Savickas, M. L. (1998). The transition from school to work: a developmental perspective. *Career Development Quarterly, 47*, 326-336.

Schaufeli, W. B., & Bakker, A. B. (2004). Job demands, job resources, and their relationship with burnout and engagement. *Journal of Organizational Behavior, 25*, 293-325.

Schaufeli, W. B., & Taris, T. W. (2005). The conceptualization and measurement of burnout: common grounds and worlds apart. *Work & Stress, 19*, 256-262.

Semmer, N. K., Grebner, S., & Elfering, A. (2004). Beyond self-report: Using observational, physiological, and situation-based in research on occupational stress. In P. Perrewé & D. Ganster (Eds.), *Research in occupational stress and wellbeing: Emotional and physiological processes and positive intervention strategies* (pp. 205-264). Amsterdam: Elsevier.

Smulders, P. G. W. (2005). *Jongere en oudere werknemers: hun werk, werktijden, ongevallen en verzuim*. [Younger and older employees: their work, work schedules, accidents, and absence]. Hoofddorp: TNO.

Sockoll, I., Kramer, I., & Bödeker, W. (2008). *Effectiveness and economic benefits of workplace health promotion and prevention. Summary of scientific evidence 2000-2006* (IGA Report No. 13e). Retrieved from http://www.iga-info.de/fileadmin/Veroeffentlichungen/iga-Reporte_Projektberichte/iga-Report_13e_effectiveness_workplace_prevention.pdf

Spector, P. E. (2006). Method variance in Organizational research. *Organizational Research Methods, 9*, 221-232.

Spector, P. E., Cooper, C. L., Sanchez, J. I., O'Driscoll, M., & Sparks, K. (2002). Locus of control and well-being at work: How generalizable are western findings? *Academy of Management Journal*, *45*, 453-466.

Spreitzer, G. M. (1995). Psychological empowerment in the workplace: dimensions, measurements, and validation. *Academy of Management Journal*, *38*, 1442-1465.

Taris, T. W. (2006). Bricks without clay: On urban myths in occupational health psychology. *Work & Stress*, *20*, 99-104.

Taris, T. W., & Kompier, M. A. J. (2006). Games researchers play - Extreme-groups analysis and mediation analysis in longitudinal occupational health research. *Scandinavian Journal of Work, Environment and Health, 32*, 463-472.

Ten Brummelhuis, L. L., Ter Hoeven, C. L., Bakker, A. B., & Peper, B. (2011). Breaking through the loss cycle of burnout: The role of motivation. *Journal of Occupational and Organizational Psychology, 84*, 268-287.

Toppinen-Tanner, S., Kalimo, R., & Mutanen, P. (2002). The process of burnout in white collar and blue-collar jobs: eight-year prospective study of exhaustion. *Journal of Organizational Behavior, 23*, 555-570.

Van den Bossche, S. N. J., Hupkens, C. L. H., De Ree, S. J. M., & Smulders, P. G. W. (2006). *Nationale enquête arbeidsomstandigheden 2005* [The Netherlands Working Conditions Survey 2005]. Hoofddorp: TNO.

Van den Bossche, S. N. J., Koppes, L. L. J., Granzier, J. J. M., De Vroome, E. M. M., & Smulders, P. G. W. (2008). *Nationale Enquête Arbeidsomstandigheden 2007: Methodologie en globale resultaten.* [The Netherlands Working Conditions Survey 2007: Methodology and global results]. PlantijnCasparie, Almere.

Van der Heijden, B. I. J. M., De Lange, A. H., Demerouti, E., & Van der Heijde, C. M. (2009). Age effects on the employability-career success relationship. *Journal of Vocational Behavior, 74,* 156-164.

Van der Heijde, C. M., & Van der Heijden, B. I. J. M. (2006). A competence-based and multidimensional operationalization and measurement of employability. *Human Resource Management, 45,* 449-476.

Vuori, J., Silvonen, J., Vinokur, A., & Price, R. (2002). The Työhön Job Search Program in Finland: Benefits for the unemployed with risk of depression or discouragement. *Journal of Occupational Health Psychology, 7*, 5-19.

Vuori, J., Toppinen-Tanner, S., & Mutanen, P. (2011). Effects of resource-building group intervention on career management and mental health in work organizations: randomized controlled field trial. *Journal of Applied Psychology, 97,* 273-286.

Warr, P. B. (1990). Decision latitude, job demands, and employee well-being. *Work & Stress*, *4*, 285-294.

Xanthopoulou, D. (2007). *A work psychological model that works. Expanding the Job Demands-Resources Model*. Ridderkerk: Ridderprint Offsetdrukkerij B.V.

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*, 121-141.

Xanthopoulou, D., Bakker, A. B., Demerouti, E., & Schaufeli, W. B. (2009). Reciprocal relationships between job resources, personal resources, and work engagement. *Journal of Vocational Behavior, 74*, 235-244.

Zerbe, W. J., & Paulhus, D. L. (1987). Socially desirable responding in organizational behavior: A reconception. *Academy of Management Journal, 12*, 250-264.

SUMMARY

WELL BEGUN IS HALF DONE: INVESTIGATING THE WORK AND CAREER OF THE YOUNG WORKFORCE

Summary

Introduction

During the last decades labor markets have started to change into more dynamic, constantly changing environments in which employees need to take more responsibility for managing their work and career. Because of the increasing importance of flexibility and proactive self-management, employees need to pursue longer and more complex careers. These developments may be especially difficult for the young workforce, as they face many unique challenges in a brief period of time, such as forming a new identity, taking on new roles and responsibilities, and having to make many important vocational choices. Considering the growing complexity of careers and the increasing demands for certificates and diplomas, these challenges may be even more prominent for young employees with lower levels of education. For these reasons, it is essential that we gain a better understanding of the work and career of the young workforce, especially those with lower levels of education.

This thesis aimed to contribute to this goal in several ways. We examined in which ways job characteristics were associated with wellbeing, health, and performance of young employees with lower levels of education. In addition, we compared educational groups to investigate whether their wellbeing may be determined in different ways. Furthermore, we aimed to develop and test a theoretical framework and measurement instrument of career competencies. Subsequently, we investigated the potential role of career competencies in fostering employee wellbeing. Finally, we aimed to develop and empirically test a career development intervention that is built around career competencies. The main target group in this thesis consists of young employees age 16-30 with lower levels of education (i.e., less than 16 years of total education; non-college level).

Summary

In which ways are job characteristics relevant for determining the wellbeing, health, and performance of young employees with lower levels of education (Question 1)?

Our first research aim was to examine in which ways job characteristics are associated to wellbeing, health, and performance of young workers with lower levels of education (see Chapters 2, 3, and 5). Using the Job Demands-Resources (JD-R) model as a heuristic model, we assumed that job characteristics are either helpful (job resources) or detrimental (job demands) in determining employee wellbeing. The JD-R model distinguishes a motivational process, which leads to improved wellbeing, and a health impairment process, which leads to reduced wellbeing. We examined these processes in several samples of young employees.

We found that autonomy, social support from colleagues and from supervisors, and opportunities for development are all job resources that can set in motion a motivational process, thereby increasing wellbeing of young workers with lower levels of education. We also found that a high work pressure, emotional workload, and physical workload may be driving forces behind a health impairment process, thus undermining wellbeing, health, and performance. Our results further indicated that the tasks of young workers with lower levels of education should not contain too much variation, while at the same time they need to be sufficiently challenging. Moreover, our findings suggest that motivational processes were stronger than health impairment processes for young employees with lower levels of education. In other words: demanding work does not seem to be an issue for these young workers, but they especially need job resources in order to experience wellbeing.

Do young employees of different educational levels differ with respect to job characteristics, wellbeing, health, performance and the relations between these aspects (Question 2)?

In addition to examining the interplay between job characteristics, wellbeing, health, and performance, we investigated potential differences between

educational groups (see Chapter 2 and 3). Based on the existing literature we expected that young workers with lower levels of education would experience less favorable working conditions and poorer wellbeing compared with their higher educated counterparts. In addition, we tested whether motivational and health impairment processes in the workplace, as described in the JD-R model, would be different across educational groups.

We found that young workers with low and with intermediate educational level were highly similar, but that both groups clearly differed from young workers with high levels of education, in favor of the latter. Young workers with lower levels (i.e., low and intermediate) of education experienced fewer job resources, more physical demands, less dedication, and poorer health and performance. Taken together, these results confirm that this group experiences a generally less favorable working environment. In addition, it seems that young workers with lower levels of education experience an imbalance between job resources and job demands, which could lead to reduced wellbeing, health, and performance.

We also found differences between motivational and health impairment processes between educational groups. We found that health impairment processes were less pronounced for those with lower levels of education. Furthermore, we found reciprocal relationships between dedication and performance, and between emotional exhaustion and performance, which may point toward a gain cycle (i.e., mutual reinforcement) and a loss cycle (i.e., mutual weakening), respectively, for young workers with lower levels of education. This emphasizes that a sense of performing well is important for these young workers in order to remain healthy and motivated.

Which career competencies may be relevant for young employees with lower levels of education and how can we measure these competencies (Question 3)?

As career development is becoming ever more important in daily work life, we also aimed to investigate what career competencies young workers

need to successfully navigate their career. We set out to develop and test an integrative framework of career competencies, and a measurement instrument to assess these competencies (see Chapter 4).

Based on the scientific literature and on interviews with academics and practitioners, we developed our integrative framework of career competencies. We defined career competencies as "knowledge, skills, and abilities central to career development, which can be influenced and developed by the individual". Our integrative framework consisted of three dimensions and six career competencies: reflection on motivation and reflection on qualities (both reflective competencies), networking and self-profiling (both communicative competencies), and work exploration and career control (both behavioral competencies). Based on this framework we developed the Career Competencies Questionnaire (CCQ) and tested its reliability and validity. Our results indicate that the items in the CCQ were reliable and valid: the items in the CCQ measured what they were supposed to measure, and they were distinguishable from other, related concepts such as perceived employability and self-efficacy. In addition, career competencies were shown to have added value up and above related concepts such as self-efficacy, thereby underlining their relevance in career development research.

Are career competencies a relevant concept in predicting wellbeing of young employees with lower levels of education (Question 4)?

After investigating wellbeing and career competencies of young employees with lower educational levels, we aimed to examine whether career competencies may also stimulate employee wellbeing (see Chapter 5). As career competencies are focused on career development and growth, we expected these competencies to function in a similar way as personal resources, which are positive self-evaluations that are linked to personal growth and development. Specifically, we used the JD-R model to investigate whether career competencies may act as a mediator in motivational and health impairment processes. Based on previous studies on personal

resources, we expected career competencies to contribute to motivational processes, but not to health impairment processes.

In line with our expectations, we found that career competencies were positively related to job resources and to work engagement. Moreover, the presence of sufficient job resources may stimulate the mastery of career competencies to subsequently foster engagement. Conversely, mastering career competencies may also enable employees to experience more job resources, subsequently increasing their work engagement. Career competencies and job resources may therefore create a mutually reinforcing process that can foster employee wellbeing. As expected, career competencies did not play a role in health impairment processes. Our findings confirm that career competencies are a relevant concept for employee wellbeing and underline the unique value of career competencies for motivational processes among young employees. These results underline the importance of integrating research on employee wellbeing and career development.

Can a career development intervention, which is based on career competencies, enhance the career self-management of young employees (Question 5)?

A final goal of this thesis was to develop and test a career development intervention that can support young employees in their career development and wellbeing (see Chapter 6). We developed the CareerSKILLS intervention, which was based on our framework of career competencies. As an underlying methodology we used the JOBS training program, which is based on the concepts of self-efficacy and resilience against setbacks, and which has been proven to be effective in several countries. We tested the short-term effectiveness of the program in two independent samples.

Our results supported the short-term effectiveness of the CareerSKILLS program. Participants of the intervention, as opposed to a control group, had grown in their career competency development, and felt more self-efficacious and resilient against potential setbacks. Moreover, they performed

more career-related behaviors and they perceived themselves to be more employable on the labor market. We also found in both samples that participants experienced higher levels of work engagement after the intervention, whereas they did not experience lower levels of emotional exhaustion. These findings suggest that the CareerSKILLS intervention may indeed stimulate both career development and employee wellbeing. The results also further support the notion that career competencies are uniquely important for stimulating motivational outcomes, and underline our argument that research on career development and employee wellbeing should be integrated more intensively.

Limitations and Strengths of this Thesis

This thesis has a number of limitations and strengths that need to be discussed.

Limitations. First, our data were all based on self-report measures. Although recent studies argued that concepts such as work engagement and personal resources are virtually impossible to measure in other ways, this could have led to common method bias and social desirability responses. Future studies should therefore also include objective outcome measures and ratings from significant others in the work environment. A second limitation concerns the way in which we measured wellbeing. Although motivational processes are usually tested with work engagement as an indicator of motivation and burnout as indicator of strain, we used three different indicators of motivation (i.e., job satisfaction, dedication, and work engagement) and emotional exhaustion, a component of burnout, as indicator of strain. We would advise future studies to include work engagement and burnout as indicators of wellbeing. A third limitation is that we could not fully test causal, reciprocal, and indirect effects in this thesis because of our cross-sectional and two-wave longitudinal designs. Therefore, future studies should employ three-wave designs to provide stronger evidence. The final limitation concerns our empirical testing of the CareerSKILLS intervention. For practical reasons we could only use

a quasi-randomized control trial, and we could only test the short-term effectiveness. To further validate our findings, future studies should employ a randomized controlled trial and longer-term follow-up measures.

Strengths. A first strength is our specific focus on young workers. In providing a better understanding of the factors influencing their wellbeing at work, the career competencies they need to navigate their career, and the effectiveness of a career development intervention, our findings provide starting points to support these young workers during the start of their professional careers. A second strength concerns an increased understanding of the concept of career competencies. We showed that young workers may especially need reflective, communicative, and behavioral career competencies in order to thrive in their career. Third, this thesis combined research on work-related wellbeing and career development. We demonstrated that career competencies are also relevant in fostering employee wellbeing, and that a career development intervention can also positively influence work engagement. A fourth strength is that we combined several methods of research and statistical analysis, which places the results of this thesis both in a strong practical and empirical context. Finally, we developed practical tools that can be used to support young workers who are starting their careers. The Career Competencies Questionnaire (CCQ) and the CareerSKILLS intervention may both be implemented by working organizations and schools to stimulate career development and wellbeing of young workers and students.

Theoretical Implications and Recommendations for Future Research

The results presented in this thesis have theoretical implications and lead to recommendations for future studies with regard to the work and career of young employees.

Wellbeing of Young Employees with Lower Levels of Education. First, we found support for the basic assumptions and processes of the JD-R model. Most of the job resources (i.e., autonomy, social support, and opportunities for development) and job demands (i.e., work pressure, emotional workload,

and physical workload) that we studied were indeed related to motivation and strain, respectively. However, task variation seemed to act as a job demand, whereas mental workload seemed to act as a job resource. It would be interesting to study possible curvilinear effects of job characteristics on employee wellbeing, especially with regard to task variation and mental demands at work. We also found differences between educational groups. Young workers with lower levels of education experienced fewer job resources than their higher educated colleagues, while these resources appeared to be especially important in determining their wellbeing. It seems that these young workers especially need to be motivated in order to experience wellbeing at work. We also found that health impairment processes were stronger for workers with high levels of education. Finally, we found reciprocal relations between dedication and performance, as well as between emotional exhaustion and performance among young workers with lower levels of education. These findings underline a multi-directional process in which job characteristics, wellbeing, and performance interact with each other over time to create gain or loss cycles. Future studies could shed more light on these cycles among young workers, specifically on the importance of perceived competence.

Career Competencies of Young Employees with Lower Levels of Education. We presented an integrative framework of career competencies for young workers with lower levels of education that included reflective, communicative, and behavioral competencies. Subsequently, we developed and validated the Career Competencies Questionnaire (CCQ). An interesting direction for future studies would be to examine the interplay between career competencies, personality characteristics (e.g., proactive personality), and contextual variables (e.g., mentoring, stress management). A second implication with regard to career competencies is that these competencies are also relevant for stimulating employee wellbeing. Specifically, career competencies and job resources may be mutually reinforcing in stimulating work engagement of young employees. In addition, career competencies were positively related to motivational process at work, but not to health

impairment processes. Additional research could investigate the interplay between job resources, personal resources, and career competencies and their relationship with employee wellbeing. with employee wellbeing.

Career Development Interventions. Our results suggest that an individual-level career development intervention that is built on career competencies may stimulate both career development and employee wellbeing. Therefore, training young workers to develop their career competencies, and to become more self-efficacious and resilient against potential obstacles, seems to be an important tool for fostering their career development and wellbeing at work. To further examine the effectiveness of this intervention, future studies could use longer-term follow-up measures and include the social and organizational context, for example by training supervisors as well.

Practical Implications

Our findings have practical implications for Human Resource Management (HRM), career counseling, Occupational Health Psychology (OHP), and educational institutions.

Human Resource Management and Career Counseling. Human Resource professionals and career counselors would benefit from paying attention to the career competencies of their employees or clients. Specifically, career competencies may be a fruitful basis for creating “smart jobs”, which are designed to foster personal growth, career development, and wellbeing at work. HRM departments and career counselors may also use the CCQ as a diagnostic tool to monitor the career progress of young employees. This would give HR departments the opportunity to map their progress and it could pinpoint potential obstacles or learning challenges. Implementing the CCQ could thereby serve as a starting point for further interventions. Finally, HRM departments may integrate the CareerSKILLS program in their employability programs and in their policies for young employees, for example as a socialization tactic. This may be a promising way of fostering their career development, wellbeing at work, and employability.

Occupational Health Psychology. For OHP, it is important to know that young workers with lower levels of education seem to be exposed to an imbalance in their work environment: they experience fewer job resources, while at the same time these resources are highly relevant for their wellbeing. These young workers seem to be relatively resistant to job demands, whereas stimulating job resources and career competencies may be an especially effective way to increase their wellbeing and career development. We also found that these young workers respond differently to certain job characteristics depending on their educational level. Therefore, it is essential to closely match the work environment with the specific needs of young workers. An implication both for OHP and HRM is that policies on employee wellbeing and career development should be integrated more intensively. Organizational health psychologists and HR professionals could therefore aim to create a stimulating work environment, and also provide young employees with opportunities to develop career competencies, thereby adopting a dual focus on work ánd career.

Education. Our findings are also valuable for educational institutions as it may help them to prepare their students for the school-to-work transition. Stimulating career competencies early in the career of students may support them in successfully starting their working lives. Schools may therefore incorporate the CCQ to monitor career competencies of interns who are about to make the school-to-work transition. In addition, implementing the CareerSKILLS interventions for students who are about to make the transition to working life may increase their preparedness to successfully complete the school-to-work transition.

Concluding Note

Young individuals experience many unique challenges during the first years of their professional careers, and they need to adapt to daily working life. Those with lower educational levels seem to be especially at risk. Therefore, it is essential to support these young workers during the start of their career. Our results point out that it is especially important to stimulate

young workers' motivation and provide them with adequate resources in the workplace. This thesis also presents the Career Competencies Questionnaire and the CareerSKILLS intervention as practical tools that can be used in supporting young employees to successfully manage their work and career. The key to a good start of their career may lie in gaining sufficient motivation and wellbeing through resources at work and mastering career competencies. If those conditions are met, well begun may indeed be half done.

SAMENVATTING

EEN GOED BEGIN IS HET HALVE WERK: EEN ONDERZOEK NAAR HET WERK EN DE LOOPBAAN VAN JONGE WERKNEMERS.

Samenvatting

Inleiding

Tijdens de laatste decennia is de arbeidsmarkt steeds meer gaan veranderen in een dynamische, continu veranderende omgeving, waarbinnen werknemers in toenemende mate verantwoordelijkheid dienen te nemen voor het vormgeven van hun eigen werk en loopbaan. Omdat flexibiliteit en zelfsturing daarbij steeds belangrijker zijn, worden loopbanen langer en complexer. Deze ontwikkelingen zouden juist voor jonge werknemers wel eens extra moeilijk kunnen zijn. Zij worden in een korte tijdsperiode geconfronteerd met veel unieke uitdagingen, zoals het vormen van een nieuwe identiteit, het verkrijgen van nieuwe verantwoordelijkheden en rollen, en het maken van belangrijke werkgerelateerde keuzes. Vooral voor laag en middelbaar opgeleide jongeren (hierna gezamenlijk benoemd als "lager opleidingsniveau") zouden deze uitdagingen extra moeilijk kunnen zijn, omdat laaggeschoold werk steeds complexer wordt binnen onze kenniseconomie (bijvoorbeeld door de groeiende rol van ICT en sociale vaardigheden) en de diploma-eisen steeds verder toenemen. Het is dan ook essentieel dat we meer inzicht krijgen in de factoren die het welzijn en de loopbaanontwikkeling kunnen bevorderen van deze jonge werknemers met lager opleidingsniveau. De voornaamste doelgroep in dit proefschrift bestaat uit jonge werknemers tussen de 16 en 30 jaar met lager opleidingsniveau (tot en met mbo niveau 4).

In dit proefschrift is op meerdere manieren geprobeerd een bijdrage te leveren aan dit doel. We hebben onderzoek gedaan naar bepalende factoren in het welzijn van lager opgeleide jonge werknemers, waarbij we gekeken hebben naar de wijze waarop werkomstandigheden samenhangen met welzijn, gezondheid en prestatie. Ook hebben we verschillende opleidingsniveaus met elkaar vergeleken om te onderzoeken of het welzijn binnen deze opleidingsniveaus wellicht op verschillende manieren beïnvloed wordt. Een volgend doel in dit proefschrift was om een theoretisch kader van loopbaancompetenties te ontwikkelen op basis van de bestaande literatuur en input vanuit de praktijk. Hieruit voortvloeiend wilden we een meetinstrument van loopbaancompetenties ontwikkelen en testen.

Vervolgens wilden we onderzoeken of loopbaancompetenties niet alleen belangrijk zijn voor loopbaanontwikkeling, maar of ze ook een rol kunnen spelen in het stimuleren van welzijn. Tot slot hadden we als doel om een loopbaaninterventie te ontwikkelen en te testen op effectiviteit. Deze interventie is gebaseerd is op ons theoretisch kader van loopbaancompetenties en is erop gericht de loopbaanontwikkeling en het welzijn van jonge werknemers te stimuleren.

Op welke manieren zijn werkkenmerken relevant in het bepalen van welzijn, gezondheid en prestatie van lager opgeleide jonge werknemers (Vraag 1)?

Ons eerste doel was om te onderzoeken op welke manieren werkkenmerken samenhangen met welzijn, gezondheid en prestatie van lager opgeleide jonge werknemers (zie Hoofdstuk 2, 3 en 5). Als onderliggend theoretisch model hebben we het Job Demands-Resources (JD-R) model gebruikt. Dit model veronderstelt dat bepaalde werkkenmerken welzijn kunnen stimuleren (hulpbronnen) of juist kunnen ondermijnen (taakeisen). Het JD-R model beschrijft een motivationeel proces, dat kan leiden tot verbeterd welzijn, en een uitputtingsproces, dat kan leiden tot verminderd welzijn. We hebben deze processen onderzocht binnen verschillende steekproeven van lager opgeleide jonge werknemers.

De resultaten wezen uit dat autonomie, sociale steun van collega's en leidinggevenden, en ontwikkelingsmogelijkheden belangrijke hulpbronnen zijn die een motivationeel proces in gang kunnen zetten dat welzijn op het werk stimuleert. Ook vonden we dat een hoge werkdruk, emotioneel belastend werk en lichamelijk belastend werk het begin kunnen zijn van een uitputtingsproces dat kan leiden tot verminderd welzijn. Uit onze resultaten bleek verder dat lager opgeleide jonge werknemers niet te veel variatie in hun taken dienen te hebben, terwijl het werk tegelijkertijd wel voldoende uitdagend moet zijn. Ook bleek dat motivationele processen belangrijker waren dan uitputtingsprocessen onder lager opgeleide jonge werknemers. Met andere woorden: veeleisend werk lijkt niet per se een probleem te zijn

voor deze jonge werknemers, maar ze hebben juist hulpbronnen nodig om goed te functioneren op hun werk.

Zijn er verschillen tussen jonge werknemers van verschillende opleidingsniveaus met betrekking tot werkkenmerken, welzijn, gezondheid, prestatie en de relaties tussen deze aspecten (Vraag 2)?

Naast het bestuderen van factoren die het welzijn van lager opgeleide jonge werknemers kunnen beïnvloeden, hebben we onderzocht of er verschillen waren tussen opleidingsniveaus (zie Hoofdstuk 2 en 3). Op basis van de literatuur verwachtten we dat lager opgeleide jongeren minder gunstige arbeidsomstandigheden en een verminderd welzijn zouden ervaren in vergelijking met hoog opgeleide jongeren. We onderzochten ook of er verschillen waren tussen opleidingsniveaus in de totstandkoming van motivationele en uitputtingsprocessen.

We vonden dat dat laag en middelbaar opgeleiden in hoge mate gelijk waren, maar dat ze beide wel duidelijk verschilden van hoog opgeleiden. Hoog opgeleiden ervoeren daarbij gunstigere arbeidsomstandigheden. Deze overeenkomst was voor ons reden om deze groepen in dit proefschrift samen te voegen onder de noemer “lager opgeleiden”. Over het geheel genomen gaven lager opgeleide jongeren aan minder hulpbronnen, meer lichamelijke belasting, minder toewijding en een slechtere gezondheid en prestatie te ervaren dan hoger opgeleide jonge werknemers. Deze bevindingen benadrukken de kwetsbaarheid van lager opgeleide jonge werknemers. Het lijkt erop dat deze groep jongeren een disbalans ervaart tussen hulpbronnen en taakeisen, die ten koste zou kunnen gaan van hun welzijn, gezondheid en prestaties.

Onze resultaten lieten ook zien dat er verschillen zijn tussen opleidingsniveaus in de manier waarop hun welzijn bepaald wordt. Uitputtingsprocessen bleken in sterkere mate aanwezig te zijn bij hoog opgeleiden dan bij lager opgeleiden. Voor de lager opgeleide groep vonden we wederkerige relaties tussen betrokkenheid en prestatie enerzijds, en tussen uitputting en prestatie anderzijds. Dit zou respectievelijk kunnen

wijzen op een zogenaamde “gain cycle” (positieve wederkerige relatie) en een “loss cycle” (negatieve wederkerige relatie). Deze bevinding duidt erop dat het voor lager opgeleide jonge werknemers belangrijk is om het gevoel te hebben dat ze competent zijn in hun werk.

Welke loopbaancompetenties kunnen belangrijk zijn voor lager opgeleide jonge werknemers en hoe kunnen we deze competenties meten (Vraag 3)? Omdat loopbaanontwikkeling steeds belangrijker wordt in het dagelijkse werk, hebben we ook onderzoek gedaan naar de loopbaancompetenties die jonge werknemers nodig hebben om hun loopbaan succesvol vorm te kunnen geven. Ons doel was om een theoretisch kader en een meetinstrument van loopbaancompetenties te ontwikkelen en testen (zie Hoofdstuk 4).

We ontwikkelden ons theoretische kader van loopbaancompetenties op basis van bestaande literatuur en interviews met onderzoekers en belanghebbenden uit de praktijk. Daarbij definieerden we loopbaancompetenties als “kennis, bekwaamheden en vaardigheden die benodigd zijn voor de loopbaanontwikkeling en die beïnvloedbaar en ontwikkelbaar zijn door het individu”. Ons theoretische kader bestond uit drie basisdimensies en zes bijbehorende loopbaancompetenties: reflectie op motivatie en reflectie op kwaliteiten (beide reflectieve competenties), netwerken en zelfprofilering (beide communicatieve competenties), en werkexploratie en loopbaansturing (beide gedragsmatige competenties). Op basis van dit kader ontwikkelden we de “Career Competencies Questionnaire” (CCQ; Vragenlijst Loopbaancompetenties). We hebben deze vragenlijst vervolgens getoetst op betrouwbaarheid en validiteit. Ons onderzoek liet zien dat de items betrouwbaar en valide zijn: de items meten wat ze zouden moeten meten (inhoudelijke validiteit), ze zijn te onderscheiden van gerelateerde concepten als loopbaanmotivatie en waargenomen inzetbaarheid (discriminante validiteit) en ze hebben toegevoegde waarde bovenop bestaande gerelateerde concepten als self-efficacy (het geloof in eigen kunnen) en waargenomen prestaties (incrementele validiteit). De relevantie van ons theoretische kader van loopbaancompetenties voor

onderzoek naar loopbaanontwikkeling werd hiermee onderschreven.

Zijn loopbaancompetenties een relevant concept in de voorspelling van welzijn van lager opgeleide jonge werknemers (Vraag 4)?

Nadat we onderzoek gedaan hadden naar welzijn en naar loopbaancompetenties bij lager opgeleide jonge werknemers, wilden we nagaan of loopbaancompetenties een rol zouden kunnen spelen in het stimuleren van welzijn (zie Hoofdstuk 5). Aangezien loopbaancompetenties gerelateerd zijn aan ontwikkeling en persoonlijke groei, verwachtten we dat ze op een soortgelijke manier zouden kunnen werken als persoonlijke hulpbronnen. Dit zijn positieve zelf-evaluaties die gelinkt worden aan persoonlijke groei en ontwikkeling, bijvoorbeeld self-efficacy en optimisme. We gebruikten opnieuw het JD-R model om te onderzoeken of loopbaancompetenties een rol zouden kunnen spelen in motivationele processen en uitputtingsprocessen. Op basis van bestaand onderzoek verwachtten we dat loopbaancompetenties wel een rol zouden spelen in motivationele processen, maar niet in uitputtingsprocessen.

Zoals verwacht hingen loopbaancompetenties positief samen met taakgerelateerde hulpbronnen en met bevlogenheid. Het lijkt erop dat de aanwezigheid van voldoende hulpbronnen ervoor kan zorgen dat werknemers meer loopbaancompetenties ontwikkelen, wat vervolgens kan leiden tot toegenomen bevlogenheid. Dit werkt ook de andere kant op: ontwikkeling van loopbaancompetenties kan werknemers mogelijk in staat stellen meer hulpbronnen te ontwikkelen of herkennen op het werk, wat vervolgens tot meer bevlogenheid kan leiden. Loopbaancompetenties en taakgerelateerde hulpbronnen zouden daarmee een wederkerig versterkend proces in gang kunnen zetten dat kan leiden tot toegenomen welzijn op het werk. Zoals verondersteld bleken loopbaancompetenties geen rol te spelen in uitputtingsprocessen. Alles bij elkaar genomen kwamen we tot de conclusie dat loopbaancompetenties inderdaad een rol kunnen spelen in het stimuleren van welzijn onder jonge werknemers, maar alleen in motivationele processen. Deze bevindingen onderstrepen

het belang van het integreren van onderzoek naar loopbaanontwikkeling en werkgerelateerd welzijn.

Kan een loopbaangerelateerde interventie, die gebaseerd is op loopbaancompetenties, de loopbaanontwikkeling en het welzijn van jonge werknemers versterken (Vraag 5)?

Een laatste doel in dit proefschrift was het ontwikkelen en empirisch toetsen van een training die jonge werknemers kan ondersteunen in hun loopbaanontwikkeling en welzijn op het werk (zie Hoofdstuk 6). We ontwikkelden daarom de CareerSKILLS interventie, een groepstraining die gebaseerd is op ons theoretische kader van loopbaancompetenties. Als onderliggende methodiek gebruikten we de JOBS interventie, die gebaseerd is op de concepten self-efficacy (geloof in eigen kunnen) en inoculatie op tegenslagen (weerbaarheid voor mogelijke obstakels), en waarvan de effectiviteit in meerdere landen is aangetoond. We testten de effectiviteit van deze training in twee verschillende organisaties.

Onze bevindingen ondersteunden de korte-termijn effectiviteit van de CareerSKILLS interventie. Deelnemers aan de training hadden meer loopbaancompetenties ontwikkeld, waren meer overtuigd van hun eigen kunnen en voelden zich ook weerbaarder tegen obstakels. Bovendien gaven ze aan meer loopbaangerelateerd gedrag te vertonen en zich beter inzetbaar (“employable”) te voelen op de arbeidsmarkt. Ook bleek uit de resultaten dat deelnemers aan de training inderdaad meer bevlogen waren geworden, terwijl er geen afname was van uitputting. Deze bevindingen bevestigen dat de CareerSKILLS training, zoals verwacht, op positieve wijze bij kan dragen aan de loopbaanontwikkeling en het welzijn van jonge werknemers. Ook bieden de resultaten wederom ondersteuning aan de rol van loopbaancompetenties in het stimuleren van werkgerelateerd welzijn. Tenslotte geeft dit eens te meer aan dat het belangrijk is onderzoek naar loopbaanontwikkeling en welzijn meer te integreren.

Beperkingen en Sterke Kanten van dit Proefschrift

Dit proefschrift heeft een aantal beperkingen en sterke punten die nader toegelicht dienen te worden.

Beperkingen. Een eerste beperking van dit proefschrift is dat alle data gebaseerd zijn op zelf-gerapporteerde meetinstrumenten. Hoewel diverse onderzoekers hebben aangegeven dat concepten als bevlogenheid en persoonlijke hulpbronnen vrijwel niet op een andere manier gemeten kunnen worden, kan het mogelijk geleid hebben tot vertekening van de resultaten en tot sociaal wenselijke antwoorden. Toekomstig onderzoek zou daarom ook objectieve uitkomstmaten (bv. aanvullende opleidingen en aantal promoties) en scores van belangrijke andere mensen in de werkomgeving (bv. collega's en leidinggevenden) mee moeten nemen. Een tweede beperking heeft betrekking op de manier waarop we welzijn gemeten hebben. Hoewel motivationele processen doorgaans worden gemeten met bevlogenheid als indicator van motivatie en met burn-out als indicator van uitputting, hebben we in dit proefschrift drie verschillende indicatoren van motivatie gebruikt (tevredenheid met het werk, toewijding en bevlogenheid) en emotionele uitputting, een onderdeel van burn-out, als indicator van uitputting. We adviseren dat toekomstig onderzoek bevlogenheid en burn-out meeneemt als indicatoren van motivatie en uitputting. Een derde beperking is dat we in dit proefschrift niet volledig in staat waren om causale, wederkerige en indirecte verbanden te toetsen vanwege de aard van onze metingen. In plaats van cross-sectionele metingen (één meetmoment) en longitudinale metingen met twee meetmomenten, zou toekomstig onderzoek gebruik moeten maken van longitudinale ontwerpen met drie metingen. Op die manier kunnen onze bevindingen nog verder versterkt worden. Een laatste beperking heeft betrekking op de manier waarop we de effectiviteit van de CareerSKILLS interventie gemeten hebben in dit proefschrift. Vanwege praktische beperkingen konden we slechts een quasi-experimenteel ontwerp toepassen, waarbij de deelnemers niet volledig willekeurig ingedeeld zijn in de groepen en konden we alleen de korte-termijn effectiviteit onderzoeken. Om de bevindingen verder te

valideren zou toekomstig onderzoek een volledig gerandomiseerd design ("randomized controlled trial") moeten gebruiken en zouden we follow-up metingen moeten doen op langere termijn.

Sterke Punten. Een eerste kracht van dit onderzoek is de nadrukkelijke focus op jonge werknemers. We hebben in dit proefschrift meer inzicht geboden in de factoren die hun welzijn kunnen bepalen, in de loopbaancompetenties die ze nodig hebben en in de effectiviteit van een training die ontwikkeld is om hen te ondersteunen in het begin van hun werkende leven. Met deze bevindingen hebben we dan ook bijgedragen aan onze kennis over deze doelgroep en hebben we aanknopingspunten geboden om hen daadwerkelijke te kunnen ondersteunen in hun startende loopbaan. Een tweede sterk punt is een toegenomen inzicht in het concept loopbaancompetenties. De resultaten lieten zien dat jonge werknemers reflectieve, communicatieve en gedragsmatige loopbaancompetenties nodig hebben om hun loopbaan succesvol vorm te kunnen geven. Een derde kracht van dit proefschrift is het combineren van onderzoek naar werkgerelateerd welzijn en loopbaanontwikkeling. We toonden aan dat loopbaancompetenties belangrijk zijn in het stimuleren van welzijn en dat een loopbaangerelateerde interventie een positieve invloed kan hebben op bevlogenheid in het werk. Een vierde sterk punt is dat we in dit proefschrift een combinatie van diverse onderzoeksmethoden en analyses hebben toegepast, die ervoor zorgt dat onze resultaten in een sterke theoretische én praktische context staan. Tot slot heeft dit proefschrift een tweetal praktisch bruikbare instrumenten opgeleverd. De Vragenlijst Loopbaancompetenties (CCQ) en de CareerSKILLS interventie kunnen beide door organisaties en scholen geïmplementeerd worden om loopbaanontwikkeling en welzijn van jongeren te versterken.

Belang voor de Theorie

Dit proefschrift heeft nieuwe inzichten en praktische hulpmiddelen opgeleverd met betrekking tot de manier waarop jonge werknemers hun werk en loopbaan succesvol vorm kunnen geven.

Samenvatting

Welzijn van Lager Opgeleide Jonge Werknemers. Allereerst ondersteunen onze bevindingen over het algemeen gesproken de veronderstellingen van het JD-R model. De meeste hulpbronnen (autonomie, sociale steun en ontwikkelingsmogelijkheden) en taakeisen (werkdruk, emotionele belasting en fysieke belasting) die we bestudeerd hebben hingen zoals verwacht samen met respectievelijk verbeterd en verminderd welzijn. Echter, variatie in het werk leek te worden ervaren als een stressor, terwijl mentale belasting juist een hulpbron leek te zijn voor lager opgeleide jonge werknemers. Het zou interessant zijn om zogenaamde kromlijnige effecten te onderzoeken die hulpbronnen en taakeisen kunnen hebben op het welzijn van jonge werknemers. Mogelijk is er een bepaalde optimale hoeveelheid aan bijvoorbeeld variatie, maar vormt te veel variatie juist een belemmering voor het functioneren. We vonden ook verschillen tussen opleidingsniveaus. Lager opgeleide jonge werknemers ervoeren minder hulpbronnen dan hoger opgeleide jongeren, terwijl deze hulpbronnen juist heel belangrijk bleken in het bepalen van hun welzijn. Het lijkt erop dat lager opgeleide jonge werknemers relatief weerbaar zijn tegen hoge taakeisen op het werk, maar dat ze juist gemotiveerd moeten worden door de ervaring van hulpbronnen om hun welzijn te versterken. Een ander verschil was dat uitputtingsprocessen duidelijker aanwezig bleken te zijn bij hoger opgeleide jonge werknemers. Tot slot vonden we onder lager opgeleide jonge werknemers wederkerige relaties tussen toewijding en prestatie, en tussen uitputting en prestatie. Deze resultaten ondersteunen het uitgangspunt dat werkkenmerken, welzijn en prestatie elkaar wederkerig kunnen beïnvloeden over de tijd in zogenaamde “gain cycles” (positieve wederkerige relatie) en “loss cycles” (negatieve wederkerige relatie). Toekomstig onderzoek zou hierover meer inzicht kunnen verschaffen, vooral op het gebied van waargenomen competentie onder lager opgeleide jonge werknemers.

Loopbaancompetenties van Lager Opgeleide Jonge Werknemers. In dit proefschrift presenteerden we een theoretisch kader van loopbaancompetenties dat bestond uit reflectieve, communicatieve en gedragsmatige competenties. Bovendien ontwikkelden en valideerden

we de Vragenlijst Loopbaancompetenties (CCQ). Een interessante richting voor toekomstig onderzoek zou zijn om de dynamiek te bestuderen tussen loopbaancompetenties, persoonlijkheidseigenschappen (bv. proactieve persoonlijkheid) en contextuele eigenschappen (bv. stress management, de rol van een mentor). Een tweede implicatie voor de theorie in dit verband is dat loopbaancompetenties niet alleen relevant zijn voor loopbaanontwikkeling, maar ook voor welzijn op het werk. Het lijkt erop dat loopbaancompetenties, op een soortgelijke manier als persoonlijke hulpbronnen, en taakgerelateerde hulpbronnen elkaar kunnen versterken en vervolgens een positieve invloed kunnen uitoefenen op het welzijn van jonge werknemers. Bovendien bleken loopbaancompetenties alleen een rol te spelen in motivationele processen op het werk, niet in uitputtingsprocessen. Toekomstig onderzoek zou nader in kunnen gaan op de exacte dynamiek tussen loopbaancompetenties, persoonlijke hulpbronnen en taakgerelateerde hulpbronnen.

Loopbaangerelateerde Interventies. Onze resultaten wijzen erop dat een interventie op individueel niveau die gebaseerd is op de ontwikkeling van loopbaancompetenties, relevant kan zijn voor het stimuleren van loopbaanontwikkeling en welzijn op het werk. Het is daarom belangrijk jonge werknemers te trainen in het eigen maken van loopbaancompetenties, hun geloof in eigen kunnen te stimuleren en hen weerbaarder te maken tegen mogelijke obstakels. Toekomstig onderzoek is nodig om de effectiviteit van de CareerSKILLS training verder te onderzoeken. Langere termijn metingen (bijvoorbeeld zes maanden of een jaar) en het betrekken van de organisatie-context (bijvoorbeeld door leidinggevenden ook te trainen) zouden hiervoor geschikte aanknopingspunten zijn.

Belang voor de Praktijk

De bevindingen in dit proefschrift zijn van belang voor Human Resource Management (HRM), loopbaanbegeleiders, Arbeids- en Gezondheidspsychologie (A&G) en opleidingsinstituten.

Human Resource Management en Loopbaanbegeleiding. Het is belangrijk voor HR professionals en loopbaanbegeleiders om aandacht te

besteden aan loopbaancompetenties. Concreet zouden ze de basis kunnen vormen van zogenaamde “smart jobs”, die zo ingericht worden dat ze persoonlijke groei, loopbaanontwikkeling en welzijn stimuleren. HR medewerkers en loopbaancoaches zouden de CCQ bovendien kunnen gebruiken als een diagnostisch instrument om de loopbaanontwikkeling van jonge werknemers te monitoren. Dit zou hen in staat stellen om de vooruitgang van deze medewerkers in kaart te brengen, waarbij mogelijke obstakels of ontwikkelpunten naar voren kunnen komen. Op deze manier zou de CCQ gebruikt kunnen worden als de aanleiding voor verdere interventies en ondersteuning. Tot slot zouden HR afdelingen de CareerSKILLS training kunnen integreren in hun employability programma’s en hun beleid voor nieuwe medewerkers. De training zou bijvoorbeeld een “socialisatie tactiek” kunnen vormen om jonge en nieuwe werknemers een vloeiende start te laten maken in de organisatie. Aangezien het een groepstraining is, is CareerSKILLS voor organisaties een efficiënte manier om loopbaanontwikkeling, welzijn en inzetbaarheid te stimuleren.

Arbeids- & Gezondheidspsychologie. Voor A&G psychologen is het belangrijk om te weten dat lager opgeleide jonge werknemers een disbalans lijken te ervaren in hun werk: ze ervaren minder hulpbronnen dan hoger opgeleide jongeren, maar juist deze hulpbronnen lijken essentieel voor hun welzijn. Deze groep jongeren lijkt relatief goed weerbaar tegen hoge taakeisen, terwijl het stimuleren van taakgerelateerde hulpbronnen en loopbaancompetenties bij uitstek een effectieve strategie lijkt om hun welzijn en loopbaanontwikkeling te stimuleren. We vonden bovendien dat jongeren met verschillende opleidingsniveaus anders reageren op de hulpbronnen en taakeisen in hun werk. Het is om deze redenen belangrijk om de werkomgeving nauwlettend aan te sluiten op de specifieke behoeften van jonge werknemers met verschillende opleidingsniveaus. Een implicatie voor A&G psychologen en voor HRM is dat beleid met betrekking tot welzijn en loopbaanontwikkeling van jonge werknemers intensiever gecombineerd zou moeten worden. Het is van belang om een duale focus te hanteren, waarbij een stimulerende werkomgeving

wordt gecreëerd en deze jonge werknemers bovendien de kans krijgen om hun loopbaancompetenties te ontwikkelen.

Onderwijs. Dit proefschrift is ook waardevol voor opleidingsinstituten, aangezien het hen kan helpen om leerlingen en studenten klaar te stomen voor de stap naar de arbeidsmarkt. Het stimuleren van loopbaancompetenties tijdens de schooltijd zou kunnen helpen om de overgang naar de arbeidsmarkt succesvol te voltooien. Het gebruik van de CCQ om de ontwikkeling van loopbaancompetenties te monitoren tijdens de opleiding zou daarom een effectieve manier kunnen zijn om mogelijke obstakels te kunnen herkennen en ondervangen. Bovendien zouden jongeren die in de afrondende fase van hun opleiding zitten de CareerSKILLS training kunnen volgen om ze beter klaar te stomen voor de definitieve overgang naar hun werkende leven.

Conclusie

Jongeren ervaren veel unieke uitdagingen tijdens de eerste jaren van hun loopbaan en ze moeten zich nog aanpassen aan het werkende leven. De lager opgeleide jongeren zijn daarbij extra kwetsbaar en het is daarom van groot belang hen te ondersteunen tijdens de start van hun loopbaan. Onze resultaten geven aan dat het vooral belangrijk is te investeren in het versterken van hun motivatie door te voorzien in voldoende hulpbronnen op het werk. Bovendien heeft dit proefschrift twee concrete praktische tools opgeleverd, de Vragenlijst Loopbaancompetenties en de CareerSKILLS training, die direct ingezet kunnen worden om jongeren te ondersteunen in hun werk en loopbaan. De sleutel naar een goede start van hun loopbaan lijkt te liggen in het verhogen van hun motivatie en welzijn door de aanwezigheid van hulpbronnen en de ontwikkeling van loopbaancompetenties. Als aan deze voorwaarden wordt voldaan, zou een goed begin inderdaad wel eens het halve werk kunnen zijn voor lager opgeleide jonge werknemers.

APPENDIX I

EXPLANATION OF THE DUTCH EDUCATIONAL SYSTEM

Appendix I

The Dutch Educational System

The Dutch system is rather unique in its structure and organization. Because the studies in this thesis are performed among the Dutch workforce, we will explain the Dutch educational system in more detail. In The Netherlands, education starts with 8 years of elementary education. Next, individuals either do pre-vocational/lower general secondary education ("vmbo"; 4 years), higher general secondary education ("havo"; 5 years) or pre-university education ("vwo"; 6 years). After that, they may either do intermediate vocational education ("mbo"; 1-4 years), higher vocational education ("hbo"; 4 years), or university level education ("wo"; 4-5 years).

According to most conventions, there are three main educational levels in The Netherlands. First, there are those with *low educational level* (less than 12 years of total education). These individuals either have no finished education, or have completed elementary education, or pre-vocational education. The second group is referred to as those with *intermediate educational level* (13-16 years of total education). These individuals have completed higher general secondary education, pre-university education, or intermediate vocational education. Compared with the North American educational system, both the group with low education and with intermediate education, which can be referred to as "lower educational levels", would be comparable with non-college degree. Third, there are individuals with *high educational level* (17 years or more of total education). These individuals have completed higher vocational education or university level education. This group would be referred to as college-level degree in the North American system.

The main target group of this thesis is young employees in the age range of 16 to 30 years with lower levels of education. However, we will also examine potential differences between educational groups.

APPENDIX II

VRAGENLIJST LOOPBAANCOMPETENTIES (VLC)

CAREER COMPETENCIES QUESTIONNAIRE (CCQ)

Appendix II

Vragenlijst Loopbaancompetenties

De volgende stellingen gaan over de ontwikkeling van je loopbaan; je werk in het heden en in de toekomst. Geef bij elke stelling aan in hoeverre je het hiermee eens bent.

1	2	3	4	5
Helemaal mee oneens	**Mee oneens**	**Neutraal**	**Mee eens**	**Helemaal mee eens**

Ik weet wat ik leuk vind in mijn werk.	1	2	3	4	5
Ik weet wat voor mij belangrijk is in mijn loopbaan.	1	2	3	4	5
Ik heb duidelijk voor ogen wat mijn passies zijn.	1	2	3	4	5
Ik weet wat mijn sterke punten zijn in mijn werk.	1	2	3	4	5
Ik ken mijn eigen beperkingen in mijn werk.	1	2	3	4	5
Ik ben me bewust van mijn talenten in mijn werk.	1	2	3	4	5
Ik weet over welke vaardigheden ik beschik.	1	2	3	4	5
Ik ken veel mensen binnen mijn werk die mij kunnen helpen met mijn loopbaan.	1	2	3	4	5
Ik ken veel mensen buiten mijn werk die mij kunnen helpen met mijn loopbaan.	1	2	3	4	5
Ik weet hoe ik mensen in mijn netwerk om hulp kan vragen.	1	2	3	4	5
Ik kan de juiste mensen benaderen om mij te helpen met mijn loopbaan.	1	2	3	4	5
Ik kan duidelijk aan anderen laten merken waar ik goed in ben in mijn werk.	1	2	3	4	5
Ik ben in staat aan mensen duidelijk te maken wat ik wil bereiken in mijn loopbaan.	1	2	3	4	5
Ik kan aan mijn omgeving laten zien wat ik belangrijk vind in mijn werk.	1	2	3	4	5

Appendix II

Vragenlijst Loopbaancompetenties (VERVOLG)

1	2	3	4	5
Helemaal mee oneens	**Mee oneens**	**Neutraal**	**Mee eens**	**Helemaal mee eens**

Ik weet hoe ik mogelijkheden kan onderzoeken die er voor mij zijn om me verder op te laten leiden.	1	2	3	4	5
Ik kan zoeken naar de ontwikkelingen binnen mijn vakgebied.	1	2	3	4	5
Ik ben in staat om de mogelijkheden te verkennen die er voor mij zijn op de arbeidsmarkt.	1	2	3	4	5
Ik kan duidelijke plannen maken voor mijn loop-baan.	1	2	3	4	5
Ik weet wat ik over een jaar bereikt wil hebben in mijn loopbaan.	1	2	3	4	5
Ik weet hoe ik een planning maak voor wat ik wil bereiken in mijn loopbaan.	1	2	3	4	5
Ik kan voor mezelf doelen stellen die ik wil bereiken in mijn loopbaan.	1	2	3	4	5

Appendix II

Career Competencies Questionnaire

The next few statements are about the development of your career, that is, your work in the present and future. Please indicate for each statement to what degree you agree with it.

1	2	3	4	5
Completely disagree	**Disagree**	**Neutral**	**Agree**	**Completely agree**

I know what I like in my work.	1	2	3	4	5
I know what is important to me in my career.	1	2	3	4	5
I can clearly see what my passions are in my work.	1	2	3	4	5
I know my strengths in my work.	1	2	3	4	5
I am familiar with my shortcomings in my work.	1	2	3	4	5
I am aware of my talents in my work.	1	2	3	4	5
I know which skills I possess.	1	2	3	4	5
I know a lot of people within my work who can help me with my career.	1	2	3	4	5
I know a lot of people outside of my work who can help me with my career.	1	2	3	4	5
I know how to ask for advice from people in my network.	1	2	3	4	5
I am able to approach the right persons to help me with my career.	1	2	3	4	5
I can clearly show others what my strengths are in my work.	1	2	3	4	5
I am able to show other what I want to achieve in my career.	1	2	3	4	5
I can show the people around me what is important to me in my work.	1	2	3	4	5

Appendix II

Career Competencies Questionnaire (CONTINUED)

1	2	3	4	5
Completely disagree	**Disagree**	**Neutral**	**Agree**	**Completely agree**

I know how to find out what my options are for becoming further educated.	1	2	3	4	5
I know how to search for developments in my area of work.	1	2	3	4	5
I am able to explore my possibilities on the labor market.	1	2	3	4	5
I can make clear career plans.	1	2	3	4	5
I know what I want to have achieved in my career a year from now.	1	2	3	4	5
I can create a layout for what I want to achieve in my career.	1	2	3	4	5
I am able to set goals for myself that I want to achieve in my career.	1	2	3	4	5

APPENDIX III

PRODUCTFOLDER CAREERSKILLS &

INHOUDSOPGAVE TRAININGSPROTOCOL

Appendix III

ACTIEF AAN DE SLAG MET JE LOOPBAAN

CAREERSKILLS

TNO innovation for life

MBO-ers vormen de grootste opleidingscategorie op de arbeidsmarkt. Meteen al aan het begin van hun loopbaan, komen deze jonge mensen voor nieuwe uitdagingen te staan. Zo krijgen ze te maken met taken en verantwoordelijkheden die voor het eerst een beroep doen op hun zelfstandigheid en eigen inzicht. Bovendien wordt direct van hen verwacht dat ze zichzelf ontwikkelen en actief kansen grijpen.

Om hun potentieel optimaal te benutten en hun loopbaan vorm te geven, kan deze groep startende werknemers gerichte begeleiding goed gebruiken. Ook vanuit het belang van de werkgever is het zaak de employability van deze groep jonge mensen te vergroten. Met als resultaat gemotiveerde jonge mensen die effectief aan de slag gaan en minder uitval en verzuim vertonen.

CAREERSKILLS: HOE VERGROOT IK MIJN EMPLOYABILITY?

Hoger opgeleiden zijn over het algemeen gewend om aan hun employability te werken, of worden door hun werkgever daarop geattendeerd. Voor lager opgeleiden is dat echter anders. Terwijl juist voor startende lager opgeleide werknemers het zaak is hun employability meteen een impuls te geven.

CAREERSKILLS HELPT STARTENDE WERKNEMERS MET HET

- Reflecteren op het eigen functioneren en de eigen wensen en mogelijkheden.
- Vooruit kijken en realistische doelen leren stellen.
- Bepalen welke vaardigheden ze nodig hebben om hun doelen te behalen.
- Opbouwen en onderhouden van een netwerk.
- Omgaan met tegenslagen.
- Nadenken en communiceren over eigen loopbaanwensen.
- Versterken van het vertrouwen in eigen employability.

Appendix III

CAREERSKILLS

VOOR WIE IS DEZE TRAINING BEDOELD?

De CareerSKILLS training richt zich op startende werknemers op MBO niveau, die in de meeste gevallen een start-kwalificatie bezitten van minimaal MBO niveau 2.

SKILLS TRAININGEN

CareerSKILLS is onderdeel van het SKILLS trainingsprogramma. SKILLS is gericht op het activeren van werklozen, (gedeeltelijk) arbeidsongeschikten, voortijdig schoolverlaters, en nu ook op startende werknemers die met de juiste steun en begeleiding hun kans op een baan aanzienlijk kunnen vergroten. SKILLS is wetenschappelijk onderbouwd en heeft haar effectiviteit in de praktijk ruimschoots bewezen.

MEER INFORMATIE

Voor uitgebreide informatie over SKILLS trainingen of een gesprek over de mogelijkheden van het SKILLS programma en certificering, kunt u contact opnemen met SKILLS coördinator Suzanne Lagerveld, 088 866 52 65, suzanne.lagerveld@tno.nl.

KIJK OOK OP DE WEBSITE WWW.TNO.NL/SKILLS

SKILLS

TNO.NL

GEZOND LEVEN

TNO initieert technologische en sociale innovatie voor een gezonde inrichting van ons leven en voor een vitale samenleving.

TNO
Polarisavenue 151
Postbus 718
2130 AS Hoofddorp

T 023 554 93 93
F 023 554 93 94
E info-arbeid@tno.nl

Appendix III

Inhoudsopgave

Appendix III

Inhoudsopgave

DANKWOORD

Dankwoord

En toen was er nog het dankwoord. Het allerlaatste stuk dat ik schrijf voor dit proefschrift en misschien ook wel het allerleukste stuk. Waarom? Omdat ik me hierdoor eens te meer besef hoe ontzettend veel belangrijke en waardevolle mensen er om mij heen staan die me de afgelopen jaren steeds geholpen hebben en die er altijd voor me waren. Bij deze alvast mijn excuses als dit dankwoord een (te) uitgebreide bloemlezing gaat worden, maar ja… dit is nu eenmaal het enige stuk in dit proefschrift dat ik even lekker "vrijuit kan ouwehoeren". Iedereen die dicht bij me staat weet dat dit proefschrift niet vanzelf tot stand is gekomen en dat ik mezelf regelmatig, om maar in CareerSKILLS termen te blijven, "geïnoculeerd heb op tegenslagen". Toch lees je nu dit dankwoord en dat betekent dat mijn proefschrift met goed gevolg is afgerond. Dat had ik niet kunnen doen zonder de steun en medewerking van allerlei belangrijke mensen. Enkelen van hen wil ik hier graag in het bijzonder bedanken.

Ik begin met mijn co-promotor. Veerle, als ik denk aan jouw rol als co-promotor in mijn promotieonderzoek, komt er één eigenschap van jou vooral naar voren die mij vaak en veel heeft geholpen: je oog voor detail. Of het nou om een typefoutje of dubbele spatie ging, of om belangrijkere zaken als een uitspraak in de Discussie over een bepaald onderzoeksresultaat… jij zag het eigenlijk altijd. Dat was heel fijn, vooral op momenten dat ik dat zelf na veel herschrijven even niet meer zag. Maar ook jouw inzet en betrokkenheid bij mijn promotietraject heb ik altijd heel erg gewaardeerd. Zelfs toen je in de laatste twee jaar veel minder aanwezig en inzetbaar was door gezondheidsproblemen, bleef je zo veel als je kon betrokken bij het project. Soms iets té veel, als je toch een manuscript ging lezen ondanks dat je ogen dat eigenlijk nog niet aankonden. Je betrokkenheid, je kritische blik en je inhoudelijke scherpte hebben me vaak geholpen en ik wil je daarvoor heel erg bedanken.

Ik ga verder met mijn eerste promotor, Roland. In jouw positie als bijzonder hoogleraar vanuit TNO en mijn positie als aio in Utrecht, hadden

hadden wij een soort “lange afstandsrelatie” met elkaar de afgelopen jaren. We zagen en spraken elkaar eigenlijk vrij weinig, maar áls we elkaar dan spraken, dan gebeurde er ook gelijk veel. Dat komt denk ik omdat je een hele duidelijke mening hebt en die ook heel direct uit. Dat was soms confronterend, maar tegelijkertijd gaf het me vaak nieuwe inzichten en ideeën. Op de momenten dat je voor een stuk ging zitten, kwam er altijd hele waardevolle feedback waar de kwaliteit duidelijk door toenam. Misschien dat ik het niet altijd even duidelijk liet merken tijdens gesprekken, maar ik heb je input altijd heel erg gewaardeerd. Bedankt voor de momenten dat je me net even de bevestiging gaf dat ik goed bezig was, als ik dat nodig had. En bedankt dat je jouw inhoudelijke expertise en jouw kijk op jongeren en werk met me hebt gedeeld en dat ik daarvan heb kunnen leren.

Ik wil ook graag Wilmar nog even nadrukkelijk bedanken. Tijdens mijn laatste jaar in Utrecht kwam ik door de gezondheidsproblemen van Veerle en de sabbatical van Roland in een situatie waarin ik nauwelijks begeleiding had. Ondanks je overvolle agenda heb je toen toch de rol van tweede promotor op je genomen van mijn promotieonderzoek. Het afgelopen jaar, toen ik al weg was uit Utrecht, ben je ook steeds betrokken gebleven bij het project en heb je regelmatig feedback gegeven op manuscripten. Ik waardeer het enorm dat je mij in die periode geholpen hebt en dat je als tweede promotor en co-auteur deel uit bent gaan maken van mijn proefschrift. Bedankt, Wilmar!

Elsi en Corine, voor jullie moet ik natuurlijk extra ruimte reserveren in dit dankwoord. Want jullie zijn niet alleen mijn roomies geweest, maar jullie zijn ook mijn paranimfen én inmiddels hele waardevolle vriendinnen geworden. Hoe onverwacht kunnen de dingen soms toch lopen. De eerste maanden toen we bij elkaar zaten op ons kamertje was de sfeer nou niet bepaald optimaal, maar hey: we did it! Ik ben de derde in ons rijtje die nu klaar is en we hebben het alle drie toch maar mooi voor elkaar gekregen. Elsi, wij waren natuurlijk wel een apart stel. Allebei lekker dominant en dus regelmatig stevig in de clinch die eerste maanden. Maar na dat goede

gesprek in het bos van Lunteren (of all places…) werd onze verstandhouding steeds beter. Ik heb je leren kennen als een onderzoeker waar ik naar op keek vanwege je krachtige uitstraling tijdens overleggen en presentaties, je inhoudelijke kennis en je gedrevenheid in alles wat je doet. Als persoon heb ik steeds meer gezien hoe ongelooflijk groot jouw hart is en ik bewonder je echt om de manier waarop je mij, en velen anderen die dichtbij je staan, altijd wilt helpen en ondersteunen. Ook de afgelopen maanden is dat eens te meer bevestigd, want je hebt me echt fantastisch geholpen bij de afronding van mijn proefschrift. Indienen bij de commissie? Elsi reserveert er een dag voor. Vraagje over de procedure? Binnen 10 minuten antwoord. We zijn dan wellicht geen ruziënd getrouwd stel meer, maar wel maatjes en dat betekent heel veel voor me. Bedankt Elsi, voor alles dat je voor me gedaan hebt. Corine, wat ben jij toch een ongelooflijk lief, zorgzaam en behulpzaam mens. Ik mis nog steeds onze vaste “how’s life/life is treating me very kindly” opening van de dag! Ik heb echt bewondering voor jou als professional en als mens. De zorgvuldige manier waarop jij altijd te werk ging vond ik inspirerend. Altijd op tijd voorbereid voor congressen, altijd ingelezen voor cursussen en ook altijd op de hoogte van analyses en onderzoeken. Maar ook als mens ben jij een bron van inspiratie. Je staat altijd klaar voor anderen, ook als je daarvoor jezelf weg moet cijferen. Je hebt altijd goede adviezen en je weet me steeds weer een spiegel voor te houden die me doet nadenken over andere perspectieven en inzichten. Zonder daarbij ooit te oordelen. Ik wil je heel erg bedanken voor al je goede raad, zowel qua werk als persoonlijk, en de vele fijne gesprekken. Lieve X-Roomies, lieve paranimfen, lieve vriendinnen. Ik had me echt geen betere kamergenootjes kunnen wensen en ik kan me geen promotie voorstellen zonder jullie. Ik hoop echt dat we onze etentjes en onze vriendschap nog lang in stand gaan houden, want jullie hebben echt een grote plek in mijn hart verworven de afgelopen jaren.

De volgende twee alinea’s gaan heel veel namen bevatten, dus maak je borst maar nat. Ik wil namelijk ook nog een aantal andere collega’s

bedanken die mij tijdens de tijd in Utrecht op allerlei manieren geholpen hebben bij het realiseren van dit proefschrift. Dat zijn natuurlijk sowieso de aio's die met hetzelfde doel aan het werken waren als ik: Maggie, Paris, Ilona, Gaby en Gerdientje. Mag, jouw oprechtheid en enthousiasme vind ik hartverwarmend. Ik heb bij jou altijd het gevoel dat ik mezelf kan zijn en "veilig" ben. Paris, jij zal als het goed is een week na mij je proefschrift verdedigen. Ik heb echt respect voor je doorzettingsvermogen en ik waardeer je oprechte interesse en vriendelijkheid. Ilona, bedankt voor je adviezen, je kritische blik en je statistische tips. Als je wilt, is er ongetwijfeld een prachtige loopbaan voor jou weggelegd als publicatiekanon! Geeb, mijn mede-hondenbezitter. Jij bent echt een "breath of fresh air" met je oprechtheid en je humor. Hou dat er vooral in! En natuurlijk ook Gerdientje, want jij hoorde er gewoon bij hoor! Je vriendelijkheid en vrolijkheid sieren je echt vind ik. Bedankt aio's, voor onze hele fijne tijd samen!

Ik kan natuurlijk niet iedereen gaan noemen (dat wordt wel erg langdradig), maar toch ga ik nog een paar mensen speciaal bedanken. Allereerst Maria. Formeel gezien hadden we weinig met elkaar te maken met betrekking tot mijn proefschrift, maar toch hebben we altijd een hele fijne samenwerking en een prettig contact met elkaar gehad. Je was altijd geïnteresseerd in mijn promotie, maar ook vooral in mij als mens. Het was fijn dat ik af en toe gewoon even mijn hart bij je kon luchten. Bedankt dat je zo'n fijn persoon bent! Ik wil ook Richta nog in het bijzonder bedanken. Je weet het misschien niet, maar ik heb al veel waardering voor je sinds je mij tijdens mijn studie geholpen hebt toen ik een cursus bij je volgde terwijl ik Pfeiffer had. Onze samenwerking is later in de vorm van collega's verder gegaan en we hebben jarenlang samengewerkt bij de cursus Conflicthantering. Ik heb die jaren als bijzonder prettig ervaren en het was een genot om met je samen te werken. Verder waren er natuurlijk ook nog Toon (een bron van inhoudelijke en statistische expertise), Lilianne (ComVa en Conflicthantering maatjes!), Fred (een bron van verrassende en waardevolle inzichten), Elianne (een fijne collega met veel kennis en kunde), Phil (altijd vriendelijk en behulpzaam), en alle andere collega's die in de loop van de jaren vertrokken zijn uit Utrecht.

Dankwoord

Bedankt allemaal voor de fijne samenwerking en voor de dingen die ik van jullie heb kunnen leren.

Dit proefschrift had nooit tot stand kunnen komen zonder de steun van en de samenwerking met een aantal organisaties. De eerste daarvan is de subsidiegever van dit project, Stichting Instituut GAK. Bedankt voor de financiële ondersteuning, maar ook voor de boeiende bijeenkomsten en het continue streven naar implementatie van de onderzoeken. Ook wil ik in het bijzonder mijn dank uiten aan ROC Landstede en Philips, de deelnemende organisaties aan de effectstudie van de CareerSKILLS interventie. Bij Landstede wil ik Ineke Wempe, Nicole Carbijn en Theo van Geffen bedanken voor het enthousiasme over de training en de energie en moeite die jullie die in de implementatie ervan hebben gestopt. Bij Philips bedank ik Frank Visser voor de prettige samenwerking en de grootschalige implementatie van CareerSKILLS in het WGP. Ook bedank ik graag het team aan WGP coördinatoren dat de training uitgevoerd heeft. Tot slot wil ik ook alle deelnemers aan de interviewstudie en focusgroepen bedanken: jullie input was een belangrijke start voor dit promotietraject!

Naast de deelnemende organisaties zijn er nog meer mensen betrokken geweest bij dit proefschrift. Ik wil graag de Master studenten bedanken die voor hun afstudeeronderzoek de ROC's in zijn gegaan en data hebben verzameld. Daarbij noem ik vooral Marthe Huibers voor de samenwerking bij de validatiestudie en Marike Scholten voor je wervingsinspanningen en je enthousiaste betrokkenheid bij het project tijdens je afstudeerfase. Ook wil ik de Conflicthantering stagiaires even noemen. Tom, Katja, Margo, Lisanne en Dennis: mede dankzij jullie waren de laatste maanden aan de UU extra leuk! Tof dat jullie ook nu, ruim een jaar later, nog steeds regelmatig interesse getoond hebben in mij en in het onderzoek.

Ook wil ik nog een paar mensen bedanken die me geholpen hebben met het tot stand komen van dit hele mooie boekje. Stefan: bedankt voor het opmaken, voor het rustig blijven beantwoorden van al mijn mailtjes (met AL die vragen!) en de adviezen die je daarbij had. Marianne

en Peter: het is echt jammer dat jullie niet bij de verdediging kunnen zijn. Ik ben heel blij dat jullie op het laatste moment nog konden helpen met de afbeeldingen van het proefschrift; bedankt daarvoor! En ook bedankt voor de vele tips en ondersteuning van jullie kant. Fijn dat jullie zo betrokken zijn geweest. Ik hoop dat we nog vaak samen pizza mogen gaan eten!

Tot slot in het rijtje met collega's en partners wil ik nog al mijn collega's aan de HAN bedanken, zowel de onderzoekers als de andere mensen in de "lob". Vanaf het moment dat ik in het Kenniscentrum ben komen werken, hebben jullie allemaal voortdurend interesse getoond in de voortgang van mijn promotieonderzoek. Het was fijn dat jullie zo betrokken waren en dat jullie me steeds motiveerden en steunden in de laatste fase. Bedankt!

Dacht je dat ik nu eindelijk klaar zou zijn? Think again! Ik kan mijn familie en vrienden niet overslaan natuurlijk. Ik begin met pa en ma. Als ik jullie voor alles moet bedanken dat jullie voor me gedaan hebben, dan wordt dit proefschrift wel héél erg lang. Jullie hebben me altijd fantastisch ondersteund, zowel tijdens mijn studie als de afgelopen jaren tijdens het promotieonderzoek. Ik kwam dan misschien niet altijd vaak genoeg langs (vooral volgens ma…), maar wat mij betreft zijn we de laatste jaren dichter naar elkaar toe gegroeid dan ooit. Jullie steun, interesse, vertrouwen en liefde zijn heel erg belangrijk voor me. Bedankt dat jullie altijd en onvoorwaardelijk voor me klaarstaan. Ik weet hoe trots jullie zijn dat ik dit proefschrift met succes heb afgerond. Ik hoop dat jullie ook weten dat ik ongelooflijk trots ben met jullie als ouders.

Wim en Mieke. Sarina en Nico. Larissa. Wat een prachtig jaar hebben we als familie achter de rug. Nu Wietze en Vajèn ook deel uit zijn gaan maken van onze familie, is die alleen nog maar mooier geworden. We spreken elkaar misschien niet dagelijks of wekelijks, maar ik weet dat jullie er altijd zijn als ik jullie nodig heb. Bedankt voor jullie liefde. Ik verheug me op ons weekendje in oktober en ik hoop dat we nog lang en vaak met elkaar gezellige etentjes kunnen plannen tijdens de feestdagen (en daarbuiten!).

Ook mijn schoonfamilie wil ik graag bedanken. Piet en Nel, het is fijn dat jullie voortdurend mee hebben geleefd en regelmatig de broodnodige

Dankwoord

“harten onder mijn riem hebben gestoken”. Jullie staan op allerlei fronten altijd voor mij/ons klaar, of dat nou gaat om het oppassen op de honden of om een uitgebreide maaltijd en een gezellig spel. En natuurlijk… die heerlijke stukken oude kaas! Paul en Nicole, ook jullie waren voortdurend geïnteresseerd en betrokken. Ik heb jullie steeds beter leren kennen de laatste jaren en daar ben ik heel blij mee. Nu Fleur (al wat langer) en Mees ook een vaste plek in de familie hebben verworven, is het alleen maar leuker en gezelliger geworden. Bedankt allemaal dat jullie me zo gesteund hebben! Ook Angelique wil ik graag nog bedanken. Het voelt door de situatie wat lastig om jouw naam in deze alinea te noemen, maar toch hoor je voor mij wel bij de schoonfamilie. We zien elkaar niet heel erg vaak, maar ik ben blij dat we nog wel regelmatig contact hebben en ik hoop dat dit ook zo mag blijven.

Beste lezer, wees gerust: ik ben nu echt langzaamaan richting afronding aan het schrijven. Ik stop echter niet voordat ik nog een aantal belangrijke vrienden en vriendinnen heb bedankt. En ik wil graag beginnen met Hel, Mel en Ber. Ik uit het niet vaak en duidelijk genoeg, maar laat ik het hier dan nog eens heel nadrukkelijk zeggen: jullie zijn echt heel erg belangrijk voor me. We kennen elkaar nu al zo lang en we zijn van stroeve collega’s (“waar ligt de chloor, in welk kastje en in welke hoek van welke plank?”) naar super goede vrienden gegroeid. De dansschool is voor mij een tweede thuis, een plek waar ik mijn grote passie kan uiten en een plek waar ik me in mijn element voel. Jullie spelen daarin een enorm belangrijke rol! Bedankt dat jullie me steeds met beide benen op de grond houden en dat jullie voor me door het vuur gaan als dat nodig is. Ook Michelle en Sandra, mijn twee maatjes, wil ik hier noemen. Mies, je woont dan al wel drie jaar aan de andere kant van de wereld, maar toen ik je een paar weken geleden weer zag voelde het nog net zo vertrouwd als voorheen. Jij bent en blijft voor altijd mijn bioscoopmaatje en al onze avonturen (touwtje spannen tussen onze appartementen…) en goede gesprekken zal ik nooit vergeten. Waar je ook woont, jij bent heel waardevol voor me! Dat geldt ook voor jou, San.

Dankwoord

Soms zien we elkaar een week niet, soms bijna een jaar. Maar we kennen elkaar nu al meer dan tien jaar en in die tijd is onze vriendschap heel erg gegroeid. Ik kan alles met je bespreken en het is altijd ontspannen en veilig met jou. Bedankt dat je mijn vriendinnetje bent!

Er zijn nog zoveel meer mensen die ik zou willen noemen, maar ik moet ergens een grens trekken natuurlijk. Wat ik nog wel belangrijk vind om te noemen, is dat er het afgelopen jaar een aantal “nieuwe” mensen in mijn leven zijn gekomen die steeds dichter bij me zijn komen te staan. Ik mag mezelf geloof ik officieel Clubhuis Member noemen (ik heb immers nog steeds de sleutel…) en dat voelt goed! Mark en Elsbeth, jullie zijn in hele korte tijd ontzettend goede en leuke vrienden geworden. Of we nou Arnhem onveilig maken, of ontspannen voetbal kijken: het is altijd goed. Beavis, Menno en Maroucha wil ik daarbij ook noemen: bedankt dat jullie ons zo snel accepteerden in de groep en dat het elke keer weer gezellig is. Ik kan niet wachten op ons weekendje Texel! Ook Pat (geen kennis, maar een vriend!) en Lin (ja, zelfs in dit proefschrift ga ik je naam afkorten!) wil ik nog noemen. We konden het altijd al goed met elkaar vinden, maar de laatste maanden zijn jullie “eigen” geworden. Dat we onze maandelijkse uitjes er nog maar lang in mogen houden!

Ik ga afsluiten met de persoon die de afgelopen jaren de allerbelangrijkste rol heeft gespeeld in mijn leven. Kirsten, ik prijs me elke dag weer gelukkig dat ik zo’n lieve, mooie, zorgzame en fijne vriendin heb als jij. De afgelopen maanden heb je het niet altijd even makkelijk met me gehad en je hebt aardig wat geduld op moeten brengen in de periode dat ik echt alleen nog maar aan het werk was (lees: onuitstaanbaar en chagrijnig tot laat achter de computer zat…). Toch heb je nooit geklaagd, maar je hebt steeds weer de rust en liefde gevonden om me te steunen en helpen waar en hoe je maar kon. Je bent mijn veilige haven, degene waar ik altijd en overal op terug kan vallen. Jouw onvoorwaardelijke liefde en steun zijn ongelooflijk belangrijk voor me geweest tijdens dit proces en daarvoor ben ik je heel erg dankbaar. Kersje, ik hou van jou!