



## Research Article

# Burnout, work engagement and workaholism among highly educated employees: Profiles, antecedents and outcomes



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## ABSTRACT

The present study examined the longitudinal profiles of burnout, engagement and workaholism among highly educated employees. First, the latent profile modeling indicated two latent classes: Engaged and Exhausted-Workaholic. Second, the results revealed that employees with the Engaged profile experienced high levels of energy and dedication, whereas employees with the Exhausted-Workaholic profile experienced exhaustion, cynicism and workaholism. Social pessimism in the transition from high education to work predicted poor subjective well-being at work. Further, workaholism decreased during the career among members of the Exhausted-Workaholic profile suggesting positive direction during career. Finally, Engaged employees experienced detachment and relaxation, life satisfaction and rewards.

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## 1. Introduction

The main aim of this longitudinal study was to identify different profiles of subjective well-being at work (i.e. burnout, work engagement and workaholism) among highly educated employees. We targeted this group of employees as their work fulfills the criteria proposed by the theory of work engagement and burnout: high education may increase work engagement when faced with emotionally challenging work (Xanthopoulou, Bakker, & Fischbach, 2013), and it may protect against risk of burnout (Ahola et al., 2004). As our theoretical framework, we applied the circumplex model of subjective well-being (SWB) at work (Bakker & Oerlemans, 2011) (see Fig. 1).

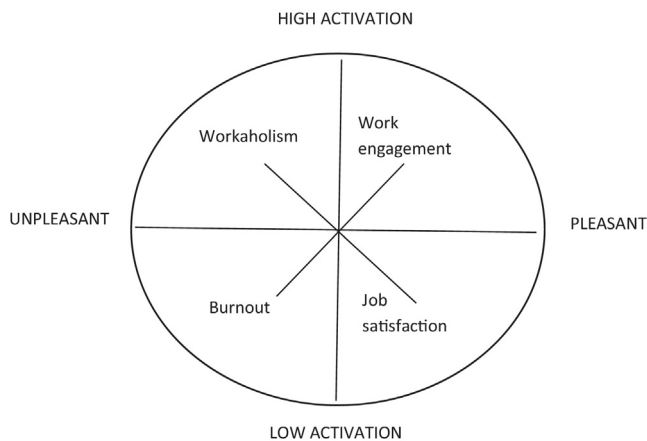
The majority of the existing research on burnout and work engagement has taken a variable-oriented approach (for example (Bakker, Demerouti, & Euwema, 2005; Freudenberger, 1974; Maslach, Leiter, & Schaufeli, 2009; Kahn, 1990)). The results of such studies have indicated, for example, that burnout (Hakanen, Schaufeli, & Ahola, 2008), and work engagement (Seppälä et al., 2009) are stable over time. However, a stability coefficient does not demonstrate dynamic developmental processes of work-related well-being over time, and it also fails to take into account inter-individual differences. A person-oriented approach,

in turn, assumes population heterogeneity with respect to the phenomenon of interest (here SWB at work) and changes in it (see (Laursen & Hoff, 2006a)). Such an approach may lend additional support to the theory of SWB at work by taking account diversity in SWB on the individual level by identifying different groups of employees who follow a similar pattern of development of SWB over time. A few previous studies have applied a person-oriented approach in the area of work and organizational psychology (Boersma & Lindblom, 2009; Mäkikangas, Feldt, Kinnunen, & Tolvanen, 2012; Feldt et al., 2013; Mäkikangas, Feldt, & Kinnunen, 2007). The present study contributes to the literature by adopting a person-oriented approach (Bergman & Trost, 2006; Laursen & Hoff, 2006b) in order to gain a deeper understanding of SWB at work on the individual level. Specifically, our aim was to identify the proportion of highly educated employees experiencing low activation and displeasure, and thus at the highest risk for severe burnout. Conversely, we expected to find employees who are engaged, highly activated and experiencing pleasure (Bakker & Oerlemans, 2011). By adding the impact of workaholism into the SWB profiles, we hoped to gain a deeper understanding of the role of all the factors relating to the different profiles of SWB at work, and so contribute to filling an important gap in the research literature.

The nature of the present study is explorative. Thus, we are cautious about precisely formulating potential longitudinal profiles or means, or possible mean changes in the SWB profiles (including the variables of simultaneous burnout, work engagement and workaholism) (Feldt et al., 2013). At the very least, we

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**Fig. 1.** A two dimensional view of work-related subjective well-being (adopted from Bakker and Oerlemans [Bakker & Oerlemans, 2011]). A simplified model.

expected to find heterogeneity in SWB at work in a sample of highly educated employees with diverse occupational and organizational backgrounds. Furthermore, we expected to find at least one longitudinal high-level work engagement profile (with simultaneous low-level burnout and low workaholism) (Bakker & Oerlemans, 2011) and one longitudinal high-level burnout profile (with simultaneous high level workaholism and low level work engagement), as examples of these have previously been found in the Finnish working population (for review see (Ahola et al., 2004; Kauppinen et al., 2012)). In accordance with the model of SWB at work (Bakker & Oerlemans, 2011), we expected workaholism to be higher in the profiles characterized by burnout, as employees who mainly experience negative emotions at work tend to suffer simultaneously from burnout and workaholism.

Finally, to deepen our understanding of the antecedents and outcomes of SWB at work, we examined the profiles obtained, first, with respect to achievement and social strategies in the transition from university to work, as antecedents of the emergent profiles. Second, we examined the profiles obtained with respect to recovery strategies, life satisfaction, rewards and sense of community as outcomes of the emergent profiles.

### 1.1. SWB at work

Traditionally, subjective well-being has referred to how an individual evaluates his or her life and well-being (Diener, Sandvik, & Pavot, 1991a). In line with the definition of the more recent circumplex model of SWB at work by Bakker and Oerlemans (Bakker & Oerlemans, 2011) (see Fig. 1) affective states of SWB at work arise along two continua: the pleasure–displeasure continuum and the high activation–low activation continuum. These affective states can be described as a linear combination of these continua, that is, of pleasure and activation (Russell, 2009). Consequently, the level of simultaneous activation and pleasure defines an employee’s SWB at work.

More specifically, in the circumplex model of SWB at work (Bakker & Oerlemans, 2011) (Fig. 1) the quadrant characterized by positive emotions and high activation is likely to result in work engagement, and the quadrant characterized by positive emotions and low activation is likely to result in job satisfaction. Further, the quadrant that is characterized by negative emotions and low activation is likely to result in burnout, and the quadrant characterized by negative emotions and high activation is likely to result in workaholism. In the present study we focused on the three quadrants (burnout, work engagement and workaholism) relevant for the present study. Although we adopted the SWB at work model

(Bakker & Oerlemans, 2011), we were not aiming to test the model itself. Instead, we adopted the model for the purpose of examining the SWB profiles, and thus we did not include the quadrant of job satisfaction in our study. The current view of work engagement and burnout on the basis of both Finnish and international studies is that positive and negative states of SWB at work represent different phenomena which employees can nevertheless experience simultaneously (Hakanen, Bakker, & Demerouti, 2005; Folkman, 2008; Schaufeli, Salanova, González-Romá, & Bakker, 2002).

#### 1.1.1. Work engagement as a positive form of SWB at work

Work engagement, defined as a positive work-related state of mind (Bakker & Demerouti, 2008), has been previously characterized either as the polar of burnout in the same continuum (Maslach et al., 2009) or as a conceptual opposite, i.e. an independent positive construct, negatively related to burnout (Schaufeli et al., 2002). To gain the best understanding of SWB at work, we examined work engagement as an independent three-dimensional positive construct (including energy, dedication, absorption), operationalized according to the definition by Schaufeli and his colleagues (Schaufeli et al., 2002). Energy refers to high levels of mental energy, dedication describes the cognitive dimension of work engagement, including a sense of meaningfulness and challenge, and absorption refers to being fully focused (Schaufeli et al., 2002) and deeply preoccupied in one’s work to the extent that it is difficult to stop working. Engaged employees are enthusiastic and energetic, involved and reasonably committed to their work. They put all their physical, emotional and mental energies into their work, and therefore are capable of optimal performance and feel positive emotions at work (Kahn, 1990; Gorgievski & Hobfoll, 2008). As a consequence, they work long hours, but feel pleasure (Aspinwall & Taylor, 1992) and are not addicted to work (Bakker & Demerouti, 2008).

#### 1.1.2. Burnout and workaholism as a negative form of SWB at work

Negative indicators of SWB at work include burnout and workaholism (Bakker & Oerlemans, 2011) (Fig. 1). The three-dimensional model of burnout comprises high levels of exhaustion and cynicism and a low level of professional efficacy (Maslach, Schaufeli, & Leiter, 2001). Exhaustion refers to the stress dimension of burnout and to a lack of mental energy; cynicism, the cognitive dimension of burnout, refers to negative attitudes toward one’s work and co-workers; and professional efficacy refers to one’s beliefs in one’s efficacy at work (Maslach & Leiter, 2008). Recently, increased research interest has been shown in workaholism, the other negative form of work-related well-being in the circumplex model of SWB (Hakanen & Schaufeli, 2012a). Workaholism is generally described as a tendency to work excessively hard (Oates, 1968; McMillan, O’Driscoll, Marsh, & Brady, 2001), and is marked by being obsessed with work and unwillingness to disengage from work (i.e. psychological dependence on work) (McMillan & O’Driscoll, 2004; Shimazu & Schaufeli, 2009). Workaholics have an extremely powerful desire to achieve (Mudrack, 2006; Mudrack & Naughton, 2001), and hence are unable to resist a compulsive need to work (Taris, Schaufeli, & Shimazu, 2010). In pursuit of achievement, workaholics expend a lot of energy on work without sufficient recovery (Sonnetag & Zijlstra, 2006; Porter, 2001). The most obvious characteristic of workaholics is an addiction to work, meaning that they tend to work harder than is required and reject other life contexts (Schaufeli, Taris, & Bakker, 2008). Berglass (Berglass, 2013) found workaholics’ lack of the capacity or willingness to engage in intimacy with others (i.e. a propensity to social pessimism). Thus, focusing on work may serve as an excuse to avoid participating in social functions at work. As a consequence they have poor relationship quality (Bakker, Demerouti, & Burke, 2009), and poor life satisfaction (Taris, Schaufeli, & Verhoeven, 2005).

## 1.2. The role of career stages in experiences of SWB at work

Career stage is of relevance in the longitudinal examination of highly educated employees' experiences of SWB at work. According to the life-span theory of motivation, individuals experience different developmental environments and tasks depending on their age (Havighurst, 1980). Havighurst (Havighurst, 1980), in his traditional theory of developmental tasks, proposed that coping with the tasks of a given life stage provides the basis for coping at the next life stage. Furthermore, in his theory of careers, Super (Super, 1990) showed that during different life stages individuals accomplish developmental tasks as part of their career decision-making process, and that success in these is related to their experiences of SWB at work. Career stages that have been identified are exploration (age 14–24), establishment (age 25–44), maintenance (age 45–60), and disengagement (age 61 or older) (Taris et al., 2005).

Many of the transitions in an individual's life course take several years to complete. For example, a career development trajectory typically includes decisions concerning education and the further career (e.g., (Nurmi, Salmela-Aro, & Koivisto, 2002)). It has been suggested that to gain a comprehensive understanding of the role of career stages in SWB at work, a long follow-up period is needed (see also (Mäkikangas et al., 2007)). Applying the circumplex model of SWB at work (Bakker & Oerlemans, 2011), we focused on the early career (i.e. establishment stage) and on the mid-career (i.e. maintenance stage). We assumed these career stages to be relevant for emerging burnout, work engagement and workaholism.

At the early career stage, young highly educated employees experience many developmental tasks, such as fitting in with the organization, learning the job, and pursuing their career goals. Simultaneously, they have other tasks, such as being a spouse and a parent (Super, 1990). Having many simultaneous tasks at this career stage may cause some young employees to experience burnout. Similarly, in pursuit of work-related achievements, some young employees may experience workaholism as a consequence of expending a lot of energy on work without sufficient recovery (Sonnetag & Zijlstra, 2006; Porter, 2001). It has been indicated that focusing excessively on work is related to a low level of SWB at work (Porter, 2001; Burke, 2000). However, some young employees may be able to cope well with developmental tasks of this career stage and hence experience of work engagement (Salmela-Aro & Nurmi, 2004). At the mid-career stage, in turn, highly educated employees are able to maintain work engagement by successfully accomplishing developmental tasks, such as work-related development – that is, determining the possibilities of this stage for further career plateauing – and high productivity. However, for some employees the developmental tasks of the mid-career stage and simultaneous early signs of their own obsolescence may induce experiences of burnout and another negative indicator of SWB, namely workaholism (Super, 1990; Greenhaus, Callanan, & Godshalk, 2009). Within this theoretical framework, we addressed the following research question:

Research question 1: What kinds of longitudinal burnout–work engagement–workaholism profiles can be identified in a sample of highly educated employees?

As already stated, because of the exploratory role of our main research aim, we were cautious about precisely formulating hypotheses on the number of longitudinal profiles. Similarly, we were not able to hypothesize means and possible mean changes in burnout, work engagement and workaholism in these yet-to-be-identified profiles. Since our sample comprises highly educated employees from diverse occupations and organizations, it is reasonable to expect heterogeneity in their experiences of SWB at work. We expected, first, to find at least one positive profile with

low risk for a highly educated employee's well-being, i.e. a profile of high work engagement, low burnout and only moderate workaholism. Furthermore, at least one high risk profile with high burnout and workaholism and low work engagement, was expected. Second, we expected the majority of the employees to report experiences of high engagement and a minority to suffer from a high level of burnout. These expectations are based on our sample, which consisted mainly of highly educated women (75%). The Finnish Health 2000 Study (Ahola et al., 2004) has previously reported that a high level of education may serve as protector against risk for burnout, especially for women. Furthermore, highly educated employees have been shown to have strong self-efficacy beliefs that, in turn, increase their engagement when faced with emotionally demanding tasks (Xanthopoulou et al., 2013). These expectations are also in line with previous empirical studies (for example (Pines, 1993)), according to which highly educated employees generally have experiences of supportive feedback and sense of control over their work, and as a consequence relatively high work engagement. Finally, these expectations are supported by both the Health 2000 Study (Ahola et al., 2004), which reported that some 20% of Finnish employees experience burnout, and the Study of Work and Health in Finland (Hakanen & Seppälä, 2013), which found that nearly 90% of Finnish employees experience engagement. Results on the prevalence of workaholism in Finland have not been published.

## 1.3. The role of achievement and social strategies in longitudinal SWB at work

Motivation has been thought to play an important role in individual well-being (Havighurst, 1980; Emmons & Kaiser, 1996; Mauno, Kinnunen, & Ruokolainen, 2007). The life-span models of motivation assume that the challenges, and opportunities individuals experience at particular developmental stages of their lives channel their perceptions over the life stage (van Heuvel, Demerouti, Schaufeli, & Bakker, 2010) and personal goals (Little, Salmela-Aro, & Phillips, 2007; Nurmi, 1992); these, in turn, influence the ways in which people direct their development (Brandtstädter, 1984), and are also related to SWB at work at the early career stage (Heckhausen, Chang, Greenberger, & Chen, 2013).

The cognitive and behavioral patterns that accompany adaptations to the different situations that arise in this process have been defined as cognitive and attributional strategies (Nurmi, Salmela-Aro, & Haavisto, 1995). These, in turn, can be divided into achievement and social strategies. Achievement strategies, further, can be subdivided into functional, task-focused strategies (i.e. achievement optimism) and support-seeking in achievement situations (i.e. achievement support strategy) (Nurmi et al., 1995), and dysfunctional, pessimistic avoidance strategies (i.e. achievement pessimism) (Nurmi et al., 1995; van Heuvel et al., 2010). Similarly, social optimism is defined by expectations of positive outcomes in social situations, whereas social pessimism is described by social avoidance (Eronen, 2000), and self-handicapping in social situations by social anxiety (Snyder, Smith, Augelli, & Ingram, 1985). Previous studies have shown that employees using optimistic strategies tend to have experiences of work engagement (Kahn, 1990; Salmela-Aro, Tolvanen, & Nurmi, 2009; Salmela-Aro, Tolvanen, & Nurmi, 2011), and strive directly for success on the basis of their high outcome expectations (Nurmi et al., 1995). Employees using pessimistic strategies, in turn, have low outcome expectations and experience anxiety in task-related and social situations (Nurmi et al., 1995); these lead to feelings of low activation and displeasure, and are related to poor well-being. Within this theoretical framework and based on previous findings, we set the following research question:



Research question 2: Do highly educated employees' longitudinal profiles of SWB at work differ in regard to their achievement and social strategies?

In seeking answers to this question, we focused on three achievement and three social strategies, namely achievement optimism, achievement pessimism and seeking achievement support in achievement situations, and on social optimism, social pessimism and self-handicapping in social situations. We expected, in light of the life-span theory of motivation (Little et al., 2007; Nurmi, 1992) and the theory of careers (Super, 1990), according to which higher expectations would be related to effective coping and well-being in the future, and lower expectations to poor coping and poor well-being. These expectations were in line with previous findings (Aspinwall & Taylor, 1992; Salmela-Aro et al., 2009) where frequent seeking of support, achievement optimism and social optimism were related to high levels of work engagement. Generally, optimistic people adjusted better to stressors and tended to experience work engagement (Scheier & Carver, 1992). Frequent use of achievement and social pessimism and self-handicapping in social situations, in turn, have been related to high burnout (Salmela-Aro et al., 2011). Furthermore, pessimistic social strategies are typical of workaholics, who have a propensity to neglect social relations in their lives (Berglass, 2013).

#### 1.4. SWB at work and recovery, life satisfaction, rewards and a sense of community as outcomes

We examined the outcomes of the profiles of SWB at work by examining the extent to which these profiles are related, first, to employee recovery strategies, second to life satisfaction, and finally to social areas of worklife such as experiences of rewards and sense of community.

Recovery has been seen as an important variable in a hypothetical causal string of events between the development of work-related stress and experiences of psychological overload in the longer run (Sluiter, van der Beek, & Frings-Dresen, 1999). According to the theory of chronic stress and accumulated fatigue, chronic stress can lead to lack of recovery strategies (McEwen, 1998). Employees' recovery strategies are characterized by individual experiences of psychological detachment, relaxation, control, and mastery. Psychological detachment refers to the regulation of one's leisure time (Sonnentag, Kuttler, & Fritz, 2010); relaxation refers to managing work engagement through positive ways of relaxation, such as reading a book; mastery refers to managing off-job activities (Fritz & Sonnentag, 2006) by such means as learning new skills during leisure time (Sonnentag & Fritz, 2007); and control refers to the extent to which employees are able to choose and make decisions of leisure time, for example to participate in the course and to overcome the impulse to be lazy at home. Psychological detachment from work and relaxation after work has been shown to be important for employees' recovery (Sonnentag & Fritz, 2007). Previously, poor psychological detachment has been shown to be associated with exhaustion, and mastery with work engagement (Siltaloppi, Kinnunen, & Feldt, 2009).

As already stated, coping with career-related tasks may challenge employees' well-being and existing experiences of working life (Karasek & Theorell, 1990). Thus, working environments may predict the level of SWB at work, which in turn may predict subsequent experiences of working environments (Bakker, Albrecht, & Leiter, 2011). Theoretically and according to the previous results (for example (Mäkikangas et al., 2007; de Lange, Taris, Kompier, Houtman, & Bongers, 2005a; Salanova, Bakker, & Llorens, 2006)), we expected the process of SWB and environments at work to be reciprocal rather than uni-directional. For example, depressive employees with poor SWB have perceived their working

environment negatively as a consequence of applying the negative perceptual cycle, known as the "gloomy perception mechanism." In contrast, employees with high levels of engagement and comfort might report positively on their working environment by implementing the positive perceptual cycle, known as the "rosy perception mechanism" (de Lange, Taris, Kompier, Houtman, & Bongers, 2004). Engaged employees thus optimize their work environment (i.e. job crafting) (see (Bakker, 2011; Tims & Bakker, 2010)). In line with this notion, an association between SWB at work and positive outcomes has been indicated in a study applying the circumplex model of SWB at work (Bakker & Oerlemans, 2011).

Studies on the simultaneous role of different social areas at work are rare (for an exception, see (Leiter & Maslach, 2003; de Lange, Taris, Kompier, Houtman, & Bongers, 2005b)). To shed more light on social areas in working environments among highly educated employees, we focused on rewards and sense of community. Rewards include positive feedback from other people as well as personal satisfaction at work (Richardson, Burke, & Leiter, 1992). Community, in turn, refers to the overall quality of social interaction at work, and thus includes interpersonal relationships in the organization (with supervisors, colleagues and subordinates) and social support (Leiter & Shaughnessy, 2006).

Within this theoretical framework and previous findings, we set the following research question:

Research question 3: Do employees whose longitudinal profiles of SWB at work are different also differ with respect to recovery strategies, life satisfaction, and social areas of worklife, such as rewards and sense of community, during the mid-career stage?

We expected that employees experiencing a high level of work engagement and a low level of burnout and workaholism would be more likely to experience functional recovery strategies, and a high level of life satisfaction (Hakanen & Schaufeli, 2012a; Karasek & Theorell, 1990). Further, in light of the SWB at work model (Bakker & Oerlemans, 2011), we expected that membership of the profile with high work engagement would predict a high level of life satisfaction (Hakanen & Schaufeli, 2012a; Hakanen & Schaufeli, 2012b; Hayes & Weathington, 2007), whereas coping successfully at one career stage would predict a high level of subjective well-being. These expectations are in line with the traditional SWB model (Diener, Sandvik, & Pavot, 1991b), where relations between high SWB and life satisfaction as well as happiness were observed. Finally, these expectations arose from the traditional assumption of the importance of work in defining one's identity. Thus, when experiences of work are out of balance because of poor SWB at work, a negative spillover effect on the individual's life overall, i.e. poor life satisfaction, can be expected (Kantak, Futrell, & Sager, 1992).

According to the traditional notions (Lee & Asfort, 1993), we expected that in emotionally demanding jobs, such as in jobs in teaching and jobs with demanding social relations, as is the case in our study, significant relationships might emerge between the SWB profiles and social factors in the work environment. We expected that employees with a high level of work engagement and a low level of burnout and workaholism would experience more rewards, and a stronger sense of community (Kahn, 1990; Bakker et al., 2011; de Lange et al., 2005b; Rice, 1984) than employees with a high level of burnout (i.e. "gloomy perception mechanism", low activation and displeasure) (see Fig. 1).

## 2. Method

### 2.1. Participants and procedure

This study is part of the ongoing Helsinki Longitudinal Student Study (HELS) (1991–), with an original sample of 292

university students (77 men, 215 women). We used three measurement points. Profiles of SWB at work were measured at two measurement points, at the early career stage, at Time 2 (year 2005), and at the mid-career stage, six years later, at Time 3 (year 2011). All the respondents available at Time 2, when the SWB profiles were contacted (year 2005), 161 (40 men, 121 women; (age 32–39 years); 54.8% of original sample), were included in the present study. The same participants were examined using the Mplus estimating procedure for missing values at Time 3 (year 2011) (125 of the participants were the same at both measurement points).

The antecedents of membership of the different SWB profiles were measured at the point of transition from university to early career at Time 1 (year 2001), when the participants filled in the Strategy and Attribution Questionnaire (SAQ) (Nurmi et al., 1995). Subsequently, at Times 2 and 3, the participants filled in the Work engagement (Schaufeli et al., 2002; Kantak et al., 1992), Work Burnout (Maslach & Jackson, 2007), and Workaholism (Robinson, 1999) questionnaires. At Time 3 (year 2011), the participants also filled in the Recovery Strategy, Areas of Work Life, and Life Satisfaction questionnaires.

During their career, 75% of the participants worked in the public sector – in universities, the civil service, and municipalities – and the remaining 25% in private sector organizations. More specifically, at Time 2, the largest proportion (22.3%) were teachers or researchers, mainly in the humanities and social sciences disciplines, while the rest worked in various other fields, such as social work. Women were overrepresented (75% of the sample at Time 2 when the first profile measurements were conducted). Subordinate positions were occupied by 76.3% and managerial positions by 23.7%; 71.3% felt that their education was appropriate for their current job.

## 2.2. Attrition analysis

Attrition analysis indicated that the final sample ( $n=161$ ) did not differ in gender from non-respondents ( $n=131$ ). Of those who dropped out during the transition from university to work, three had died, five refused to participate, 30 had an unknown address and 12 had moved abroad. The other participants who dropped out of the study had shown less progress during their last university years than those who continued to participate ( $M=22.85$ ,  $SD=14.11$ ;  $t(297)=-3.35$ ,  $p<.001$ ). The participants in the final sample at Times 2 and 3 ( $n=161$ ) did not differ from those who left the study after T1 ( $n=313$ ) in gender [ $\chi^2(1)=1.095$ , ns] or age [ $t(314)=-.378$ , ns]. The participants in the final sample were less prone to social optimism than those who left the study after T1 [ $t(188)=-2.134$ ,  $p<.05$ ]. No significant differences emerged between the final sample and those who left the study after T1 to exhaustion [ $t(165)=1.584$ , ns], cynicism [ $t(162)=1.010$ , ns], or professional efficacy [ $t(163)=1.338$ , ns]. Work engagement and workaholism were not measured at T1.

## 2.3. Measures

Burnout was assessed with the revised Maslach Burnout Inventory – General Survey (MBI-GS) (Maslach & Jackson, 2007). The scale includes 3 questions related to exhaustion (e.g., ‘I feel emotionally drained from my work’), 3 questions on cynicism (e.g., ‘I have become more cynical about whether my work contributes anything’), and 3 questions on professional efficacy (e.g., ‘At my work, I feel confident that I am effective at getting things done’) to be answered on a Likert-type scale from 0 (never) to 6 (daily). The items from the original scale were as follows: exhaustion 1, 2, 3 (factor loadings .92, .85, .86); cynicism 8, 14, 15 (factor loadings .76, .79, .83); and professional efficacy 5, 12, 16 (factor loadings .72, .85, .80). The construct validity of the revised MBI-GS was

good and the model fitted the data well:  $\chi^2(23)=23.562$ ,  $p=.428$ , CFI = 1.00, TLI = 1.00, RMSEA = .012, SRMR = .03 (Muthén & Muthén, 1998–2012; Muthén, 2004). Exhaustion correlated significantly with cynicism ( $r=.38$ ,  $p<.001$ ), and professional efficacy ( $r=-.21$ ,  $p<.01$ ). Cynicism correlated significantly with efficacy ( $r=-.30$ ,  $p<.001$ ). Internal consistencies (Cronbach’s alpha  $\alpha$ ) are presented in Table 1. All the  $\alpha$  values met the criterion of .70 (Nunnally & Bernstein, 1994). The consistency of the scale over time was shown by  $\alpha$  values, the levels of which were good at both measurement points.

Work engagement was assessed with the revised Finnish version of the Utrecht Work Engagement Scale (UWES) (Schaufeli et al., 2002; Schaufeli, Bakker, & Salanova, 2006). The UWES-9 has been shown to have good construct validity and rank-order stability in a recent Finnish study (Seppälä et al., 2009). The scale includes 3 questions related to vigor (e.g., ‘At my work, I feel bursting with energy’), 3 questions regarding dedication (e.g., ‘I find the work that I do full of meaning and purpose’), and 3 questions on absorption (e.g., ‘When I am working, I forget everything else around me’) to be answered on a Likert-type scale from 0 (never) to 6 (daily).

Workaholism was assessed with 4 questions adopted from the Work Addiction Risk Test (Robinson, 1999). Two questions measured working excessively (‘I seem to be in a hurry and racing against the clock’, ‘I stay busy and keep many irons in the fire’), and two measured compulsion tendency (‘I feel guilty if I don’t work all the time’; ‘I find myself continuing to work after my coworkers have stopped working’). The questions were rated on a Likert-type scale from 0 (never) to 6 (daily) (factor loadings .99, 1.00, 1.00, .99). The construct validity of the scale was excellent:  $\chi^2(2)=.322$ ,  $p=.852$ , CFI = 1.00, TLI = 1.00, RMSEA = .00, SRMR = .00 (McEwen, 1998; Siltaloppi et al., 2009). The internal consistency, convergent validity and discriminant validity of the measurement (five items both) have been shown previously. Furthermore, the two-factor structure has shown good fit to the data in other cultural contexts (Schaufeli, Shimazu, & Taris, 2009).

Achievement and social strategies were assessed with the extended Strategy and Attribution Questionnaire (SAQ) (for details, see (Nurmi et al., 1995)). The participants were asked to rate statements on a 4-point Likert-type scale (1 = strongly agree, and 4 = strongly disagree). Achievement optimism was measured with 5 items (e.g., ‘When I get ready to start a task, I am usually certain that I will succeed in it’), achievement pessimism with 6 items (e.g., ‘What often happens is that I find something else to do when I have a difficult task in front of me’), and social support strategy with 7 items (e.g., ‘When things don’t function, it is better to talk with your partners’). Social optimism was measured with 4 items (e.g., ‘In most cases, I feel I get along well with other people’), social pessimism with 5 items (e.g., ‘I often have more important things to do than spend time with my colleagues’), and self-handicapping with 4 items (e.g., ‘I often avoid group situations and I’d rather be alone or together with one person at a time’).

The items for rewards and a sense of community were drawn from the Areas of Worklife Survey (AWLS) (Leiter & Maslach, 2003). In the present study, these were 28 and 29 for rewards (e.g., ‘My work is usually noticed’) and 31 and 33 for sense of community (e.g., ‘I am a member of a supportive team’), which characterize the social dimensions of work environments. Respondents indicated their degree of agreement with these statements on a 5-point Likert-type scale from 1 (strongly disagree) to 5 (strongly agree). The factor loadings for rewards were .75, .69, and for sense of community .88, .54. The inter-item correlations were good for both rewards ( $p<.001$ ), and sense of community ( $p<.001$ ).

Recovery strategies were assessed by the revised version of the Recovery Experience Questionnaire (Sonnentag & Fritz, 2007). Each type of recovery strategy was measured by two items: e.g., ‘I distance myself from my work’ (detachment), ‘I spend time

**Table 1**  
The descriptives of the study variables ( $N = 161$ ).

Variable items	Number of	Range	Mean (SD)			Cronbach's alpha		
			T1	T2	T3	T1	T2	T3
Social support	6	1–4	3.19 (.40)	–	–	.85	–	–
Achievement pessimism	6	1–4	1.81 (.54)	–	–	.75	–	–
Achievement optimism	4	1–4	3.55 (.43)	–	–	.81	–	–
Self-handicapping	5	1–4	2.49 (.48)	–	–	.81	–	–
Social pessimism	5	1–5	2.41 (.60)	–	–	.85	–	–
Social optimism	5	0–6	3.14 (.61)	–	–	.83	–	–
Workaholism	4	0–6	–	3.50 (1.34)	3.32 (1.32)	–	.80	.84
Exhaustion	3	0–6	–	2.29 (1.32)	2.04 (1.39)	–	.86	.89
Cynicism	3	0–6	–	1.90 (1.38)	1.66 (1.46)	–	.75	.79
Professional efficacy	3	0–6	–	4.55 (1.12)	4.55 (1.12)	–	.70	.74
Vigor	3	0–6	–	4.15 (1.13)	4.15 (1.13)	–	.83	.83
Dedication	3	0–6	–	4.06 (1.28)	4.30 (1.24)	–	.87	.90
Absorption	3	1–5	–	4.17 (1.10)	4.71 (1.07)	–	.74	.78
Rewards	2	1–5	–	–	2.75 (3.72)	–	–	.72
Community	2	1–5	–	–	3.78 (1.03)	–	–	.81
Detachment	2	1–5	–	–	3.67 (.87)	–	–	.60
Mastery	2	1–5	–	–	2.92 (.94)	–	–	.71
Relaxation	2	1–5	–	–	3.62 (.89)	–	–	.71
Control	2	1–5	–	–	3.39 (1.14)	–	–	.90
Life satisfaction	2	1–5	–	–	5.03 (1.32)	–	–	.84

relaxing' (relaxation), 'I seek out intellectual challenges' (mastery), and 'I take care of things the way that I want them done' (control). Participants were asked to rate the statements on a 5-point Likert-type scale ranging from 1 (totally disagree) to 5 (totally agree). Factor loadings for control were .92, .88, for mastery: .86, .65, for detachment .57, .79, and for relaxation: .70, .80. The construct validity of the scale was moderate:  $\chi^2(14) = 33.571, p = .002$ , CFI = .953, TLI = .905, RMSEA = .088, SRMR = .045 (Muthén & Muthén, 1998–2012; Muthén, 2004). Although the  $p$ -value was  $<.05$ , all the other goodness-of-fit-values showed that the model fitted the data well. Detachment correlated with mastery ( $r = .24, p < .01$ ), relaxation ( $r = .43, p < .001$ ), and control ( $r = .25, p < .01$ ). Mastery correlated with relaxation ( $r = .36, p < .001$ ) and control ( $r = .37, p < .001$ ), and relaxation correlated with control ( $r = .59, p < .001$ ). All the  $\alpha$ -values, except detachment, met the criterion of .70 (Nunnally & Bernstein, 1994). The  $\alpha$  value for detachment was at a moderate level. Moreover, the inter-item correlations for separate variables were good ( $p < .001$ ).

Life satisfaction was assessed by the Satisfaction with Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985). The scale comprises 5 questions (e.g., 'The circumstances in my life are excellent') to be answered on a 5-point Likert-type scale ranging from 1 (totally disagree) to 5 (totally agree).

#### 2.4. Analytical strategy

Employees with similar longitudinal profiles of burnout, workaholism, and work engagement were identified by using Latent Profile Analysis (LPA) (Vermunt & Magidson, 2003), applying the missing data method, where the program estimates the values of the participants from Time 2 at Time 3. The estimation method used was maximum likelihood performed by Mplus program version 5.21 (Muthén & Muthén, 1998–2012). LPA analysis is a type of finite mixture analysis that seeks to identify the smallest number of homogenous latent classes (profiles) that adequately describe the associations among the observed continuous variables (burnout, work engagement, workaholism (Muthén, 2004). The advantage of LPA over traditional cluster analysis is that it is model-based and permits the use of statistical criteria for deciding the number of latent classes for the core indicators of the SWB at work model. The estimation was performed step by step, starting from the one-class solution to estimate the parameters for 2, 3, ...,  $k$ -class solutions (Feldt et al., 2013). To ensure the validity of each class solution, a

large set of random starting values (500) for the parameters were used in the present study.

The Bayesian Information Criterion (BIC), Bootstrapped Likelihood Ratio Test and classification quality test (Entropy) – as implemented in the Mplus statistical program – were used as the statistical criteria for choosing the best-fitting model. Models with a lower BIC value and higher Entropy value fit the data better. Changes in burnout, workaholism and work engagement between measurement points were measured by multivariate analyses of covariance (MANCOVA) for repeated measures. Using the SPSS 16 and PASW Statistics 18 programs, we examined whether the latent classes would differ in background factors (gender and age). In the attrition analysis, either the chi-squared test or  $t$ -test was used. The bivariate logistic regression analysis of the PASW 18 program was used, first, to examine achievement and social strategies at Time 1 as antecedents of the longitudinal SWB profiles, and second to analyze associations between achievement and social strategies (at Time 2 and at Time 3) and the longitudinal SWB at work profiles. Multivariate analysis of covariance (MANCOVA) was used to analyze the differences between the longitudinal SWB profiles in, first, recovery strategies, second, life satisfaction, and, third, rewards and sense of community (at Time 3).

### 3. Results

Design of the study is presented in Fig. 2. Descriptive information on all the study variables (number of items, ranges, means, standard deviations, reliabilities) are shown in Table 1. Table 2 reports the tested latent class solutions for the longitudinal patterns of burnout, work engagement and workaholism included in the LPA analysis (see also Appendix A). The fit indices did not support the one-class solution as compared to multi-class solutions. We compared the profiles of the different latent multi-class solutions and found theoretically meaningful patterns that remained unchanged in their content in most of the multi-class solutions (i.e. solutions with 2–4 classes).

With respect to the fit indices (see Table 2), the BIC value supported the two-class solution. Entropy was very good (.94) in the two-class solution, indicating that the two-class model provides a clear classification. On the basis of the above-described stability of the patterns as well as the information provided by the fit indices, we decided to choose a two-class solution for our subsequent analyses. We made this choice for four reasons: first, the two-class



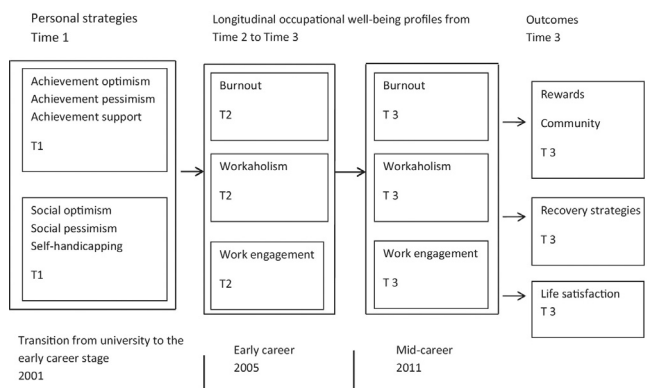


Fig. 2. Design of the study. T1, Time 1; T2, Time 2; T3, Time 3.

solution included the theoretically meaningful SWB profiles, which remained unchanged in all the multiclass solutions; second, unlike the three- and four-class solutions, the two-class solution did not produce several profiles with few members; third, the two-class solution produced theoretically justified profiles; and fourth the average latent class probabilities for the most likely latent class membership by latent class showed good levels. The two-class solution, containing two SWB profiles, is shown in Table 2. Profile 1 represented the low-risk profile. The participants in this profile 1 ( $n = 136$ ; 84%) reported high work engagement and professional efficacy, low cynicism and moderate workaholism. The participants in the profile 2 ( $n = 25$ ; 16%) reported high exhaustion, low energy and rather high workaholism. In both profiles, the employees reported high levels of professional efficacy and absorption. These two SWB profiles were labeled Engaged and Exhausted-Workaholic.

The means and mean changes for exhaustion, cynicism, professional efficacy, energy, dedication, absorption and workaholism in the two longitudinal SWB profiles are shown in Table 3. Significant and stable differences between the profiles were found in the means of exhaustion, cynicism, energy, dedication, and workaholism. A significant profile  $\times$  time interaction was observed for workaholism; decreasing workaholism was found in the Exhausted-Workaholic profile.

Table 2 Fit indices for the longitudinal occupational well-being (burnout, work engagement, workaholism) with different numbers of latent classes (latent profile analyses).

No. of classes	LogL	BIC	Entropy	BLRT	Latent class proportions n (%)
1	-4824.92	10,005.54	-	-	161 (100)
2	-4778.39	9988.70	.94	.00	136 (84)/25 (16)
3	-4746.75	10,001.63	.82	.00	85 (53)/61 (38)/15 (9)
4	-4717.94	10,002.24	.86	.00	84 (52)/53 (33)/15 ((9)/9 (6)

Notes: BIC = Bayesian Information Criterion; BLRT = Parametric Bootstrapped Likelihood Ratio Test.

Table 3 Changes in burnout, engagement and workaholism according to two longitudinal occupational well-being profiles, using multivariate analyses of covariance (MANCOVA) for repeated measures (gender and age were controlled for).

	Engaged ( $n = 136$ ) M (SE)		Exhausted-Workaholic ( $n = 25$ ) M (SE)		Pattern differences F	Time effect F	Pattern $\times$ Time F
	T2	T3	T2	T3			
Exhaustion	1.98 (.10)	1.71 (.12)	4.53 (.22)	4.07 (.26)	153.48***	1.21 ns	.31 ns
Cynicism	1.64 (.12)	1.55 (.15)	3.93 (.26)	3.54 (.32)	76.93***	1.62 ns	.49 ns
Professional efficacy	4.56 (.11)	4.16 (.12)	4.59 (.23)	4.18 (.26)	3.28 ns	.23 ns	.01 ns
Energy	4.35 (.11)	4.41 (.11)	3.09 (.24)	3.28 (.24)	27.11***	1.36 ns	.30 ns
Dedication	4.30 (.12)	4.33 (.12)	2.63 (.24)	3.05 (.24)	32.89***	1.95 ns	.28 ns
Absorption	4.24 (.11)	4.70 (.12)	3.94 (.27)	4.42 (.26)	1.27 ns	.01 ns	.22 ns
Workaholism	3.42 (.14)	3.17 (.13)	4.61 (.30)	4.01 (.28)	13.30***	18.95***	13.30***

\*\*\*  $p < .001$ .

Table 4 The results of binary logistic regression analyses (with Exhausted-Workaholic profile as the reference category) in the years 2001, 2005 and 2011 (final models).

Achievement and social strategies	$\beta$ (SE)	OR (95% CI) Exhausted-Workaholic $n = 25$ (16%)
Social pessimism 2001	1.52 (0.67)	4.56* (1.24, 16.77)
Achievement optimism 2005	-1.31 (0.55)	.27* (0.09, 0.79)
Achievement optimism 2011	-1.27 (0.48)	.28** (0.11, 0.72)

Notes: OR = odds ratio, CI = confidence interval.

\*  $p < .05$

\*\*  $p < .01$ .

The chi-squared tests revealed no significant differences between the SWB profiles in either employees' reports regarding the appropriateness of their education for their current job (options Yes or No) [ $\chi^2(1, N = 161) = 0.01, ns$ ] or gender [ $\chi^2(1, N = 161) = 0.01, ns$ ]. Independent samples  $t$ -test revealed no age differences between the SWB at work profiles [ $t(159) = -1.09, ns$ ].

### 3.1. Achievement and social strategies as antecedents of SWB at work profiles

The results revealed that (Time 1) social pessimism in the final model, determined by bivariate logistic regression analysis, was a significant antecedent of membership of the Exhausted-Workaholic profile. To examine the role of achievement and social strategies from early to mid-career, we analyzed the simultaneous associations between achievement and social strategies and the SWB profiles at the early career and at the mid-career stages. The results showed that achievement optimism was negatively associated to membership of the Exhausted-Workaholic profile and supported membership of the Engaged profile at the early career stage, at Time 2, and at the mid-career stage, at Time 3, in the final model (Table 4).

### 3.2. SWB at work and recovery strategies, life satisfaction, rewards, and sense of community

At Time 3, of the four recovery strategies, the longitudinal SWB profiles showed significant differences in, first, psychological detachment and relaxation (Table 5). The employees in

**Table 5**

Mean differences in recovery strategies, experiences of rewards, sense of community and life satisfaction between the two longitudinal occupational well-being profiles using multivariate analyses of covariance (MANCOVA) (gender and age were controlled for).

	Engaged ( <i>n</i> = 136) <i>M</i> (SE)	Exhausted-Workaholic ( <i>n</i> = 25) <i>M</i> (SE)	<i>F</i> -test	Partial $\eta^2$
Detachment	3.79 (.82)	3.28 (.80)	9.505**	.05
Relaxation	3.73 (.83)	3.25 (.88)	6.43*	.04
Mastery	2.97 (.89)	2.58 (1.14)	3.13 ns	.02
Control	3.48 (1.14)	3.20 (1.25)	1.20 ns	.01
Rewards	3.56 (.87)	2.93 (1.12)	8.13**	.06
Community	3.84 (1.00)	3.45 (1.12)	2.50 ns	.02
Life satisfaction	5.05 (1.20)	4.20 (1.64)	7.18**	.06

\*  $p < .05$ .

\*\*  $p < .01$ .

the Engaged profile, i.e. the low-risk profile, reported more psychological detachment and relaxation than those in the Exhausted-Workaholic profile, i.e. the high-risk profile. Experiences of mastery and control, however, did not differ between the two longitudinal SWB profiles. Second, the employees in the Engaged profile reported significantly more life satisfaction, and experiences of rewards than those in the Exhausted-Workaholic profile. Experiences of sense of community, in turn, did not differ between the two SWB profiles.

#### 4. Discussion

This study contributes to the previous studies (e.g., (Mäkikangas et al., 2007)) by utilizing a person-oriented approach, a follow-up period of six-years (the profiles), and data gathered in two waves among highly educated Finnish employees to identify longitudinal profiles of SWB at work (simultaneous burnout, work engagement, workaholism). Academically highly educated employees formed our target group, since work requiring higher education is regarded as not only as challenging (Bakker et al., 2005) but also as engaging (Seppälä et al., 2009). High education may, furthermore, increase work engagement (Xanthopoulou et al., 2013), and protect against risk of burnout (Ahola et al., 2004).

The results showed heterogeneity in the levels of, and changes in highly educated employees' SWB at work. The three quadrants (burnout, work engagement and workaholism), relevant to our aims, were included simultaneously in the LPA analysis. Overall, in line with the circumplex model of SWB at work (Bakker & Oerlemans, 2011), we expected to differentiate at least two clear longitudinal SWB profiles among highly educated employees: one low risk profile characterized by high work engagement (energy, dedication, absorption), and one high risk profile characterized by high burnout (exhaustion, cynicism, low professional efficacy) and high workaholism. Further, the achievement and social strategies of the participants had been examined during their transition from high education to early career, four years before the first analysis of their profiles of SWB at work. This had been done in order to reveal the role of achievement and social strategies as antecedents of their subsequent membership of different profiles of SWB at work. The simultaneous associations of achievement and social strategies with membership of the SWB profiles during the career were also analyzed. Furthermore, at the mid-career stage, the outcomes of membership of the two SWB profiles were examined.

First, we found as expected, the longitudinal paths of SWB at work from early to mid-career. Two distinctive profiles of SWB at work were observed: an Engaged profile (84% of employees) and an Exhausted-Workaholic profile (16% of employees). Second, the deployment of social pessimism in the transition from education

to work anticipated membership of the longitudinal Exhausted-Workaholic profile, while achievement optimism during the career was negatively associated with membership of the Exhausted-Workaholic profile, and linked to the Engaged profile. Finally, as outcomes of the two profiles, the Engaged employees experienced higher levels of psychological detachment and relaxation, rewards, and life satisfaction than their Exhausted-Workaholic counterparts.

##### 4.1. Profiles of SWB at work from early to mid-career

Examining SWB profiles according to sub-dimensions of burnout and work engagement, provided important new knowledge of heterogeneity in SWB profiles. The results contributed to the circumplex model of SWB at work and showed longitudinally that frequent positive emotions and fewer negative emotions, typical of work engagement, indicated membership of the Engaged profile. These employees were in activation state in regard to high engagement, low burnout and moderate workaholism. The Engaged profile was characterized by high energy and dedication. Frequent negative emotions and fewer positive emotions, on the contrary, tend to be related to the Exhausted-Workaholic profile. The Exhausted-Workaholic profile was observed as a risk profile in terms of experiences of displeasure; characterized by high exhaustion, cynicism and a high level of workaholism. This result was in line with our expectations and with previous findings indicating that highly educated employees are likely to be classified in the Engaged profile (Xanthopoulou et al., 2013), and are likely to be work-engaged and committed to their organizations (Boersma & Lindblom, 2009; Pines, 1993). This result was in line with general findings on burnout and work engagement in Finnish working population (Ahola et al., 2004; Hakanen & Seppälä, 2013). One reason for the inclusion in the Engaged profile of the majority of the present sample of highly educated employees might also be their high level of education, as this may help them to pursue appropriate goals and maintain adaptive coping at different stages of their careers (Salmela-Aro & Nurmi, 2004; Nurmi et al., 1995; van Heuvel et al., 2010).

Interestingly the two profiles detected in the present study were quite the opposite of each other. When measuring burnout and work engagement simultaneously with separate measurements, exhaustion and cynicism, the indicators of burnout (Maslach & Leiter, 2008), were at a high level in the Exhausted-Workaholic profile, and at a low level in the Engaged profile. In the Engaged profile, in turn, energy and dedication were high and in the Exhausted-Workaholic profile they were low. Professional efficacy and absorption were at the same level in both profiles, which may suggest that they are more independent factors in subjective well-being (see (Maslach & Leiter, 2008)). According to the perspective of Maslach et al. (Maslach et al., 2009), low scores on exhaustion and cynicism, and high scores on efficacy, would be indicative of job engagement in the burnout–work engagement continuum. It would be interesting to examine the SWB profiles in future studies from the perspective of the burnout–engagement continuum proposed by Maslach et al. (Maslach et al., 2009). It has been suggested that the practical significance of the burnout–work engagement continuum is that, when measuring occupational well-being among employees, work engagement represents a goal requested by applicants for burnout interventions (Maslach et al., 2009).

Noteworthy significant differences in the levels of absorption and professional efficacy between the longitudinal Engaged and Exhausted-Workaholic profiles were not observed in the present study. The levels of absorption and professional efficacy were rather high in both profiles. This result supported the theoretical framework (Schaufeli et al., 2002; Oates, 1968; McMillan et al., 2001),



according to which high absorption in work could be a factor in both high and poor SWB at work (i.e. related to burnout, work engagement, and workaholism (Bakker & Oerlemans, 2011), and that professional efficacy and absorption could represent more independent factors in subjective well-being (Maslach & Leiter, 2008; Schaufeli et al., 2006). This result may also further support the view that the role of education in SWB at work is important. Further, a favorable change in the experience of workaholism was observed among those in the Exhausted-Workaholic profile from early to mid-career. At the beginning of their career, some young highly educated employees experienced a high level of workaholism. During their career, they may continue to experience burnout but, however, less workaholism, through appropriate utilization both of their education and work experience and of more adaptive coping strategies. This result showed that those highly educated employees in the Exhausted-Workaholic profile turned to more a positive direction during their career. As expected of highly educated employees, they also showed a good level of professional efficacy during their career. For this reason, it might be possible to diminish their propensity to workaholism during their later career, and turn them more toward high pleasure/positive high activation in the circle described by the circumplex model (Bakker & Oerlemans, 2011), and along the continuum of burnout (Bergman & Trost, 2006). This result may emphasize the importance of high quality education as a basis for longitudinal SWB at work. Furthermore, this result emphasizes the importance of being able to cope successfully with developmental and career-related tasks during the early career stage in order to provide the basis for coping with career-related tasks in the mid-career stage (Havighurst, 1980; Super, 1990; Salmela-Aro & Nurmi, 2004).

#### 4.2. *The role of achievement and social strategies in the longitudinal profiles of SWB at work as antecedents and during the career*

Our results supported our expectations, the life-span models of motivation (Little et al., 2007; Brandtstädter, 1984; Heckhausen et al., 2013), and previous findings (for example (Salmela-Aro et al., 2011)) according to which social pessimism is related to negative, unpleasant emotions and low expectations and further poor SWB at work (Bakker & Oerlemans, 2011). Our results were in line with the life span theory of motivation and previous findings (Salmela-Aro et al., 2009) according to which achievement optimism is associated to high work engagement and low burnout. The results revealed, first, the strong role of social pessimism, measured in the transition from education to work, as an antecedent of membership of the Exhausted-Workaholic profile, i.e. the high risk profile, later in the career. This result is significant when revealing the role of social pessimism in the face of risk for young employees' further marginalization in working life. The result suggested that frequent social pessimism in student life, and thus fewer social relationships (Mudrack, 2006; Mudrack & Naughton, 2001) may have far-reaching consequences for young adults. This result strongly suggests that further attention should be paid to motivation and adaptive social strategies in education, and especially in the transition from education to work, in order to experience further work engagement (Little et al., 2007; Nurmi, 1992; Nurmi et al., 1995).

Notably, the results showed that later on, in the early and in mid-career, achievement optimism was negatively associated with the Exhausted-Workaholic profile and had the strongest association with membership of the Engaged profile in both career stages. This result was in line with the propositions of the life-span model of motivation (for further information, e.g., (Feldt et al., 2013; Little et al., 2007; Brandtstädter, 1984; Heckhausen et al., 2013)). Motivation and successful coping in career-related

tasks could increase positive expectations of outcomes, which, in turn, could increase further achievement optimism and support membership of the Engaged profile later on (Salmela-Aro & Nurmi, 2004; Little et al., 2007). Thus, optimistic attitudes in achievement situations enabled better adjustment to stressors in career-related tasks (Aspinwall & Taylor, 1992; Scheier & Carver, 1992).

#### 4.3. *Outcomes of longitudinal SWB at work profiles*

In line with our expectations and previous results (Maslach & Leiter, 2008; Sonnentag & Fritz, 2007), highly educated employees in the Engaged profile experienced higher levels of detachment and relaxation, a greater life satisfaction, and a stronger sense of sufficient rewards than employees in the Exhausted-Workaholic profile. This result strengthened the findings, based on the model of SWB at work proposed by Bakker and Oerlemans (Bakker & Oerlemans, 2011) and Russell (Russell, 2009), that positive emotions lead to work engagement, which, in turn, has positive outcomes. These results emphasized the role of high SWB at work for psychological detachment from work and relaxation. Experiences of mastery and control, however, did not differ between the two longitudinal SWB profiles, suggesting that highly educated employees might be able to master and control the relationships between work and leisure-time. Recovery has been shown to be an important variable in a hypothetical causal string of events between the development of work-related stress and experiences of psychological overload in the longer run (Sluiter et al., 1999). Our results supported the theoretical evidence and previous results according to which chronic stress may lead to lack of recovery strategies (McEwen, 1998). These results may support the phenomenon known as the cumulative cycle, according to which young adults' social pessimism in the transition from higher education to work predicts poor SWB at work, which, in turn, predicts poor psychological detachment and relaxation, and furthermore poor life satisfaction as a consequence of the negative life spiral. Most of all, our results were in line with the results of Sonnentag and Fritz (Sonnentag & Fritz, 2007), who found that feelings of psychological detachment from work were crucial for SWB at work. Finally, the results supported the theoretical argument (Kantak et al., 1992) that poor SWB at work causes negative spillover over to the individual's life overall, leading to poor life satisfaction (Hakanen & Schaufeli, 2012a).

These results also supported the theoretical notion (de Lange et al., 2005b) that individuals with poor well-being perceive their environment negatively as a consequence of the negative perceptual cycle. Individuals with high levels of engagement, instead, perceive their working environments positively by implementing the positive perceptual cycle, and thus optimizing their work environment (Bakker, 2011; Tims & Bakker, 2010). Thus, SWB at work would be a significant predictor of experiences of social areas of worklife, for example internal rewards such as a sense of work well-done and external rewards such as positive feedback of coworkers and supervisors. In line with previous findings, the present study revealed that feelings of reward, such as positive feedback from other people and personal satisfaction at work were high among members of the Engaged profile (Richardson et al., 1992). This result emphasized the role of SWB in experiences of rewards.

Finally, from the viewpoint of practice, the results supported the circumplex model of SWB (Bakker & Oerlemans, 2011), according to which burnout and workaholism comprise the negative forms of SWB at work. Work engagement, on the contrary, is the positive form of SWB at work. Furthermore, research utilizing also sub dimensions of burnout and work engagement provides information that may be useful in the development of interventions on an

individual and an organizational level. This study emphasizes the importance of paying attention to motivation and adaptive social strategies during the stage of education, before pressures from working life start to accumulate. In Finland the occupational health care service is well organized. Thus, this study may be of great value for occupational health care service experts interested in identifying different profiles of SWB at work and developing burnout interventions during the early career stage, and thus reducing the prospect of poor SWB during the later career. The study may also be valuable for the management and Human Resources departments of organizations seeking to support work engagement.

## 5. Limitations

As well as contributions, our study also has some limitations. First, the sample was strongly female-dominated and restricted to employees who had graduated from the social sciences. Also, the sample consisted of graduates from only one university. However, the university in the present study was a large university in Finland. The third limitation is that all of the measures used were self-reports. Fourth, the sample size was rather small. Fifth, only social working environments were examined as outcomes of the profiles of SWB at work. Using the complete Areas of Work Life Scale would give useful further knowledge of the outcomes of these profiles. Future research on the SWB at work of highly educated employees could greatly benefit from using larger samples from several universities, also examining vocational tracks, and by gathering responses not only from employees but also from supervisors, co-workers and spouses. Replicating the findings among blue-collar workers would also bring further benefits. Moreover, a longitudinal study with more than two measurement points would offer more possibilities for estimating changes in burnout–work engagement–workaholism profiles.

## 6. Conclusions

The present study examined SWB at work from early to mid-career using a person-oriented approach. Two profiles were identified: an Engaged profile and an Exhausted-Workaholic profile. SWB at work was at a good level among the sample of highly educated employees in Finland. The majority of employees were members of the longitudinal Engaged profile. Second, the results revealed continuity in both profiles, with only a minority of employees experienced changes in their profile. It is noteworthy that decreasing workaholism from early to mid-career was observed in the Exhausted-Workaholic profile. Third, adopting a high level of social pessimism during the transition from education to work would predispose newcomers to membership of the Exhausted-Workaholic profile. Fourth, membership of the Engaged profile was related to experiences of psychological detachment from work and relaxation, sufficient rewards, and overall life satisfaction.

## Conflict of interest statement

The authors declare that there are no conflicts of interest.

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## Appendix A. Average latent class probabilities for most likely latent class membership by latent class

Most likely latent class membership	Latent class	
	1	2
1	<i>0.990</i>	<i>0.010</i>
2	<i>0.031</i>	<i>0.969</i>

Note. Values in italics represent the average posterior probability associated with the clusters to which participants are assigned.

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