

# **STRIVING AND THRIVING:**

THE RELATIONSHIP BETWEEN  
ACHIEVEMENT GOAL ORIENTATION  
AND WELL-BEING AT WORK

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**Striving and Thriving:**  
the relationship between  
achievement goal orientation  
and well-being at work

**Streven en floeren:**  
*de relatie tussen doeloriëntatie  
en welbevinden op het werk*

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CHAPTER 1

# GENERAL INTRODUCTION



In his famous novel *Moby Dick*, Herman Melville devoted a chapter to describe the different types of whales that exist. After explaining how vast are the characteristics of the different species, the main character of the novel, Ishmael, states the following: “I promise nothing complete; because any human thing supposed to be complete, must for that very reason infallibly be faulty” (Melville, 1851; pp. 146-147).

The faultiness of attempting to be complete is also relevant for this dissertation, because it focuses on the rich and complex subject of how people judge the quality of their lives, that is, their well-being. For instance, when one looks for a definition of well-being, the list of different definitions to be found is impressive, filling a full page in a recent overview article (Diener, Oishi, & Tay, 2018). This variety of interpretations of just the concept ‘well-being’ calls to mind Melville’s (1851) discussion of the number of different species of whales and their characteristics. The feeling of incomplete studying becomes even more overwhelming when considering the factors that influence well-being. With these thoughts in mind, this dissertation includes only a small portion of what can be investigated about people’s well-being and what contributes to it.

One important factor that influences well-being concerns the goals people set for themselves. The focus of this thesis is on goals that people set for themselves in general and how their goals are related to their well-being at work and in their lives. This thesis is mainly intended to gain more insight into what goals serve this purpose better than others (e.g., Emmons, 2003). Captain Ahab is a tragic example of someone who had a clear goal (killing Moby Dick), but that goal eventually was not conducive to his well-being, and even led to his demise. Knowing what types of goals are most beneficial for a person’s well-being is relevant, because the types of goals that people set for themselves can be changed relatively easily compared to other factors that influence one’s well-being, such as a person’s level and type of education, personality and occupational status.

That goals can be changed does not mean that changing goals is always an easy process. For example, we can seriously doubt whether Captain Ahab would be willing to change his personal goal. However, gaining further insight into what goals contribute more to well-being than others is an important step towards more consciously setting certain types of goals, for example, within organizations, while discouraging setting other types of goals. Therefore, this dissertation aims to gain more knowledge about what goals are positively related to well-being among a working population and thereby to provide concrete avenues for enhancing well-being in the workplace and in general.

This introduction to the dissertation has the following structure. First, a brief overview on well-being will be given, followed by the theoretical framework addressing achievement goal orientation, which distinguishes between different types of goals. Second, the known effects of these achievement goals on well-being will be summarized. Subsequently, gaps in knowledge about the relation between achievement goals and well-being will be described, which this dissertation aims to partially fill. Third, the research

questions that guide this dissertation will be presented. Finally, the separate empirical studies in this dissertation will be introduced.

## WELL-BEING

Well-being is seen as an important good because it is not only beneficial for the people it concerns (for instance, well-being is related to better physical and mental health, better job performance and longer lifespan), but also for their social environment (well-being, for instance, has been shown to lead to more prosocial behavior; Aknin, Whillans, Norton, & Dunn, 2019). As one of their missions, the United Nations has considered how to make well-being accessible to everyone in a sustainable way. Their 17 Sustainable Development Goals refer to ending poverty, reducing inequality, and protecting our planet, which are the means to achieve this mission of well-being for everyone (United Nations, 2016). Therefore, the World Health Organization has noted a continuing keen interest in well-being in several governments, among both developed (e.g., the United Kingdom) and developing countries (e.g., Bhutan), that systematically measure the well-being of their citizens in order to make better policy choices that can ultimately positively influence the well-being of their citizens (Ghent, 2011). The International Labour Organization (ILO; 2018a) has also stressed the importance of well-being in the workplace. This organization takes the perspective that employee well-being will positively influence productivity levels and physical and mental health. This increased interest in well-being in the workplace has been accompanied by a growing awareness of potential threats to well-being, such as stress (ILO, 2018b). Stress can be defined as the appraisal by individuals that their well-being is endangered (Lazarus & Folkman, 1987). Stress is associated with negative consequences (e.g., more absenteeism, poorer health, lower job performance and a shorter lifespan; Goh, Pfeffer, & Zenios, 2016). Thus, both the presence and the absence of well-being may have a great impact on people's lives.

At the brink of the 21th century, Diener and colleagues reviewed three decades of research on subjective well-being<sup>1</sup>, which they defined as: "... a broad category of phenomena that includes people's emotional responses, domain satisfactions, and global judgments of life satisfaction" (Diener, Suh, Lucas, & Smith, 1999, p. 277). With domain satisfactions, Diener et al. (1999) referred to satisfactions with different domains in life (e.g., work). Hence, research on subjective well-being primarily focused on the absence of negative and the presence of positive emotions and life satisfaction, which has often been summarized with the term happiness. Diener et al. (1999) noticed that during three decades of research, substantial insight was gained into processes that could explain subjective well-being. Summarizing these studies, they concluded that a happy person is a person

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<sup>1</sup> Diener and colleagues defined well-being as *subjective well-being*, contrasting it with Kahneman's (1999) *objective happiness*, which is measured by asking people many times over an extended period whether they are having pleasant or unpleasant experiences.

endowed with a positive temperament who tends to look on the bright side of things, does not ruminate excessively about bad events, lives in an economically developed society, has friends who can be trusted, and has adequate resources for making progress toward valued personal goals.

The research reviewed by Diener and colleagues (1999) was based on what is known as the hedonic perspective on well-being. This perspective defines well-being as happiness, that is, the presence of positive affect, the absence of negative affect, and being satisfied with one's life (Ryan & Deci, 2001). After their systematic review, a new perspective on subjective well-being emerged, namely the eudaimonic perspective (Diener et al., 2018). The term eudaimonic refers to both social and psychological optimal functioning (i.e., someone experiences their life as meaningful, contributes to the lives of others and is kind to themselves and to others). Studies on eudaimonic well-being were initiated by researchers who pointed out that the fulfillment of underlying psychological needs (for instance, one's personal growth) assumed to result in self-realization and optimal psychological functioning should not be left out of sight, and should be incorporated in research into well-being (cf. Ryff & Keyes, 1995; Waterman, 1993). In a nutshell, the eudaimonic perspective defines well-being as *actualizing one's own potentials* (Ryan & Deci, 2001). The use of the nonfinite verb "actualizing" is not coincidental here, as the process of actualizing is an ongoing process. Here I would like to bring in Ishmael's statement again: not only must "*any human thing supposed to be complete, ... for that very reason infallibly be faulty*" (Melville, 1851), but also humans themselves. Both the hedonic and eudaimonic perspectives were combined by Keyes (2002), who introduced the term 'flourishing' as a way to describe someone who has both high eudaimonic and high hedonic well-being. Keyes demonstrated that flourishing is an important indicator of mental health.

The vast majority of the body of research on well-being, in both the hedonic and the eudaimonic traditions, relates to well-being in general life, also referred to as context-free well-being (Warr, 1990). When well-being relates to a certain life domain (for example, relationships in the private sphere or the work domain), it is referred to as domain-specific well-being (see Taris & Schaufeli, 2014). This dissertation mainly focuses on well-being in the domain of work, and therefore studies both hedonic and eudaimonic well-being among working adults. Traditionally, research into (subjective) well-being in the work domain focused mainly on job satisfaction, which refers to one's overall evaluation of one's job (Locke, 1969). Such research can be situated within the hedonic perspective on well-being. The emergence of eudaimonic well-being also influenced research on well-being in the work domain. An example of an eudaimonic perspective on well-being in the workplace is a focus on the concept of thriving. Thriving is defined as "the psychological state in which individuals experience both a sense of vitality and of learning" (Porath, Spreitzer, Gibson, & Garnett, 2012, p. 250), which definition indicates that learning in the workplace is inextricably linked with optimal psychological functioning.

Along with the observation that more and more researchers have incorporated a eudaimonic perspective in their studies, there seems to be a growing awareness that well-being can be even better understood when interactions with the environment are taken into account (Ahuvia et al., 2015). For instance, someone with a pro-active personality will benefit from a resourceful environment (e.g., career opportunities), which will positively influence this person's well-being. An interactional approach to well-being investigates the interaction between internal and external, environmental factors that will increase or decrease people's well-being. For example, job insecurity can be regarded as an environmental condition that will affect well-being differently for individuals who passively accept the threat to their job than for individuals who proactively engage in various activities to increase their employability. As another example, one could think of the degree to which employees and their workplace match: when employees match their work environment in terms of their values, this match will be positively associated with their well-being, while a mismatch will be negatively associated with their well-being (Kristof-Brown & Guay, 2011). Thus, well-being is best understood when both environmental and individual factors and their interplay are taken into account. Among the individual factors, an important factor concerns the goals people set for themselves, which is discussed in the following section.

### **ACHIEVEMENT GOAL ORIENTATION**

The extent to which people experience hedonic and eudaimonic well-being is influenced by various factors, such as their demographic characteristics, social relations, personality and genetic factors (Argyle, 1999; Huppert, 2009). A study by Emmons (2003) showed that besides the factors mentioned, personal goals can make life meaningful, valuable, and worth living, and hence such goals will contribute to one's well-being.

Achievement goal orientation theory, which was developed by Dweck (1986), provides a theoretical framework for distinguishing between the preferences that people have for different kinds of goals in achievement situations (e.g., at work, at school, or in sports). More specifically, achievement goals can be defined as "the purpose for engaging in competence-relevant behavior" (Elliot & Hulleman, 2017, p. 44). The different achievement goal orientations manifest themselves both as a state (a *situational goal orientation*: goals set in a particular situation) and as a trait (a *dispositional goal orientation*: a fairly stable preference of a person for a particular goal across different situations; Button, Mathieu, & Zajac, 1996). In line with research into achievement goal orientation in organizational settings (see Vandewalle, Nerstad, & Dysvik, 2019), the focus in this dissertation is on dispositional achievement goal orientation in the domain of work.

According to Dweck (1986), a learning goal orientation, also known as a '*mastery goal orientation*' (e.g., Van Yperen, Blaga, & Postmes, 2014) aims at developing one's competence. The label, '*mastery goal orientation*', applies across different domains, not just education,

and will be used from here onwards. Such a goal orientation is self-referential (e.g., developing one's skills) or task-referential (e.g., mastering a task). In contrast, a *performance goal orientation* aims at gaining positive judgments and at avoiding negative judgments about one's competence, which encompasses an other-referential (e.g., doing better than others) focus. Among students in an educational context, mastery goal orientation has been shown to be positively and performance goal orientation to be negatively associated with motivation and performance (Dweck & Leggett, 1988). Achievement goal theory yielded similar results when it was adopted by organizational researchers, showing that a high level of mastery goal orientation was favorable also in a work setting (e.g., Button et al., 1996).

The initial division into mastery and performance goal orientation was later expanded to include the distinction between approach and avoidance goals (Elliot & McGregor, 2001). An *approach goal* is aimed at striving for a desired outcome (i.e., success) and an *avoidance goal* at avoiding an undesirable outcome (i.e., failure). Mapping the approach and avoidance goal orientations onto the existing mastery and performance goal orientation distinction resulted in four different types of achievement goal orientations (Elliot & McGregor, 2001): 1) mastery-approach, where the emphasis is on improving one's own competence and gaining mastery over a task; 2) mastery-avoidance, where the focus is on avoiding incompetence and preventing the loss of mastery over a task; 3) performance-approach, where the emphasis is on showing competence and getting positive judgements from others; and 4) performance-avoidance goal orientation, with an emphasis on avoiding showing incompetence and preventing negative judgements from others (see Table 1).

**TABLE 1**

The 2 x 2 achievement goal framework (see Elliot & McGregor, 2001)

		Orientation	
		Absolute/ intrapersonal (mastery)	Normative (performance)
Valence	Positive (approaching success)	Mastery- approach goal	Performance- approach goal
	Negative (avoiding failure)	Mastery- avoidance goal	Performance- avoidance goal

Research has systematically shown that mastery-approach goal orientation is positively associated with task interest, self-regulatory skills, social relationships, motivation and performance, while the opposite holds true for performance-avoidance goal orientation (Payne, Youngcourt, & Beaubien, 2007; Vandewalle et al., 2019). Empirical findings for both mastery-avoidance and performance-approach goal orientations are mixed, and fall somewhere between the positive outcomes found for mastery-approach and the negative outcomes for performance-avoidance goal orientations (e.g., Baranik, Barron, & Finney, 2007; Elliot & McGregor, 2001).

The research on achievement goal orientation theory is still underway and was by no means finalized with the proposal of the 2 x 2 achievement goal framework (Elliot & McGregor, 2001). For instance, a further expansion to a 3 x 2 framework was proposed, in which mastery goals are separated into task-based (absolute) and self-based (intrapersonal) goals (Elliot, Murayama, & Pekrun, 2011). Likewise, the concept of performance goals has not crystallized yet: some researchers have argued that performance goals can be classified into goals aimed at demonstration of competence and goals aimed at outperforming others (Hulleman, Schrager, Bodmann, & Harackiewicz, 2010). However, these refinements to the model have not yet been widely adopted in organizational research, where studies are often limited to three achievement goal orientations (i.e., mastery-approach, performance-approach and performance-avoidance goal orientations; see Vandewalle et al., 2019) and the 2 x 2 achievement goal framework has been less frequently used (Baranik, Lau, Stanley, Barron, & Lance, 2013; Van Yperen & Orehek, 2013). The research in this dissertation is based on the full 2 x 2 achievement goal framework.

Another ongoing debate in achievement goal orientation theory relates to the possible beneficial effects of performance-approach goals (see Senko, 2016). For instance, what is known as the multiple goal perspective contends that mastery goals have desirable effects, but that performance-approach goals also show positive effects (e.g., Harackiewicz, Barron, & Elliot, 1998). In contrast, the mastery goal perspective (e.g., Brophy, 2005) contends that only mastery goals should be pursued, and that performance goals should be actively discouraged. Although an increasing number of researchers have found evidence for the multiple goal theory, this evidence was mainly based on the relations of achievement goals with motivation and performance in an educational setting. Thus far, less is known concerning the extent to which the mastery goal perspective or the multiple goal perspective apply to well-being in a work setting.

## **ACHIEVEMENT GOAL ORIENTATION AND WELL-BEING**

Studies until now have mainly investigated the relation of achievement goal orientations with motivation and performance across different domains such as work, sports and education (see Cellar et al., 2011; Payne et al., 2007). However, some studies have also examined the relation between achievement goal orientations and well-being (e.g.,

Huang, 2011). The meta-analysis by Huang (2011) provided evidence that mastery-approach goal orientation is positively related to hedonic well-being. On the other hand, performance-avoidance goal orientation has been shown to have a negative relationship with hedonic well-being. Findings with regard to performance-approach goal orientation are mixed (cf. Huang, 2011). Mastery-avoidance goal orientation, however, on the whole seems to be negatively related to hedonic well-being (see Baranik, Stanley, Bynum, & Lance, 2010), although the number of relevant studies was too small to draw firm conclusions. Moreover, the studies in the meta-analysis by Baranik et al. (2010) were mainly carried out among young people (students), while there are indications that age could buffer the negative effects (such as poor performance) of mastery-avoidance goal orientation in such a way that among older adults, mastery-avoidance goal orientation might be positively related to hedonic well-being (such as task enjoyment; Senko & Freund, 2015). It should be noted that studies that investigated the relation between achievement goal orientation and well-being mainly used positive and negative affect as indicators of (hedonic) well-being, and that satisfaction, the other aspect of hedonic well-being, was rarely studied (see Huang, 2011).

A review of the scarce literature on the effects of achievement goal orientation on well-being in organizational settings (Vandewalle et al., 2019) showed a similar pattern as in educational settings: mastery-approach goal orientation displays a positive relationship with hedonic well-being, while performance-avoidance goal orientation displays a negative relationship. Findings on mastery-avoidance goal orientation were not included in this review, although there is empirical support for applying the full 2 x 2 goal framework, including mastery-avoidance goal orientation, to the work domain (see Baranik et al., 2007). Moreover, based on Baranik et al.'s (2010) study, both negative and positive relations between mastery-avoidance goal orientation and well-being would be expected. However, one could argue that the negative relations with well-being as reported by Baranik et al. (2010) depend on the age of the population, as mastery-avoidance goal orientation seems to become more adaptive at an older age (Senko & Freund, 2015).

In sum, it is a well-known finding that being focused on developing one's competence (i.e., mastery-approach goal orientation) is positively related to (hedonic) well-being, and that avoiding displaying incompetence (i.e., performance-avoidance goal orientation) is negatively related to well-being. As said, however, this research was largely based on students in an educational setting, and less is known about this relation among working adults. Although the relevance of eudaimonic well-being has been widely recognized, for instance, because of its positive relation with mental health, whether and to what extent an achievement goal orientation is related to employee eudaimonic well-being in an organizational setting has not yet been examined. Finally, little is known about the effects on well-being of the interaction between achievement goal orientations and the characteristics of the work environment. Therefore, the interaction between the

achievement of employees and characteristics of their work environment is studied in this dissertation.

## **THE PURPOSES OF THIS DISSERTATION**

This dissertation aims to gain greater insight into and more knowledge of the relations of the different goal orientations with hedonic and eudaimonic well-being in a working population. More specifically, the aim is to make a unique contribution to the research literature on achievement goal orientation, because the relation between achievement goal orientation and eudaimonic well-being is not part of achievement goal theory. Moreover, achievement goal theory has mainly been tested in the educational domain. Only relatively few studies have examined whether the relations between achievement goal orientations and various outcomes, according to achievement goal theory, can be generalized to the population of working adults. Hence, the aim of this dissertation is to examine whether the hypotheses of achievement goal theory on the relation of achievement goal orientations with emotional well-being (i.e., hedonic well-being) can be extended both to the population of working adults and to eudaimonic well-being.

This dissertation also contributes to research on well-being, and eudaimonic well-being in particular. Research on well-being has established that one's goals contribute to one's well-being (e.g., Emmons, 2003), but that not all goals contribute equally (e.g., Ryan, Sheldon, Kasser, & Deci, 1996). However, few studies have investigated the contribution of the different goal orientations to eudaimonic well-being. This dissertation aims to provide empirical evidence for the view that achievement goal theory can be incorporated within the literature on eudaimonic well-being. In line with this view, there are already some indications that the concept of achievement goal orientation should be part of the research on eudaimonic well-being (psychological and social well-being). For instance, mastery-approach goals have been found to be associated with pro-social behavior, such as tolerance for other points of view and sharing of resources (such as information) with others (Poortvliet, 2009).

Finally, a practical aim is to lay a basis for possible interventions to positively influence eudaimonic well-being. If a relation can be demonstrated between employees' achievement goal orientations and their well-being (both hedonic and eudaimonic) in the workplace, this finding would provide avenues for employers to enhance the well-being of their personnel. Although we mainly focus on employees in this dissertation, one can imagine that the implications could reach further, such as implications for public policy, employment services or adult education. Nevertheless, such implications are outside the scope of this dissertation.

## **THE POPULATION THAT IS INVESTIGATED**

All five studies in this dissertation were conducted among working adults. More specifically, four of the studies were conducted within the field of social work. Although high well-being is desirable for employees in general, for social workers, well-being is arguably a prerequisite for doing their work adequately. Social workers are expected to take care of groups of people who are vulnerable, which requires well-being on the side of the social workers themselves. Social work is a work field in which employees experience a high level of stress, which negatively impacts their (subjective) well-being (e.g., Lloyd, King, & Chenoweth, 2002; Travis, Lizano, & Mor Barak, 2015). Moreover, social workers who are stressed, overworked, and have low vitality are not well-equipped to provide for the needs of other people (Trevithick, 2011). Therefore, it is highly relevant to investigate whether certain achievement goal orientations can contribute to their well-being (both hedonic and eudaimonic).

## **RESEARCH QUESTIONS**

**Two main research questions underlie this dissertation:**

1. What is the association between achievement goal orientation and hedonic and eudaimonic well-being among working adults?
2. What is the influence of the work environment on the relation between the achievement goal orientation and hedonic and eudaimonic well-being among working adults?

Research question 1, on the relation between achievement goal orientation and well-being, is addressed in Chapters 2, 3 and 4, and research question 2, focusing on the influence of the work environment on the relation between achievement goal orientation and well-being, is addressed in Chapters 5 and 6. Below, the topics of each chapter are briefly introduced.

In Chapter 2, research question 1 (the relation of achievement goal orientation with well-being) is addressed in a study that investigates whether the associations found in earlier research between students' achievement goal orientation and hedonic well-being are also found in adults and with eudaimonic well-being. This study uses the concept of flourishing as developed by Keyes (2002), and establishes to what extent one's goal orientation can predict whether one flourishes or not. In this chapter, research question 2 (the influence of the work environment on the relationship between achievement goal orientation and well-being) is also briefly touched upon, because this study also examines whether being employed or not (an environmental factor) influences the relation between one's achievement goal orientation and well-being. The study is based on a cross-sectional survey among a representative sample of 305 Dutch adults (with and without employment).

Note that this chapter is in Dutch (an English summary is available at the beginning of the chapter).

Chapter 3 addresses research question 1, concerning the relation between achievement goal orientation and well-being. The study described in this chapter takes a longitudinal perspective by unfolding this relationship over time. This study aims to add to the understanding of the potential long-term impact of achievement goal orientation in the process of stress recovery and on eudaimonic well-being. This study also answers the call for more research into the long-term consequences of recovery from stress (Geurts, 2014). Measures at three time points (T<sub>1</sub>-T<sub>3</sub>) are included. Data were collected among employees of a youth guardian organization. The final sample at T<sub>3</sub> consisted of 133 employees. Note that this chapter is in UK English.

In Chapter 4, research question 1 (the relation of achievement goal orientation with well-being) is addressed in a study that also tested an assumption of the original achievement goal theory (Dweck & Leggett, 1988), namely, the idea that mindsets (i.e., implicit theories about personal traits, such as intelligence) underly achievement goal orientations. This study focuses on whether achievement goal orientations and mindsets differ in their contribution to eudaimonic well-being. In line with Ryff (2018), it uses participating in professional training as a behavioral indicator of eudaimonic well-being. A cross-sectional design was used, with data collected among 620 social workers. Note that this chapter is in UK English.

Chapter 5 addresses research question 2 (the influence of the work environment on the relation between achievement goal orientation and well-being), and describes a study that aims to gain insight into the effects of the interaction between learning opportunities (a working environment factor) and achievement goal orientation (a person factor) on hedonic well-being. According to the person-environment fit (PE fit) literature (Kristof-Brown & Guay, 2011), the interaction between a person and their environment is related to well-being, with a match between both resulting in positive outcomes and a mismatch in negative outcomes. This study's purpose is to predict hedonic well-being (in terms of job satisfaction and task enjoyment) as a positive outcome, and a subjective indicator (need for recovery) and an objective indicator (absenteeism) as negative outcomes. To this end, the same T<sub>1</sub>-sample (N = 212) is used as in the longitudinal study described in Chapter 3. Other variables (such as task enjoyment and job satisfaction) are included than in the Chapter 3 study, and prospective data (absenteeism during the following year after T<sub>1</sub>) are also included, which were not included in the Chapter 3 study.

In Chapter 6, research question 2 (the influence of the working environment) is addressed by a study that aims is to gain greater insight into the role of employees' achievement goal orientation in their perception of job insecurity and into the (indirect) effect of achievement goal orientation on their eudaimonic well-being. Therefore, a mediation model is tested in this study, in which achievement goal orientation is directly

and indirectly related to eudaimonic well-being, namely, through quantitative (i.e., uncertainty about the continuity of one's job) and qualitative (i.e., uncertainty about the quality of one's job) job insecurity. The study is based on cross-sectional survey data ( $N = 257$ ) conducted in a youth care organization that faced a massive reduction in staff.

Finally, Diener et al. (2018) warned researchers to keep in mind that (subjective) well-being is a broad construct that is determined by multiple factors. Consequently, Diener et al. (2018) stated that well-being can at best be partially explained by a single factor (in this case, achievement goal orientation). Therefore, it is important to reiterate Ishmael's statement presented in the beginning of this introductory chapter (Melville, 1851, pp. 146-147): I promise nothing complete; because any human thing supposed to be complete, must for that very reason infallibly be faulty.



# **SOCIAL WORKERS AND RECOVERY FROM STRESS**

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## **ABSTRACT**

Recovery from stress is essential for employees' well-being, even more so in jobs where high stress is inevitable. The purpose of this study was to examine the influence of achievement goal orientation on recovery from stress (i.e., need for recovery and vigour) over several years. We followed a sample of social workers in the Netherlands ( $N = 238$ ) across 4 years, with three measurement points ( $T_1$ - $T_3$ ). Data were analysed with latent growth curve modelling. Results showed that need for recovery and vigour were fairly stable over time and therefore we could not examine the effects of achievement goal orientation on change in vigour and need for recovery over time. However, level of mastery goal orientation (mastery-approach and mastery-avoidance goal orientation) at  $T_1$  was positively related to the initial level of vigour at  $T_1$ , even after controlling for job autonomy and workload. Our results indicate that mastery goal orientation is relevant for employees to feel energetic and vital in a job with high stress. Our results showed that organisations can prevent depletion among social workers by ensuring an acceptable workload, while vigour can be enhanced by selecting employees with high mastery goal orientation. Organisations can also contribute to the vitality of social workers by stimulating and fostering mastery goal orientation.

The negative impact of the increasing pressure accompanying the demands of modern working life is widely recognized, and is seen more and more as an urgent problem all over the world (International Labour Organization, 2018). The *Sixth European Working Conditions Survey* revealed that in Europe, many workers experience high work demands, with 25% indicating that their health was negatively affected by their work (Eurofound, 2017). Job stress is caused by different factors, such as work pressure and emotional demands, organisational factors (e.g., role conflict) and personal factors (e.g., work-family conflict) (Cooper & Dewe, 2004). Social workers are no exception; they can experience considerable job stress, which negatively impacts their well-being (e.g., Lloyd, King, & Chenoweth, 2002; Travis, Lizano, & Mor Barak, 2015). Some sources of stress (such as emotional demands) are more typical of social workers, but the general rule that stress occurs when job demands exceed the job resources also applies to social work (Stevens, Manthorpe, & Martineau, 2019). Social workers are an important and substantial part of the workforce; in 2015, 209,000 employees (i.e., 2.5%) in the Dutch workforce were social workers, who therefore make up one of the larger professional groups in the Netherlands (Central Bureau for Statistics, 2018).

When it comes to coping effectively with job stress, recovery from stress seems to play a vital role (Geurts & Sonnentag, 2006). Recovery from stress enables individuals to replenish their depleted resources. Previous research (e.g., Sonnentag, Binnewies, & Mojza, 2008; Van Hooff, Geurts, Beckers, & Kompier, 2011) has used several indicators (e.g., fatigue, vigour, need for recovery, sleep quality and affective states) to measure recovery from stress. One of those indicators, the need for recovery, refers to the desire to be relieved from exposure to stressors at the end of the workday in order to replenish resources. Need for recovery has been linked to negative health consequences, such as psychosomatic complaints (Sluiter, 1999). In addition, insufficient recovery from stress, as indicated by high need for recovery, plays a crucial role in the development of burnout (Sluiter, 1999; Toker & Melamed, 2017). Sufficient recovery from stress will lessen the negative consequences of job stress. However, the absence of negative consequences of stress, such as exhaustion, does not necessarily imply that employees are functioning well in their jobs. For example, a social worker who is not dedicated to his work and consequently does not feel stress will not be regarded as a well-functioning social worker, while an engaged social worker will have a greater chance of functioning well. Work engagement has been widely studied and has been characterized by different dimensions such as vigour, dedication, and absorption (Maslach, Schaufeli, & Leiter, 2001). Vigour, feeling energetic during a workday, is an important indicator of recovery from stress (Geurts, 2014). Hence, one can assume that a social worker who recovers well from stress is not only not exhausted at the end of the workday, but also feels energetic during the workday, even under high demands. In this study, need for recovery and vigour will be used to measure recovery from work stress (Sluiter, 1999; Sonnentag & Niessen, 2008).

A well-designed job enables employees to recover well, by providing, among other things, job autonomy, acceptable workload, social support and sufficient variety in tasks (Geurts, 2014). Unfortunately, prolonged exposure to high job demands (e.g., clients who are experiencing a crisis) cannot be ruled out for social workers. In other words, for social workers, job stress is inevitable. When stress is unavoidable, the question of who can recover better from stress becomes more relevant. Consequently, more insight into what personal factors (e.g., personality) contribute to sufficient recovery from stress is needed to understand how to reduce the negative impact of stress. Moreover, although there is evidence that recovery from job stress differs between persons, the influence of personal characteristics on the recovery process is under-researched (Geurts, 2014).

One personality characteristic that is related to recovery from job stress is achievement goal orientation (Sonnetag, 2003). Sonnetag reported that recovery on a daily basis was influenced by an employee's achievement goal orientation; mastery goal orientation was positively related to daily recovery. If personal characteristics, such as one's achievement goal orientation, are indeed related to the recovery process (i.e., need for recovery and vigour), this would offer concrete opportunities, such as training and selection of employees, to promote the recovery process. As a result, burnout among employees might be prevented and work engagement enhanced. The aim of our study is twofold. First, we examine the influence of social workers' achievement goal orientation on their recovery from stress by looking at two indicators of recovery from stress (need for recovery and vigour) over a period of four years, with three measurement points. Second, we aim to gain more insight into the recovery process in jobs where high stress is inevitable, such as in social work.

### **ACHIEVEMENT GOAL ORIENTATION AND THE RECOVERY FROM JOB STRESS PROCESS**

According to achievement goal orientation theory (Dweck & Leggett, 1988; Elliot & McGregor, 2001), the type of achievement goals people pursue influence their motivation and well-being. The two best-known achievement goal types stem from definitions of competence: mastery goals are aimed at developing one's competence and performance goals are aimed at validating one's competence (e.g., by receiving positive evaluations).

The initial distinction between mastery and performance goal orientation was extended by Elliot and McGregor (2001), who added a valence dimension distinguishing between approach and avoidance goals. This addition resulted in a 2x2 goal orientation framework: 1) mastery-approach (Map) goals, where the focus is on improvement of one's competence and gaining mastery of a task, 2) mastery-avoidance (Mav) goals, in which the focus is on avoiding incompetency and preventing the loss of mastery of a task, 3) performance-approach (Pap) goals, where the focus is on showing one's competence and receiving positive evaluations, and 4) performance-avoidance (Pav) goals, where the focus

is on avoiding showing incompetence (see Figure 1). Achievement goal orientation has been conceptualized as both a trait and a state, with the trait having a moderate degree of stability over time (Payne, Youngcourt, & Beaubien, 2007).

**FIGURE 1**

The 2 x 2 achievement goal model. Figure from Elliot & McGregor (2001)

		Orientation	
		Mastery (developing competencies)	Performance (showing competencies)
Valence	Approach (striving for success)	Mastery- approach goal	Performance- approach goal
	Avoidance (avoiding failure)	Mastery- avoidance goal	Performance- avoidance goal

Achievement goal orientation has proven to be a valid predictor of motivation, performance, well-being, and engagement across different domains (education, work and sports), and across different occupations (e.g., Payne et al., 2007; Vandewalle, Nerstad, & Dysvik, 2010; Van Yperen, Blaga, & Postmes, 2014). Despite the differences between social work and other occupations, we therefore assume that achievement goal orientation is also a valid predictor of differences in aspects of well-being (e.g., the recovery process) in the social work domain.

The relationship between achievement goals and the recovery process from work has rarely been studied. An exception is a study demonstrating that higher Map goal orientation contributed to work engagement, while higher Pav goal orientation hampered work engagement (Bakker, Petrou, den Kamp, & Tims, 2018). Furthermore, Sonnentag (2003) reported a positive relation between Map goal orientation and both daily recovery and daily engagement. The studies by Bakker et al. (2018) and Sonnentag (2003) covered a relatively short period of time (i.e., one to five weeks). However, Geurts (2014) argued that more studies should look at the recovery process over the long term. Both vigour and need for recovery are stable person characteristics over longer periods. For instance, over a period of two years, intraclass correlations ranging from 0.68 to 0.80 were reported for need for recovery in a stable work environment (De Croon, Sluiter, & Frings-Dresen, 2006).

For vigour, an intraclass correlation of 0.61 was reported, even over a period of seven years (Seppälä et al., 2015). Therefore, based on the previously mentioned studies, we expect that achievement goal orientation will predict vigour and need for recovery over a longer period of time (i.e., four years). In particular, we expect that Map goal orientation will have a positive effect on the recovery process over time (i.e., lower need for recovery and higher vigour) and Pav goal orientation a negative effect (higher need for recovery and lower vigour). Because of a lack of prior research, we cannot formulate hypotheses about the effects of Mav and Pap goal orientations on vigour and need for recovery. However, we will include them in our analyses to explore possible relations.

Among social workers, workload and job autonomy play an important role in the development of stress (e.g., McFadden, Mallett, & Leiter, 2018). To determine the unique effect of achievement goal orientation on vigour and need for recovery and on their development over time, we controlled for the effect of workload and job autonomy on vigour and need for recovery.

## **METHOD**

### **Participants and procedure**

All employees ( $N = 238$ ) of an organization in the Netherlands that provides guardianship for youngsters were asked to participate in what is known as a vitality check, in 2012 (T<sub>1</sub>), 2014 (T<sub>2</sub>) and 2016 (T<sub>3</sub>). The vitality check addressed multiple topics about how employees experience different aspects of their job, such as cooperation with their colleagues and supervisor, perceived workload, need for recovery, variety in their tasks and task enjoyment. It involved completion of an online questionnaire. After its completion, the employees were individually informed about their own results in an online report. All employees were invited by email to complete the questionnaire, with the confidentiality of their results and report guaranteed. Completion of the questionnaire indicated their informed consent. After three weeks, the employees who had not completed the questionnaire received a reminder. The results for all employees were analysed (anonymously) on a team level and presented in a report to the management of the organization. The procedures and questionnaire were identical at T<sub>1</sub>, T<sub>2</sub> and T<sub>3</sub>.

Vitality in the workplace had high priority for the management of the organization. For this reason, the management encouraged participation in the vitality check. Employees were also notified that they would immediately receive online feedback about their vitality scores after completing the questionnaire. This procedure resulted in a high response rate in 2012; 91.2% of 238 employees completed the questionnaire, resulting in a final sample of 217 employees (156 females, 61 males). At T<sub>1</sub>, the mean age was 45.1 years ( $SD = 10.37$ ) and the mean hours worked per week was 32.06 ( $SD = 4.50$ ); respondents, on average, worked 2.66 ( $SD = 2.05$ ) hours of overtime per week. Almost all respondents had completed higher vocational training or a higher level of education.

## **MEASURES**

### **Achievement goal orientation**

The achievement goal orientation scale developed by Baranik, Barron, and Finney (2007) was used, which measures: 1) mastery-approach goal orientation (4 items;  $\alpha$  ranging from .89 at T1 to .91 at T3), for example, “I enjoy challenging and difficult tasks in which I’ll learn new skills”; 2) performance-approach goal orientation (4 items;  $\alpha$  ranging from .80 at T1 to .86 at T3), for example, “I enjoy it when others are aware of how well I am doing”; 3) performance-avoidance goal orientation (4 items;  $\alpha$  ranging from .79 at T1 to .85 at T3), for example, “Avoiding a display of low ability is more important to me than learning a new skill”, and mastery-avoidance goal orientation (4 items;  $\alpha$  ranging from .71 at T3 to .81 at T1), for example, “I just hope I am able to maintain enough skills so I am competent”. Items were scored on a 5-point scale, ranging from 1 = strongly disagree to 5 = strongly agree. Thus, a higher score means a higher level of each type of goal orientation.

Test-retest correlations over a two-year period ranged from 0.45 (mastery-avoidance) to 0.59 (performance-avoidance), and over a four-year period the values ranged from 0.32 (mastery-avoidance) to 0.56 (mastery-approach). These values were all statistically significant.

### **Vigour, need for recovery, perceived workload, and job autonomy**

Vigour, need for recovery and the time-varying covariates of perceived workload and job autonomy were measured with the Questionnaire on the Experience and Evaluation of Work (QEEW; Van Veldhoven, Meijman, Broersen, & Fortuin, 2002). Item responses were on a 4-point Likert-type scale (1 = always, 4 = never). We reversed the scores, so that a high score indicates high vigour, high need for recovery, high workload and high job autonomy.

Need for recovery was measured with six items ( $\alpha$  ranging from .84 at T2 to .86 at T3); a sample item is “Because of my job, at the end of the workday I feel rather exhausted”. Vigour was measured with five items ( $\alpha$  ranging from .79 at T2 to .82 at T1); a sample item is “I am very energetic at work”. Job autonomy was measured with four items ( $\alpha$  ranging from .77 at T2 to .84 at T3); a sample item is “Can you decide on your own how your work is carried out?”. Perceived workload was measured with six items ( $\alpha$  ranging from .87 at T2 to .88 at T3); a sample item is “Do you have too much work to do?”. Test-retest correlations over a two-year period ranged from 0.54 (need for recovery) to 0.60 (vigour) and over a four-year period the values ranged from 0.27 (need for recovery) to 0.49 (job autonomy). These values were all statistically significant.

### **Data attrition**

The sample of employees who had completed the T1 questionnaire was followed up on during the next four years, with additional measurement points in 2014 (T2) and 2016 (T3). At T2, 188 of the T1 participants (86.6% of the T1 sample) were still employed

at the organization, of which 140 employees (74.5% of those from T1 remaining at T2) participated in the follow-up questionnaire. At T3, 181 employees (83.4% of the T1 sample) were still employed in the organization, of which 133 employees (73.4% of those from T1 remaining at T3) participated in the last questionnaire.

Longitudinal studies are typically confronted with dropout (i.e., attrition), resulting in missing data that can bias the results of a study. To determine whether attrition possibly affected the outcome variables we performed several analyses. First, we created a dummy variable to classify respondents into four groups: Group 1 ( $n = 48$ ) consisted of respondents who only participated at T1, Group 2 ( $n = 35$ ) consisted of respondents who participated at T1 and T2, group 3 ( $n = 105$ ) consisted of respondents who participated at T1, T2 and T3 and Group 4 ( $n = 49$ ) consisted of respondents who participated at T1 and T3.

Second, we performed a one-way ANOVA to examine whether these groups differed on age, sex, educational level, hours worked and hours worked overtime. Only age was significantly higher in Group 1 ( $M = 49.39$ ,  $SD = 10.45$ ) as compared to Group 2 ( $M = 41.86$ ,  $SD = 10.42$ ), Group 3 ( $M = 44.92$ ,  $SD = 9.28$ ) and Group 4 ( $M = 40.38$ ,  $SD = 9.52$ ). This difference can be partly explained by employees reaching retirement age. However, after removing four employees older than 63 years from the T1 sample, age was still significantly higher in Group 1. Therefore, we kept the four employees in the sample.

Finally, we examined possible difference between the four groups on the study variables (i.e., vigour and need for recovery) at T1. Only need for recovery at T1 was significantly different across the groups. Group 3 ( $M = 1.65$ ,  $SD = .42$ ) scored significantly lower on need for recovery than Group 1 ( $M = 1.94$ ,  $SD = .51$ ) and Group 2 ( $M = 1.91$ ,  $SD = .52$ ). Thus, participants who completed the questionnaires at all three time points (i.e., Group 3) scored lower on need for recovery at T1. This implies that participants with a high need for recovery dropped out more often at T2 and T3, which will most likely bias our results. There is a growing consensus that multiple imputation is particularly suited for handling missing data in longitudinal studies (Asendorpf, Van De Schoot, Denissen, & Hutteman, 2014). We followed the recommendations of Asendorpf et al. in our analyses and created 100 imputed datasets, based on the scale scores, with the R package ‘mice’ (Buuren & Groothuis-Oudshoorn, 2010), which were used for the further analyses in Mplus (Muthén & Muthén, 2017); for more information on handling of missing data, see Appendix A.

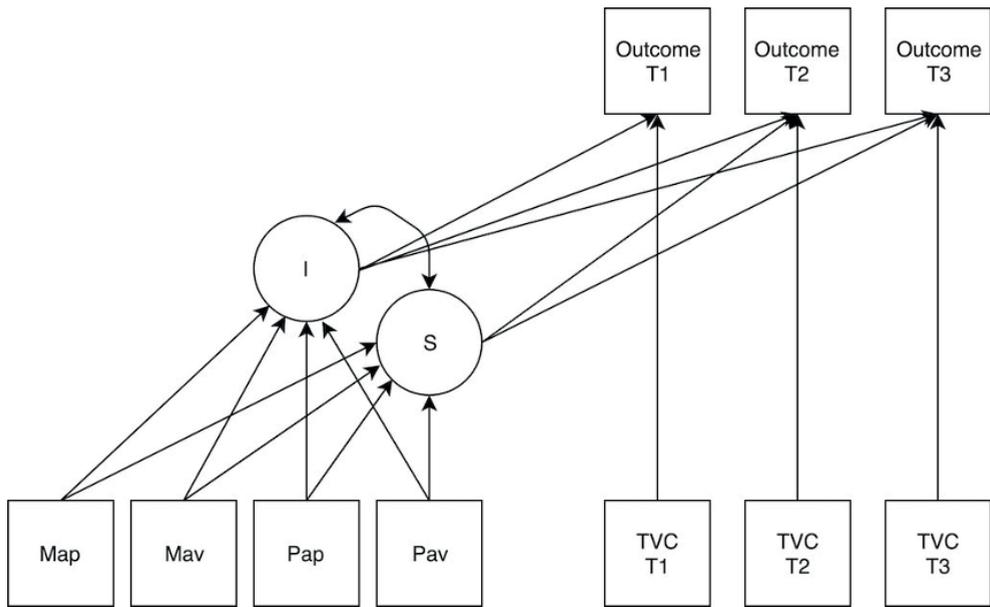
### *Statistical Analyses*

Latent growth curve modelling (LGCM) is suitable to analyse whether and to what degree changes occur in longitudinal data (Curran, Obeidat, & Losardo, 2010). LGCM enables researchers also to examine the form of change over time (e.g., linear or quadratic). Individual growth trajectories are described by their intercept (i.e., initial level of trajectory) and slope (i.e., change of trajectory). The intercept and slope predict the outcome variables

at the different time-points. The outcome can be controlled for time-varying covariates (TVC). LGCM can also be extended with variables that predict the intercept and slope. We used vigour or need for recovery as the outcome at T1, T2 and T3; the four goal orientations to predict the intercept and slope at T1, T2 and T3, and job autonomy or workload as TVC (see Figure 2).

**FIGURE 2**

*Latent growth curve model with time-varying covariates.*



Note. I = intercept factor; S = slope factor; Map = mastery-approach; Mav = mastery-avoidance; Pap = performance-approach; Pav = performance-avoidance; Outcome T1, T2 & T3 = vigour or need for recovery at T1, T2 & T3; TVC (time-varying covariates) T1, T2 & T3 = workload or job autonomy at T1, T2 & T3

**Measurement invariance**

A prerequisite for latent growth curve modelling (LGCM) is that the measurement of the outcome variable is invariant across time. To test for longitudinal measurement invariance we used a dataset with the items from the scales for the outcome variables (i.e., vigour and need for recovery). We created 100 imputed datasets that were subsequently analysed.

Little (2013) states that a CFI difference of .01 or less between the less (configural variance; only factor structure across time is the same) and most strict model (strict variance; factor structure, loadings and error variance are the same across time) is tenable

to establish measurement invariance. The CFI difference between the configural and strict variance models was less than .01 for both vigour and need for recovery. More details are available upon request.

## RESULTS

### Univariate latent growth models

We tested univariate latent growth models that only describe the trajectory of vigour and need for recovery as outcome variables. We report the following fit statistics: comparative fit index (CFI), Tucker-Lewis index (TLI), standardized root mean square residual (SRMR) and root mean square error of approximation (RMSEA). Fit indices above a value of .95 for the maximum likelihood (ML)-based indices (TLI, CFI), a value lower than .08 for SRMR, and a value lower than .06 for RMSEA are recommended (Hu & Bentler, 1999). To compare the fit of the models we used the Akaike information criterion (AIC). The AIC indicates which model has the least loss of information. For smaller samples, a corrected version (AICc) of the AIC is recommended, for which rules of thumb are available. The difference in the AICc values between models is denoted as  $\Delta$ . Compared to the best model (lowest AICc), models with  $\Delta$  values close to 0 have strong empirical support. Models with  $\Delta$  values in the range of 4–7 have considerably less support, while models with  $\Delta$  values in the margin (about 9–14) have relatively little support (Anderson, 2008).

### Vigour

The model fit statistics indicated an excellent fit ( $\chi^2 = 0.226$ ,  $df = 1$ ,  $p = 0.63$ , CFI = 1.00, RMSEA = 0.000, SRMR = 0.011). The intercept factor ( $M_{\text{INTERCEPT}} = 2.89$ ,  $z = 90.547$ ,  $p < .001$ ) in the model was significant, while the slope factor ( $M_{\text{SLOPE}} = 0.02$ ,  $z = 0.885$ ,  $p = 0.38$ ) was not. The absence of a significant slope implies that vigour across four years was stable and that on average the trajectories did not change. There was significant variability in the initial level of vigour scores ( $\text{Var}_{\text{INTERCEPT}} = 0.12$ ,  $z = 3.921$ ,  $p < .001$ ). Thus, while vigour was stable over time, people differed significantly among each other in vigour at T1.

### Need for recovery

The model fit statistics indicated an excellent fit ( $\chi^2 = 0.053$ ,  $df = 1$ ,  $p = 0.82$ , CFI = 1.00, RMSEA = 0.000, SRMR = 0.004). The intercept factor ( $M_{\text{INTERCEPT}} = 1.77$ ,  $z = 52.876$ ,  $p < .001$ ) in the model was significant, while the slope factor ( $M_{\text{SLOPE}} = 0.02$ ,  $z = 0.979$ ,  $p = 0.33$ ) was not. This implies that need for recovery across 4 years was also fairly stable and that on average the trajectories did not change. However, there was significant variability between the slope factors ( $\text{Var}_{\text{SLOPE}} = 0.01$ ,  $z = 2.221$ ,  $p < .03$ ), indicating that the individual trajectories differed significantly in their steepness. There also was significant variability in the initial need for recovery scores ( $\text{Var}_{\text{INTERCEPT}} = 0.18$ ,  $z = 4.322$ ,  $p < .001$ ), indicating significant individual differences in levels of need for recovery at T1.

### Latent growth curve models with achievement goal orientation

The lack of significant slope factors for both vigour and need for recovery made it impossible to detect effects of achievement goal orientation (AGO) on changes in these over time. Therefore, we were only able to determine the effect of achievement goal orientation on employees' initial levels of vigour and need for recovery; to do this, the univariate models were extended with the four AGOs as predictors of the intercept and slope factors.

#### Vigour

The model fit statistics indicated an excellent fit ( $\chi^2 = 4.371$ ,  $df = 5$ ,  $p = 0.50$ ,  $CFI = 1.00$ ,  $RMSEA = 0.000$ ,  $SRMR = 0.022$ ). Only Map and Mav goal orientations significantly predicted the intercept factor ( $\beta_{Map} = 0.21$ ,  $p < 0.05$ ;  $\beta_{Mav} = 0.19$ ,  $p < 0.05$ ). We used the Akaike information criterion (AIC) to assess the difference in fit between the univariate model and the model with AGO ( $AICc_{UNI} = 710.73$ ;  $AICc_{AGO} = 706.85$ ). The  $\Delta$  value of 3.9 indicated a better fit for the model including AGO.

#### Need for recovery

The model fit statistics indicated an excellent fit ( $\chi^2 = 5.112$ ,  $df = 5$ ,  $p = 0.40$ ,  $CFI = 1.00$ ,  $RMSEA = 0.010$ ,  $SRMR = 0.026$ ). Only Mav significantly predicted the intercept factor ( $\beta_{Mav} = -0.21$ ,  $p < 0.05$ ). The AIC scores ( $AICc_{UNI} = 860.33$ ;  $AICc_{AGO} = 860.45$ ) of both models, with a  $\Delta$  value of 0.1, indicated both models fitted the data equally well. In other words, the model with AGO is more complicated, but did not lead to loss of more information. However, according to the principle of parsimony a simpler model is always preferable (Burnham & Anderson, 2002).

### Latent growth curve models with AGO, job demands and resources

To determine the unique effect of AGO on vigour and need for recovery, the models were extended with perceived workload or job autonomy as time-varying covariates. First we extended the univariate models and then the models with AGO.

#### Vigour and perceived workload

The model fit statistics indicated an excellent fit ( $\chi^2 = 5.236$ ,  $df = 7$ ,  $p = 0.63$ ,  $CFI = 1.00$ ,  $RMSEA = 0.00$ ,  $SRMR = 0.05$ ). Perceived workload at T1 predicted vigour at T1 and T2 significantly ( $\beta_{WorkT1} = -0.21$ ,  $p < 0.05$ ). The model with perceived workload had a better fit:  $AICc_{UNI} = 710.73$ ;  $AICc_{WORKL} = 699.99$ . The  $\Delta$  value of 10.7 indicated that adding perceived workload improved the model.

#### Vigour, AGO and perceived workload

The model fit statistics indicated an excellent fit ( $\chi^2 = 8.066$ ,  $df = 11$ ,  $p = 0.71$ ,  $CFI$

= 1.00, RMSEA = 0.000, SRMR = 0.031). Both Map and Mav significantly predicted the intercept factor ( $\beta_{\text{Map}} = 0.21, p < 0.05$ ;  $\beta_{\text{Mav}} = 0.19, p < 0.05$ ). The model with both AGO and perceived workload had a better fit:  $\text{AICc}_{\text{WORKL}} = 699.99$ ;  $\text{AICc}_{\text{WORKL\&AGO}} = 697.49$ . The  $\Delta$  value of 2.5 indicated that adding AGO improved the model.

### **Vigour and job autonomy**

The model fit statistics indicated an excellent fit ( $\chi^2 = 6.571, df = 7, p = 0.47, \text{CFI} = 1.00, \text{RMSEA} = 0.00, \text{SRMR} = 0.07$ ). Vigour at T1, T2 and T3 was significantly predicted by job autonomy at T1, T2 and T3 ( $\beta_{\text{AutT1}} = 0.20, p < 0.01$ ;  $\beta_{\text{AutT3}} = 0.19, p < 0.05$ ). The lower AIC score of the model with job autonomy convincingly indicated a better fit ( $\Delta$  value = 19.8;  $\text{AICc}_{\text{UNI}} = 710.73, \text{AICc}_{\text{AUT}} = 690.89$ ).

### **Vigour, AGO and job autonomy**

The model fit statistics indicated an excellent fit ( $\chi^2 = 11.597, df = 11, p = 0.40, \text{CFI} = 0.99, \text{RMSEA} = 0.016, \text{SRMR} = 0.042$ ). Mav significantly predicted the intercept factor ( $\beta_{\text{Mav}} = 0.21, p < 0.05$ ), while Map had a marginally significant effect ( $\beta_{\text{Map}} = 0.17, p < 0.10$ ). The model with AGO and job autonomy had a better fit ( $\Delta$  value = 1.3;  $\text{AICc}_{\text{AUT}} = 690.89, \text{AICc}_{\text{AUT\&AGO}} = 689.59$ ).

### **Need for recovery and perceived workload**

The model fit statistics indicated an excellent fit ( $\chi^2 = 6.803, df = 7, p = 0.45, \text{CFI} = 1.00, \text{RMSEA} = 0.000, \text{SRMR} = 0.063$ ). Need for recovery at T1, T2 and T3 was significantly predicted by perceived workload at T1, T2 and T3 ( $\beta_{\text{WorklT1}} = 0.40, p < 0.001$ ;  $\beta_{\text{WorklT3}} = 0.35, p < 0.001$ ). Extending the model with perceived workload convincingly ( $\Delta$  value: 85.7) improved the fit:  $\text{AICc}_{\text{UNI}} = 860.33$ ;  $\text{AICc}_{\text{WORKL}} = 774.66$ .

### **Need for recovery, AGO and perceived workload**

The model fit statistics indicated an excellent fit ( $\chi^2 = 10.919, df = 11, p = 0.45, \text{CFI} = 1.00, \text{RMSEA} = 0.000, \text{SRMR} = 0.041$ ). Only Mav significantly predicted the intercept factor ( $\beta_{\text{Mav}} = -0.23, p < 0.05$ ). The model with only perceived workload had a slightly better fit ( $\Delta$  value: 0.3). Thus, adding AGO resulted in a poorer fit:  $\text{AICc}_{\text{WORKL}} = 774.66$ ;  $\text{AICc}_{\text{WORKL\&AGO}} = 774.94$ .

### **Need for recovery and job autonomy**

The model fit statistics indicated an excellent fit ( $\chi^2 = 7.914, df = 7, p = 0.34, \text{CFI} = 0.98, \text{RMSEA} = 0.025, \text{SRMR} = 0.045$ ). Need for recovery was significantly predicted by job autonomy only at T2 ( $\beta_{\text{AutT2}} = -0.13, p < 0.05$ ). Extending the model with job autonomy ( $\Delta$  value = 6.3) improved the fit:  $\text{AICc}_{\text{UNI}} = 860.33$ ;  $\text{AICc}_{\text{AUT}} = 854.04$ .

**Need for recovery, AGO and job autonomy**

The model fit statistics indicated an excellent fit ( $\chi^2 = 14.669$ ,  $df = 11$ ,  $p = 0.20$ , CFI = 0.95, RMSEA = 0.039, SRMR = 0.036). Only Mav significantly predicted the intercept factor ( $\beta_{Mav} = -0.22$ ,  $p < 0.05$ ). The model with both AGO and job autonomy had a comparable fit to the model with only job autonomy ( $\Delta$  value = 0.6):  $AICc_{AUT} = 854.04$ ;  $AICc_{AUT\&AGO} = 854.98$ . The model with AGO explained more variance, but due to three non-significant predictors is less parsimonious than the model with only job autonomy as a time-varying covariate.

**Overview of results**

The results of the different models are summarized in Tables 1 and 2. For all models, based on AICc, the addition of AGO led to a comparable (i.e., need for recovery) or even better fit (i.e., vigour). It should be noted that AICc only ranks models; when all models are badly fitting, it only ranks models from worse to worst. The variance explained by the model ( $R^2$ ) is a better indicator of the quality of the model (Anderson, 2008). Over all the models for vigour, the model with job autonomy as a time-varying covariate and AGO had the lowest AICc value. In this model, 12% of the variance in the intercept factor was explained by AGO ( $R^2 = 0.12$ ,  $p = 0.08$ ). In the model with only AGO as a predictor, 12% of the variance in the intercept factor was also explained ( $R^2 = 0.12$ ,  $p < 0.05$ ).

**TABLE 1**  
Fit statistics LGCM Vigour

	$\chi^2$	$df$	$p$	CFI	TLI	RMSEA	SRMR	ssaBIC	BIC	AIC	AICc
M1: Univariate	0.226	1	0.63	1.00	1.04	0.00	0.01	711.73	737.08	710.04	710.73
M2: M1 + AGO	4.371	5	0.50	1.00	1.02	0.00	0.02	707.51	758.21	704.13	706.85
M3: M1 + Workl	5.236	7	0.63	1.00	1.04	0.00	0.05	701.02	735.88	698.70	699.99
M4: M3 + AGO	8.066	11	0.71	1.00	1.07	0.00	0.03	697.64	757.85	693.63	697.49
M5: M1 + Aut	6.571	7	0.47	1.00	1.01	0.00	0.07	691.93	726.79	689.61	690.89
M6: M5 + AGO	11.597	11	0.39	0.99	0.99	0.02	0.04	689.74	749.95	685.73	689.59

Note. Workl & Aut = Perceived workload and job autonomy as time-varying covariates; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; ssaBIC = sample size adjusted BIC; AIC = Akaike Information Criterion; AICc = corrected Akaike Information Criterion.

**TABLE 2**

Fit statistics LGCM need for recovery

	$\chi^2$	df	p	CFI	TLI	RMSEA	SRMR	ssaBIC	BIC	AIC	AICc
M1: Univariate	0.053	1	0.82	1.00	1.07	0.00	0.00	861.33	886.68	859.64	860.33
M2: M1 + AGO	5.112	5	0.40	1.00	1.00	0.01	0.03	861.10	911.81	857.73	860.45
M3: M1 + Workl	6.942	7	0.44	1.00	1.00	0.00	0.07	760.22	795.08	773.37	774.66
M4: M3 + AGO	10.919	11	0.45	1.00	1.00	0.00	0.04	775.09	835.30	771.08	774.94
M5: M1 + Aut	7.914	7	0.34	0.98	0.97	0.03	0.05	855.07	889.93	852.75	854.04
M6: M5 + AGO	14.669	11	0.20	0.95	0.89	0.04	0.04	855.13	915.34	851.12	854.98

Note. Workl & Aut = Perceived workload and job autonomy as time-varying covariates; CFI = Comparative Fit Index; TLI = Tucker-Lewis Index; RMSEA = Root Mean Square Error of Approximation; SRMR = Standardized Root Mean Square Residual; ssaBIC = sample size adjusted BIC; AIC = Akaike Information Criterion; AICc = corrected Akaike Information Criterion.

These results indicated that the models for vigour with AGO were good, as reflected in the significant and substantial explained variance. For need for recovery, the model with perceived workload as a time-varying covariate and AGO had the lowest AICc value (among the models with AGO); 7% of the variance in the intercept factor was explained by AGO ( $R^2 = 0.07$ ), but this was not significant ( $p = 0.23$ ). These results indicated that the models for need for recovery with AGO were poor, because the variables in the model did not significantly explain the variance in need for recovery.

Finally, the lack of significant slopes for both vigour and need for recovery, as described earlier, indicated that in our study there were no significant changes in the average individual trajectories over time for these variables. Consequently, no effects of AGO on the development over time of vigour and need for recovery could be detected. Nonetheless, the initial levels of vigour were related to Map and Mav goal orientations and those of need for recovery to Mav goal orientation. However, the  $R^2$  of need for recovery was not significant. In sum, Map and Mav goal orientations contribute to predicting vigour in employees but there is no support for a significant effect of achievement goal orientation on the need for recovery.

## DISCUSSION

The objective of the present study was to examine the long-term relationship between achievement goal orientation (AGO) and recovery from stress (i.e., vigour and need for recovery), in a high-stress job. To this end we used data from a sample of social workers, and looked at the influence of AGO on the recovery process over several years. More specifically, we expected that higher mastery-approach (Map) goal orientation over time would result in lower need for recovery and higher vigour, whereas higher performance-avoidance (Pav) goal orientation would result in higher need for recovery and lower vigour.

We used latent growth curve modelling (LGCM) to detect changes over a period of four years, with three measurement points. LGCM estimates trajectories of a variable over time; the intercept describes the initial level of the trajectories and the slope describes the changes in the trajectories. LGCM can also be extended with predictors of the intercept and the slope. To determine the effect of AGO on the initial level of and changes in the trajectories, we entered AGO as a predictor of the intercept and slope.

Overall, there were no significant changes (i.e., slope factors) in both vigour and need for recovery over time. This result is in line with other studies (e.g., De Croon et al., 2006; Seppälä et al., 2015), which showed that both vigour and need for recovery are fairly stable over time. Consequently, we could not examine the effects of AGO on change in vigour and need for recovery over time. A possible explanation for the lack of findings could be an attrition effect. In our study, social workers with a higher need for recovery at T<sub>1</sub> were less likely to participate at T<sub>2</sub> or T<sub>3</sub>. Although a multiple imputation procedure was used to correct for an attrition effect, we cannot rule out a bias effect. However, the means and standard deviations of vigour and need for recovery were similar at the different measurement points. Therefore, attrition is less likely an explanation for our findings.

Another explanation for the stability in vigour and need for recovery might be that the working environment was fairly stable over time. Therefore, we additionally analysed the trajectories of two important indicators of job demands and resources (i.e., perceived workload and job autonomy) and they were indeed also stable over time. So, it might be that in a stable work environment, recovery from stress shows a stable pattern over time, while in a more dynamic environment, recovery from stress would show more variability over time. In addition, stability over time does not mean that need for recovery and vigour are unchangeable or do not fluctuate on a daily level. Sonnentag (2003), for example, found that Map goal orientation at the daily level was related to engagement and recovery at the daily level.

Therefore, to gain more insight into what contributes to recovery from stress by social workers, future research is needed in which social workers are monitored on a daily level (for instance, by means of diary studies). With this kind of research, antecedents and consequences of stress recovery can be measured and AGO can then be added as a state

(versus a trait) variable. An example of an item evaluating AGO as a state is 'Today I focused on developing my skills at work'. Measuring AGO on a daily level has the advantages that any filter effects of one's memory are minimized and that the measurements can be related to concrete events (for instance, a crisis at work) (Kahneman & Krueger, 2006). Despite the lack of findings for change over time, the initial levels of both vigour and need for recovery differed significantly between employees. Moreover, these differences were related to employees' AGO. As expected, a higher Map goal orientation was related to more vigour at T1. In LGCM the measurement points can be controlled for relevant variables, which are labelled as time-varying covariates. We created models that controlled for an important job demand, namely, perceived workload, and an important job resource, namely, job autonomy. After controlling for perceived workload, Map goal orientation still predicted the initial level of vigour significantly, while after controlling for job autonomy this effect became marginally significant. The latter was caused by the presence of predictors, Pap and Pav, that did not contribute to the model. An additional analysis showed that in a more parsimonious model with only Map and Mav as predictors, Map still significantly predicted the initial level of vigour even after controlling for job autonomy. Thus, Map goal orientation is related to vigour independent of the experienced job autonomy, and therefore might be considered as an important personal resource. In other words, vigour can be partly explained by the degree of job autonomy, but a unique part of the variance can be explained by the levels of mastery goal orientation (both Map and Mav). Hence, besides creating job autonomy, fostering mastery goal orientations in employees could contribute to their feeling more energetic during the workday.

Contrary to our expectations, Pav goal orientation was not related to vigour. It is hard to find an explanation why vigour is not related to employees' Pav goal orientation. Apparently, the previously found negative effects of Pav goal orientation on engagement in a working environment (e.g., Bakker et al., 2018) were not supported by the data in our study. It might be that Pav goal orientation was less maladaptive in this particular professional field (i.e., youth guardians). It is known that the effects of goal orientation on performance differ across domains (work, sports and education) (Van Yperen et al., 2014). Similarly, the effects of goal orientation on aspects of well-being (such as recovery from stress) could vary across the different work areas within social work. Thus, in addition to research that monitors social workers' recovery from stress on a daily level, more research across different work areas in social work is needed to examine whether in some work areas (e.g., youth guardianship) a focus on avoiding mistakes is less maladaptive than in other work areas (e.g., residential youth care).

The remarkable finding that Mav goal orientation was positively related to vigour might be explained by the age of the participants in our study ( $M = 45.12$ ,  $SD = 10.37$ ). More recent studies have reported positive effects of Mav goal orientation on positive affect (e.g., more task enjoyment) for older adults (Senko & Freund, 2015). In addition, an orientation

toward prevention of loss is negatively associated with well-being in younger adults, while in older adults, orientation toward maintenance is positively associated with well-being (Ebner, Freund, & Baltes, 2006). So, at an older age, Mav goal orientation might be related to feeling energetic during the workday; a prevention-based focus on competencies (not lagging behind and staying up to date in my job) would contribute to feeling more energetic for older employees. However, more research is needed to replicate these effects of Mav goal orientation. Moreover, these positive effects of Mav goal orientation might also vary across different work areas.

For need for recovery, although we found that employees with a high level of Mav goal orientation had lower need for recovery, both Map and Pav goal orientation were unrelated to need for recovery. Despite the strong association between vigour and need for recovery ( $r = -.51, p < .01, T1$ ), their relation with AGO proved not to be similar. A possible explanation for the lack of a relationship between AGO and need for recovery, while there was a relationship with vigour, could be that vigour is more dependent on motivational processes. The effect of AGO on motivation is known and extensively researched (Payne et al., 2007). Feeling energetic at one's work (i.e., vigour) depends on one's energy level, but also the motivation to use the available energy resources, while need for recovery is more a logical consequence of being exposed to high demands. To illustrate this, one can imagine that a social worker who has a hard time recovering well after work (i.e., high need for recovery) will have more difficulty feeling energetic the next workday. In such a case, putting energy into his work is determined by not only his fatigue, but also his willingness to do so. In other words, vigour may be regarded as an outcome of motivational processes, while need for recovery may be seen as an outcome of a strain process (Schaufeli, Bakker, & Van Rhenen, 2009). Our study showed that mastery goal orientation (i.e., Map and Mav goal orientations) cannot prevent depletion, but is related to vitality. Similarly, Van Yperen and Janssen (2002) found that job demands resulted in fatigue regardless of goal orientation. However, for individuals whose performance goal orientation was stronger than their mastery goal orientation, fatigue was also accompanied with dissatisfaction.

Due to the lack of change over the long term in vigour and need for recovery, we could not demonstrate an influence of achievement goal orientation over the long term. The relationship between AGO and the process of recovery from stress is probably even more complex than we could show with this study. One can imagine that AGO and the recovery process have a reciprocal relationship, in such a way that vital (i.e., well-recovered) employees will be focused more on developing competencies and that the focus on developing competencies will result in more vitality. More longitudinal studies with different time spans are needed to demonstrate a possible reciprocal relationship between AGO and vitality. This kind of research could also address whether AGO and recovery from stress are related constructs or whether they are clearly independent of each other. Based on our findings, in which vigour and recovery were fairly stable, we expect that research

in which recovery from stress is monitored daily over a period of several weeks would be the most fruitful. First, this kind of research will likely involve more variability and can provide more insight into related events that influence recovery from stress. Second, such a research design enables researchers to determine to what extent the relationship between AGO and recovery from stress is reciprocal.

### **Practical implications**

The findings have implications for both social workers and the organizations in which they work. Social workers are confronted with inevitable stress in their job, which makes it highly relevant to ask which workers can recover well from stress. Our study showed that employees with high mastery goal orientation (both Map and Mav) felt more energetic during the workday despite their workload. Therefore, mastery goal orientation can be used as an indicator whether someone is suited for a job in which high stress is inevitable. Thus, organisations can prevent depletion (i.e., high need for recovery) by ensuring an acceptable workload, while vigour can be enhanced by selecting employees with high mastery goal orientation.

Organisations can also contribute to the vitality of their workers by stimulating and fostering mastery goal orientation (see also Dragoni, 2005). Promoting mastery goals has been proven to be effective, even for employees with high performance goal orientation (Latham, Seijts, & Slocum, 2016). Moreover, it has been demonstrated that mastery-approach goal orientation can be promoted among adults (e.g., Noordzij, van Hooft, van Mierlo, van Dam, & Born, 2013) and that leaders can promote mastery-approach goal orientation in their employees by promoting a mastery-approach goal structured work environment (e.g., O'Keefe, Ben-Eliyahu, & Linnenbrink-Garcia, 2013).

Finally, our study showed that the positive relation between mastery goal orientation (both Map and Mav) and vigour is also independent of job autonomy. Thus, mastery goal orientation can be viewed as an important personal resource for feeling more energetic during the workday.

### **Limitations**

A possible limitation of the present study is that the results rely on self-report measures. Self-report measures raise the concern of common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, the scales are well validated and are based on extensive empirical evidence (e.g., Van Veldhoven et al., 2002; Van Yperen et al., 2014). Another limitation is that the study suffered from data attrition, which might influence the results. Multiple imputation is, however, considered appropriate to minimize the effects of data attrition (Asendorpf et al., 2014) (for an explanation of handling missing data in our study, see Appendix A ).

### **Conclusion**

Because no changes over time in vigour and need for recovery were found, a possible relation with AGO over the long term could not be demonstrated. Employees' AGO did not significantly predict their level of need for recovery. However, mastery goal orientation proved to be a unique and important predictor of how energetic the employee felt during the workday. Therefore, mastery goal orientation can be regarded as an important factor in relation to vitality in a high-stress job. Organisations may consider using this knowledge by selecting social workers with high mastery goal orientation and by fostering mastery goal orientation, as a personal resource, among their employees. Thus, mastery goal orientation could provide a concrete avenue for positively influencing the well-being of social workers and also provide a solution for the stress they frequently experience.

## APPENDIX A

### Handling missing data

Longitudinal studies are typically confronted with dropout (i.e. attrition), resulting in missing data, which can bias the results of a study. The bias depends on the pattern of missing data. When all missing data occur independently of all observed and non-observed variables, they are regarded as missing completely at random (MCAR). In the case of MCAR, the dropout therefore does not bias results. However, in our case, data were missing not at random (MNAR), as dropout was related to several variables (e.g., age and need for recovery). Missing data that are MNAR are hard to rule out in longitudinal studies (Little, 2013). Although in such cases a bias cannot be ruled out, there is growing consensus that multiple imputation is particularly suited for handling missing data in longitudinal studies (Asendorpf, Van De Schoot, Denissen, & Hutteman, 2014). An imputation procedure replaces missing values by imputed values (i.e., estimated scores).

In our study, vigor and NFR across T1-T3 form the core variables for which missing values need to be imputed. Imputation also makes it possible to add auxiliary variables that are correlated with a core variable and can predict some of the missing scores on the core variable, because some participants have scores on the auxiliary variable but not on the core variable. The estimation improves when the added auxiliary variables have higher correlations with the core variables.

For the imputation procedure, we followed the guidelines provided by Asendorpf et al. (2014). First, the missing data pattern was analyzed as described in the Method section. In addition, based on this analysis, we could conclude that a *monotone missing pattern* (i.e. all missing scores are due to drop-outs who never returned to the study) was absent; 49 participants returned at T3, while missing at T2. Therefore, no special imputation procedures were needed in our study (see Asendorpf et al., 2014). Secondly, we determined the auxiliary variables. As a rule of thumb, the number of auxiliary variables should not exceed 1/3 of the number of participants without missing values. In our study 105 participants had no missing values, so we could add 35 auxiliary variables. The selection of the auxiliary variable was based on the correlations of the core variables with background variables (e.g., age, education) and remaining variables from the QEEW (e.g., job satisfaction, pleasure in work and involvement in organization). We selected 31 variables and also added the four goal orientations at T1 and the time-covarying variables of job autonomy and workload. Finally, with use of the R package ‘mice’ (Buuren & Groothuis-Oudshoorn, 2010), we created 100 imputed datasets. These datasets can be easily used within Mplus (Muthén & Muthén, 2017) with the R package MplusAutomation (Hallquist & Wiley, 2018).





**LINKING THE FIT**  
BETWEEN ACHIEVEMENT  
GOAL ORIENTATION AND  
LEARNING OPPORTUNITIES  
WITH EMPLOYEE WELL-BEING  
AND ABSENTEEISM

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## **ABSTRACT**

We examined the effects of a (mis)match between learning opportunities and mastery-approach and -avoidance goal orientation (GO) on positive well-being (job satisfaction and task enjoyment) and negative well-being (need for recovery and absenteeism). Data (N=212) of a guardianship organization were analyzed by means of polynomial regression and surface plot analysis. A match between mastery-approach GO and learning opportunities contributed to task enjoyment. Both a negative mismatch (few learning opportunities and high mastery-approach GO) and positive mismatch (ample learning opportunities and low mastery-approach GO) were related to lower positive well-being and higher need for recovery. Unexpectedly, a match between learning opportunities and mastery-avoidance GO was related to higher task enjoyment and less need for recovery. Theoretical and practical implications are discussed.

Opportunities for learning and permanent learning by employees can make an important contribution to employees' well-being (e.g., Rau, 2006), which in turn fosters good health and higher productivity (e.g., Litchfield, Cooper, Hancock, & Watt, 2016). Enhancing the positive effects of learning opportunities on well-being is, therefore, beneficial for both organisations and employees.

According to the person-environment (PE) fit literature (Kristof-Brown & Guay, 2011), a match between the environment (e.g., learning opportunities) and the characteristics of a person will result in positive outcomes (e.g., task enjoyment), while a mismatch will result in negative outcomes (e.g., need for recovery from work-related fatigue). One personal characteristic that likely influences the effects of learning opportunities is mastery goal orientation (Dweck & Leggett, 1988; Vandewalle, Nerstad, & Dysvik, 2019). A mastery-approach goal orientation is characterized by a focus on improving oneself and has shown positive relationships with self-regulation, task performance, and well-being (Vandewalle et al., 2019). Moreover, individuals high on mastery-approach goal orientation are inclined to work on challenging tasks, which indicates that employees with mastery-approach goals have a preference for tasks they can learn from (Preenen, Van Vianen, & De Pater, 2014). Relying on the ideas of the PE theory, we will examine whether ample opportunities to develop oneself (i.e., learning opportunities) and a high focus on developing one's competencies (i.e., mastery-approach goal orientation) have positive effects on employee well-being. We conducted our study within a youth guardian organization, an employee population known to be exposed to day-to-day and long-term stress, which can likely result in negative well-being (Travis, Lizano, & Barak, 2016).

This study contributes to the literature by 1) improving our understanding of the effects of mastery goal orientation and learning opportunities on positive (i.e., job satisfaction and task enjoyment) and negative (i.e., need for recovery and absenteeism) indicators of well-being, and by 2) applying a PE-fit perspective to the achievement goal orientation theory by investigating the effects of the fit between a mastery goal orientation ("person variable") and learning opportunities in a job ("environment variable") on well-being. Furthermore, our study hopes to provide concrete avenues for employers to positively influence the well-being of their employees by 1) assessing to what extent employees feel the need to develop themselves in order to provide a better match with provided learning opportunities, and by 2) paying attention to applicants' mastery-approach goal orientation when recruiting new staff.

## **WELL-BEING**

The Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007) provides a theoretical framework to explain negative (e.g., emotional exhaustion) as well as positive aspects (e.g., task enjoyment) of employee well-being (Schaufeli, Bakker, & van Rhenen,

2009). The JD-R model states that job demands evoke a strain process of energy depletion leading to strain (e.g., burnout), whereas job resources induce a motivational process leading to motivation (e.g., work engagement). The strain and motivational pathways are two different but interrelated psychological processes. More specifically, job resources (the motivational pathway) buffer the negative effects of high job demands (the strain pathway). Thus, a job with high demands but also ample job resources can be expected to reduce the negative effects of these job demands and result in more motivation and less strain than a job with low job resources.

Motivation and strain are different aspects of well-being, which we will name respectively positive and negative well-being from here. For positive well-being, we use both a subjective indicator that reflects a direct report of affect, namely task enjoyment, and a subjective indicator that reflects a more global job evaluation, namely job satisfaction (Weiss, 2002). Need for recovery, which refers to work-related fatigue after working time, has proven to be an important subjective indicator of negative well-being and can be viewed as a psychological early warning indicator for negative well-being (Sluiter, 1999). Moreover, a certain level of fatigue after a working day is inevitable, especially when one is dedicated to one's job. However, a high need for recovery occurs when the energy resources cannot be replenished after working hours. A persistent high need for recovery is therefore associated with prolonged fatigue and chronic exhaustion (e.g., burnout). Sickness absenteeism can be divided into frequency and duration (i.e., time lost). Absence frequency can be regarded as the outcome of a motivational process whereas absence duration can be perceived as the outcome of a strain process. Both frequency and duration can therefore be viewed as behavioral indicators of well-being (Schaufeli et al., 2009). However, there is little empirical support for the voluntariness distinction between absence frequency and duration (Johns & Al Hajj, 2016). Therefore, in line with the recommendation by Johns and Al Hajj (2016), both absence frequency (the number of sick leaves) and duration (time lost due to sick leave) are measured and no further assumptions about voluntariness are made.

## **LEARNING OPPORTUNITIES AND WELL-BEING**

Learning opportunities are the extent to which employees perceive that their job provides opportunities to develop skills and knowledge and stimulates personal growth (Van Veldhoven, Meijman, Broersen, & Fortuin, 2002). Examples of learning opportunities in this organization include professional training and challenging tasks such as providing care for traumatized children.

Learning opportunities enable employees to deal with work demands more effectively, because these opportunities promote the development of new competencies and feelings of mastery (Karasek & Theorell, 1990), resulting in less exhaustion (Van Ruysseveldt, Verboon, & Smulders, 2011). Therefore, learning opportunities can be viewed as a job resource that are likely to have a positive effect on employees' well-being (e.g., Rau, 2006).

Learning opportunities in a job have a considerable conceptual overlap with challenging job experiences, which have been described as “job characteristics that provide individuals with the opportunity and motivation to learn and that may result in the development of a wide range of skills, abilities, insights, knowledge, and values” (De Pater, Van Vianen, Bechtoldt, & Klehe, 2009, p. 299). Challenging job experiences have been related to positive outcomes such as employee learning (Maurer, Pierce, & Shore, 2002) and career advancement (De Pater et al., 2009). Both learning opportunities and challenging job experiences underline the importance and relevance of the opportunity to learn and to develop in a job. However, they differ in their scope. Challenging job experiences are operationalized as tasks in a job that are challenging, while learning opportunities have a wider scope by also incorporating opportunities outside one’s own job tasks, such as trainings that are provided and learning from experienced colleagues.

### **MASTERY GOAL ORIENTATION AND WELL-BEING**

Dweck and Leggett (1988) discerned two different preferences for goals: a mastery and a performance goal orientation (GO). A mastery GO focuses on improving competence, while a performance GO focuses on demonstrating competence. Later on, Elliot and McGregor (2001) divided mastery and performance GO along a valence dimension into approach and avoidance orientation: 1) mastery-approach GO, where the focus is on improvement of one’s competence and gaining mastery over a task, 2) mastery-avoidance GO, in which the focus is on avoiding incompetency and failure to learn (see also Baranik, Lau, Stanley, Barron, & Lance, 2013), 3) performance-approach GO, where the focus is on showing one’s competence and being evaluated positively, and 4) performance-avoidance GO, where the focus is on avoiding showing incompetency. As the four goal orientations are interrelated, when the effect of one of the GO’s is examined, the other three GO’s are used as control variables.

A mastery-approach GO is positively related to well-being in terms of positive affect, satisfaction, and engagement (Vandewalle et al., 2019) and negatively related to burnout symptoms (Sijbom, Lang, & Anseel, 2019). The effects of a mastery-avoidance GO on well-being are less clear; both negative relations with well-being (such as more fatigue and job detachment; Poortvliet, Anseel, & Theuwis, 2015), and positive relations (such as more interest in one’s job tasks; Baranik, Stanley, Biddum, & Lance, 2010) have been reported. Moreover, Senko and Freund (2015) found that experimentally induced mastery-avoidance goals were associated with higher task enjoyment and task persistence among older adults. In sum, we expect to find a positive effect of mastery-approach GO on employee well-being, but do not make a prediction for mastery-avoidance GO. Although outside the scope of this study, a negative effect on well-being is expected for performance-avoidance GO and no effect for performance-approach GO (Vandewalle et al., 2019).

## LEARNING OPPORTUNITIES, MASTERY GOAL ORIENTATION AND WELL-BEING

We draw from the findings of the PE-fit literature, more specifically, need-supplies fit literature (e.g., Edwards & Shipp, 2007), to infer what the effects of the interaction between mastery GO (needs) and perceived learning opportunities (supplies) will be on employee well-being. The needs-supplies fit literature clearly states that well-being is higher when needs and supplies are both high than when both are low. For example, job satisfaction is higher when both needs and supplies are high than when both are low.

When supplies fall short of someone's needs (i.e., negative mismatch), this person's well-being will be low and will increase when the mismatch decreases. An explanation for the effects of a negative mismatch comes from the stress literature, which shows that stress exists when supplies fall short of a person's need (Edwards & Shipp, 2007). Moreover, the effects of stress on well-being are intensified when needs are important to the person. Therefore, a higher mastery-approach GO in combination with fewer learning opportunities will result in lower employee well-being. For example, a misfit between needs and supplies has been associated with burnout symptoms (Brandstätter, Job, & Schulze, 2016). Therefore, we expect that a misfit between mastery-approach goal orientation and learning opportunities will result in a precursor of prolonged fatigue, namely a higher need for recovery.

The effects of a positive mismatch (i.e., high supplies while the needs are low) on well-being depend on the effect of the excess of supplies on other needs or on the same need at a later time (cf. Edwards & Rothbard, 1999). For example, an excess of learning opportunities was shown to be associated with lower satisfaction (e.g., Klein, Noe, & Wang, 2006). According to Edwards and Rothbard (1999), two mechanisms explain the negative effect of a positive mismatch on well-being. These are the mechanism of *interference*, referring to situations in which the excess interferes with other needs, and the mechanism of *depletion*, referring to situations in which the excess depletes supplies in the future. Interference is most likely responsible for the negative effect of an excess, because an excess of learning opportunities can interfere with other needs, such as the need for competence. Klein et al. (2006) indeed found that a low mastery-approach GO was associated with perceiving more barriers to learning. Therefore, we expect that a higher positive mismatch (i.e., learning opportunities high, mastery-approach GO low) will result in lower well-being.

Based on the previous, we hypothesize that well-being will be higher, that is, there will be higher job satisfaction (1a), higher task enjoyment (1b), lower need for recovery (1c), lower frequency of absenteeism (1d) and shorter absenteeism duration (1e), when learning opportunities and mastery-approach GO are both high than when both are low (Hypothesis 1). Furthermore, we expect negative mismatch (Hypothesis 2) and positive mismatch (Hypothesis 3) effects. The greater the negative mismatch (i.e., mastery-approach GO is high and learning opportunities are low) and the greater the positive

mismatch (i.e., mastery-approach GO is low and learning opportunities are high), the lower the well-being, that is, lower job satisfaction (H2a, 3a), lower task enjoyment (H2b, 3b), higher need for recovery (H2c, 3c), higher frequency of absenteeism (H2d, 3d) and longer absenteeism duration (H2e, 3e).

In contrast to mastery-approach GO, for mastery-avoidance GO possible interaction effects with learning opportunities are less clear. The focus of a mastery-avoidance GO is on avoiding an unpleasant possibility (such as avoiding incompetence). For example, a learning opportunity might elicit the fear that one's competencies are not up to par or lead to worries about not learning enough from the given opportunity. On the other hand, besides avoiding a negative situation, a mastery-avoidance GO is also characterized by task- and self-reference. Therefore, a learning opportunity might elicit some interest in the task at hand (e.g., a challenging task) for employees who have a high mastery-avoidance GO (Baranik et al., 2010).

Based on achievement goal theory and findings from previous studies (e.g., Baranik et al., 2010), we have no reason to expect that the interaction between a mastery-avoidance GO and learning opportunities will result in either a positive or a negative effect on employee well-being. So, we offer no hypotheses concerning the interaction between a mastery-avoidance GO and learning opportunities, and will only explore the possible effects of the interaction between mastery-avoidance GO and learning opportunities on well-being.

## **METHOD**

### **Participants and procedure**

All employees ( $N = 240$ ) of an organization in the Netherlands that provides guardianship for youngsters were given the opportunity to participate in what was called a vitality check. Vitality in the workplace was an important focus for the management of the organization. For this reason, the management encouraged participation in the vitality check. Employees were also notified that they would immediately receive online feedback about their vitality scores after completing the questionnaire. At the same time, the results of all employees were analyzed on a team level and (anonymously) presented in a report to the management of the organization.

The vitality check addressed multiple topics: how employees experience their cooperation with their colleagues and supervisor, job satisfaction, perceived workload, need for recovery, task variety, task enjoyment. All employees were invited by email to complete the questionnaire, with the confidentiality of their results and report guaranteed. By completing the questionnaire, they consented to the confidentiality arrangement for handling their results. After three weeks, the employees who had not completed the questionnaire received a reminder. This procedure resulted in a high response rate; 90.4% of the employees completed the questionnaire, resulting in a sample of 217 employees ( $N =$

217; 156 female, 61 male), M age = 45.1 years ( $SD = 10.37$ ), M weekly working hours = 32.06 ( $SD = 4.50$ ) and 88.5% had a bachelor's degree or higher.

## **MEASURES**

### **Achievement goal orientation**

Dispositional achievement goal orientation was measured with the questionnaire from Baranik et al. (2013). Mastery-approach and mastery-avoidance GO were measured with four items each, for example, "I have a preference for challenging tasks where I can learn a lot" (mastery-approach GO) and "I just hope I am able to maintain enough skills so I am competent at my job" (mastery-avoidance GO). We also measured performance-approach (4 items) and performance-avoidance (4 items) GO. Responses were on a 5-point scale, ranging from 1 = strongly disagree to 5 = strongly agree.

### **Learning opportunities, task enjoyment, job satisfaction, and need for recovery**

Learning opportunities, task enjoyment, job satisfaction, and need for recovery were measured with the Questionnaire on the Experience and Evaluation of Work (QEEW; Van Veldhoven et al., 2002). Unless stated otherwise, item responses used a 5-point Likert-type scale (1 = "totally agree", 5 = "totally disagree"). Four items measured learning opportunities. A sample item is "Does your job offer opportunities for personal growth and development?" Five items measured task enjoyment. A sample item is "I enjoy my work". One item concerning job satisfaction was used: "All things considered, I am satisfied with my job." The use of a single-item measure has been proven to be satisfactory to measure job satisfaction (e.g., Wanous, Reichers, & Hudy, 1997). Six items were used to measure the need for recovery. A sample item is "Because of my job, at the end of the working day I feel rather exhausted." These items used a 4-point Likert-type response scale (1 = "always", 4 = "never"). We reversed the scoring of the scales where needed, so that a high score indicates high learning opportunities, high task enjoyment, high job satisfaction, and high need for recovery.

### **Absenteeism**

Sickness absence data were taken from the sickness absence records of the company. Data on sick leave gathered from company records are clearly preferable as an outcome measure (e.g., Johns & Miraglia, 2015) compared to self-reported absenteeism which tends towards underreporting. We used the absence data that were collected during the period from the administration of the questionnaire until 12 months later. An one-year time interval was chosen to rule out seasonal fluctuations in the sickness absences registered. An absence is reported by the employee to the executive manager. Two sickness absence measures were used: absence frequency (i.e., the number of sick-leave days reported in 12 months) and absence duration (i.e., the number of sick-leave days as a percentage of the

days worked in 12 months, corrected for maternity leave). The mean absence frequency was .86 times in a year ( $SD = 1.03$ ), and the mean absence duration amounted to 3.4% of the total days worked ( $SD = 9.80$ ).

### Statistical Analysis

We used polynomial regression, represented in the following regression equation:  $Z = b_0 + b_1X + b_2Y + b_3XY + b_4X^2 + b_5Y^2 + e$ . Polynomial regression has the advantage that each component can be interpreted relatively independently and that complicated fit patterns can be detected (Kristof-Brown & Guay, 2011).

A disadvantage of polynomial regression is that interpretation of the results can be complex. A response-surface plot analysis can facilitate the interpretation of the results of a polynomial regression. In a surface plot, the regression plane is plotted on three axes (in the present study:  $x$  = learning opportunities,  $y$  = mastery-approach or mastery-avoidance GO and  $z$  = an indicator of well-being). Four surface parameters are available:  $a_1$ ,  $a_2$ ,  $a_3$  and  $a_4$ . A significant parameter  $a_1$  indicates a linear additive effect on the outcome along the “the line of congruence” (LOC): the higher the level of the combined predictors (learning opportunities and mastery-approach or mastery-avoidance GO), the higher the outcome variable. A significant parameter  $a_2$  tells us that the LOC has a quadratic (curvilinear) shape instead of a linear shape. The parameter  $a_3$  represents the slope of the surface along the “line of incongruence” (LOIC) (see Edwards, 2007), indicating a negative or positive mismatch effect. A significant parameter  $a_4$  means there is significant curvature along the LOIC, which indicates both a negative and a positive mismatch effect.

Absence frequency and absence duration are known to be heavily skewed and can suffer from an excess of zeros (i.e., no absences), We therefore used the R packages *pscl* and *countreg* and the steps provided by Zeileis, Kleiber, and Jackman (2008) to analyze the absence data. These authors suggested to test different models (Poisson, negative binomial, hurdle and zero-inflated model). The hurdle and zero-inflated models are two-component models: 1) a count component, such as Poisson or negative binomial, is employed for positive counts (i.e., count model), and 2) a zero component is employed for the zeros versus the positive counts (i.e., zero model). To apply a count distribution, we converted the absence duration data to integer values (i.e., 4.5% absence became 5%). The same set of predictor variables was used for the zero and the count models. We used Akaike’s Information Criterion (AIC) and the numbers of estimated zeros to decide which model fitted the data best. For the absence frequency data (with both mastery-approach and mastery-avoidance as predictors) a negative binomial regression had the best fit, and for absence duration (with both mastery-approach and mastery-avoidance) a hurdle negative binomial regression had the best fit.

## RESULTS

### Preliminary analyses

Five cases with missing data on one or more of the predictor variables were excluded from the analyses, resulting in a final dataset of 212 cases. Table 1 shows the means and standard deviations, the intercorrelations among all variables and the alphas for the scales. Learning opportunities were moderately (job satisfaction) or strongly (task enjoyment) related to the indicators of positive well-being, while relations with the indicators of negative well-being (i.e., need for recovery and absenteeism) were absent. It is worth mentioning that the relation between learning opportunities and mastery GO was, at best, weak (mastery-approach GO:  $r = .14$ ,  $p < .05$ ; mastery-avoidance GO:  $r = .03$ , ns).

### Hypothesis testing

To test our hypotheses, polynomial regression analyses were performed with SPSS 24. To facilitate interpretation, the two predictor variables in all models were scale centered (Edwards, 2007). A score of zero on one of the predictor variables therefore indicates that participants had a midpoint score on learning opportunities or mastery GO (approach and avoidance). To calculate the surface parameters, the steps described by Shanock, Baran, Gentry, Pattison, and Heggstad (2010) were followed. The surface plots (see Figure 1) were created with the R package RSA (Schönbrodt, 2015).

To correct for multiple testing, the  $p$ -values of the different polynomial models of each outcome were controlled for false discovery rate, see Table 2, with the Benjamini-Hochberg method (Benjamini & Hochberg, 1995).

For Hypothesis 1, we expected a positive slope on the LOC ( $a_1$ ) for the positive outcomes (i.e., job satisfaction and task enjoyment) and a negative slope for the negative outcomes (i.e., need of recovery and absenteeism). For Hypothesis 2, the matching LOIC can have a U-shaped curvature (positive  $a_4$ ) for positive outcomes and an inverted U-shaped curvature (negative  $a_4$ ) for the negative outcomes, which together indicate a negative and positive mismatch effect. However, when the surface along the LOIC is more or less flat (significant  $a_3$  and  $a_4$  not significant), a positive  $a_3$  indicates a negative mismatch effect for positive outcomes and a negative  $a_3$  indicates a negative mismatch effect for negative outcomes. For Hypothesis 3 the matching LOIC can have curvature (significant  $a_4$ ), with a positive  $a_4$  for the positive outcomes and a negative  $a_4$  for the negative outcomes. However, when the LOIC is more or less flat (significant  $a_3$  and  $a_4$  not significant), a negative  $a_3$  indicates a positive mismatch effect for positive outcomes and a positive  $a_3$  indicates a positive mismatch effect for negative outcomes.

The surface plots are shown in Figures 1 and 2. The results of the polynomial regression models are presented in Table 2. For each outcome, the next paragraphs describe the results for the different hypotheses, and, in addition, provides a brief description of the results for mastery-avoidance GO (see Appendix: Table 3a to 7b).

**TABLE 1**  
*Means, standard deviations, and correlations*

Variable	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender <sup>a</sup>	0.72	0.45													
2. Age	45.10	10.35	-0.17*												
3. Education <sup>b</sup>	4.87	0.77	-0.09	-0.12 <sup>†</sup>											
4. Hours of work	32.06	4.44	-0.41**	.13 <sup>†</sup>	.10										
5. Learning opportunities	3.79	0.74	-0.15*	-0.11	.19**	.08	<b>.84</b>								
6. Mastery-approach	3.94	0.65	-0.05	-0.03	.16*	.21**	.14*	<b>.88</b>							
7. Mastery-avoidance	3.55	0.74	-0.01	.08	-0.02	-0.04	.03	.05	<b>.81</b>						
8. Performance-approach	2.80	0.68	-0.03	-0.14*	-0.02	.04	.06	.20**	.18**	<b>.80</b>					
9. Performance-avoidance	2.56	0.64	-0.02	-0.06	-0.13 <sup>†</sup>	-0.08	-0.04	-0.28**	.23**	.25**	<b>.80</b>				
10. Job satisfaction	4.12	0.71	-0.10	-0.01	-0.03	.10	.43**	.13 <sup>†</sup>	.02	-0.02	-0.12 <sup>†</sup>				
11. Task enjoyment	4.22	0.59	-0.03	.06	-0.01	.06	.56**	.22**	.10	-0.03	-0.12 <sup>†</sup>	.68**	<b>.85</b>		
12. Need for recovery	1.77	0.49	.04	-0.09	.18**	-0.05	-0.07	-0.05	-0.15*	.03	.07	-0.27**	-0.31**	<b>.85</b>	
13. Absence frequency	0.86	1.03	.16*	-0.03	-0.14*	-0.15*	-0.09	-0.06	-0.10	.09	.01	-0.03	-0.06	.02	
14. Absence duration <sup>c</sup>	3.44	9.80	-0.04	-0.01	.03	-0.07	.04	.07	-0.09	-0.01	-0.00	-0.08	-0.02	.03	<b>.28**</b>

*Note.* *N* = 212. Variables 5 – 11: 5-point scale. Variable 12: 4-point scale. Higher values indicate higher levels of the measured construct. <sup>a</sup>0 = male, 1 = female, <sup>b</sup>1 = primary education, 2 = secondary education, 3 = high school, 4 = graduated, <sup>c</sup>Percentage of workdays absent during the following year. <sup>†</sup>*p* < .10, \**p* < .05, \*\**p* < .01. Alpha coefficients are shown in bold along the diagonal.

**TABLE 2**

Results of the fitted polynomial regression models for learning opportunities and mastery goal orientation and the different outcome variables

Outcome	adj R <sup>2</sup>
Job satisfaction (see Table 3 for more details)	
Mastery approach	0.22 <sup>***</sup>
Mastery avoidance	0.20 <sup>***</sup>
Task enjoyment (see Table 4 for more details)	
Mastery approach	0.36 <sup>***</sup>
Mastery avoidance	0.39 <sup>***</sup>
Need for recovery (see Table 5 for more details)	
Mastery approach	0.04 <sup>*</sup>
Mastery avoidance	0.04 <sup>*</sup>
Absence frequency (see Table 6 for more details)	
Mastery approach	0.03 <sup>*</sup>
Mastery avoidance	0.03 <sup>*</sup>
Absence duration (see Table 7 for more details)	
Mastery approach	_ <sup>a</sup>
Mastery avoidance	_ <sup>a</sup>

Note. The adj R<sup>2</sup> for absence frequency and duration was calculated with the R package 'rsq' (Zhang, 2018). \*\*\*  $p < .001$ . <sup>a</sup> R<sup>2</sup> not available for hurdle models.

### JOB SATISFACTION

Hypothesis 1a (job satisfaction will be higher when the levels of perceived learning opportunities and mastery-approach GO are both high than when both are low) was not confirmed;  $a_1$  was not significant (see Table 3a).

However, the quadratic shape of the line of congruence (significant  $a_2$ ) indicates that job satisfaction was higher when both learning opportunities and mastery-approach were either low or high (see Figure 1). Greater negative and positive mismatch were both associated with lower job satisfaction (significant  $a_4$ ), confirming hypotheses 2a and 3a.

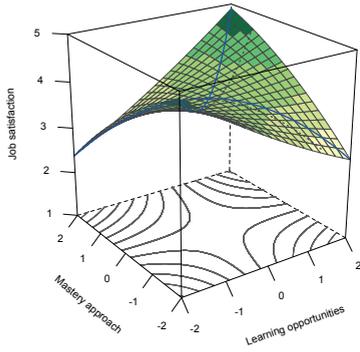
For mastery-avoidance GO the surface plot showed that, in contrast to what was seen for mastery-approach GO, positive mismatch (ample learning opportunities; low mastery-avoidance GO) resulted in higher job satisfaction ( $a_3$  significant and  $a_4$  not significant) (see Table 3b).

**FIGURE 1**

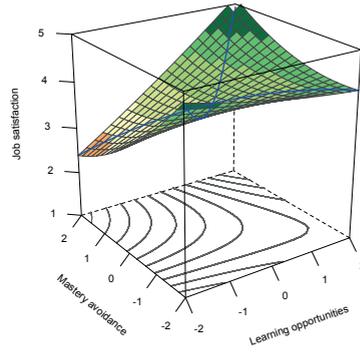
Surface plots for learning opportunities and mastery goal orientation as predictors with job satisfaction and task enjoyment as outcomes

**Job satisfaction**

*Mastery approach*

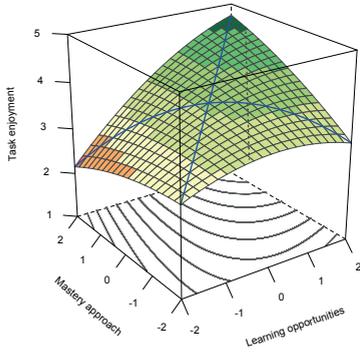


*Mastery avoidance*

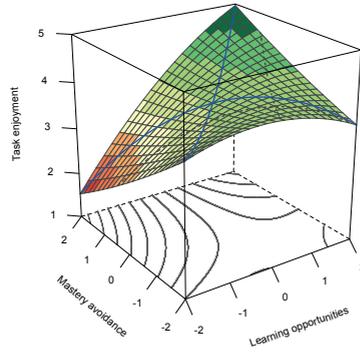


**Task enjoyment**

*Mastery approach*



*Mastery avoidance*



## TASK ENJOYMENT

Hypothesis 1b (task enjoyment will be higher when the levels of learning opportunities and mastery-approach GO are both high than when they are both low) was confirmed by a significant  $a_1$  (see Table 4a). Greater negative and positive mismatch were both associated with lower task enjoyment (significant  $a_4$ ), confirming hypotheses 2b and 3b.

For mastery-avoidance GO the surface plot (see Figure 1) showed a different pattern. An excess of learning opportunities affected task enjoyment less (both  $a_3$  and  $a_4$  significant) than was the case for mastery-approach GO (see Table 4b).

## NEED FOR RECOVERY

Hypothesis 1c (need for recovery is lower when the levels of learning opportunities and mastery-approach GO are both high than when they are both low) was not confirmed;  $a_1$  was not significant (see Table 5a). Greater negative and positive mismatch were both associated with greater need for recovery (significant  $a_4$ ), confirming hypotheses 2c and 3c.

For mastery-avoidance GO, none of the surface parameters was significant (see Table 5b). The surface plot (see Figure 2) shows a similar, but less pronounced, pattern as mastery-approach GO. The interaction term was significant, indicating an interplay between mastery-avoidance and learning opportunities that affected the level of need for recovery and explained 4% of the variance (see Table 2). However, this effect is difficult to interpret.

## ABSENCE FREQUENCY

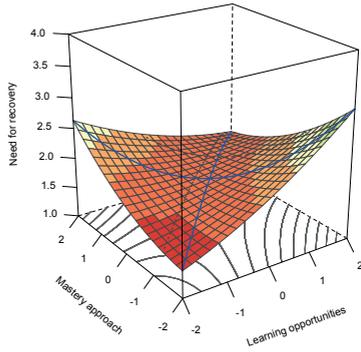
Hypothesis 1d (absence frequency is lower when the levels of learning opportunities and mastery-approach GO are both high than when they are both low) was not confirmed;  $a_1$  was not significant (see Table 6a). Greater negative and positive mismatch were not associated with higher absence frequency ( $a_3$  and  $a_4$  not significant), so that hypotheses 2d and 3d were not confirmed.

Only learning opportunities (linear and quadratic) were significantly related to absence frequency. Absence frequency was higher when learning opportunities were low (see Figure 2). Unexpectedly, the model with mastery-avoidance GO had a significant  $a_1$  indicating that absence frequency was higher when mastery-avoidance and learning opportunities were both low than when both were high (see Figure 2 and Table 6b).

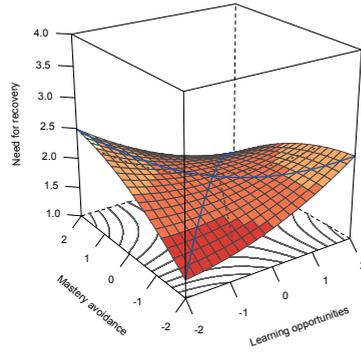
**FIGURE 2**

Surface plots for learning opportunities and mastery goal orientation as predictors with need for recovery and absence frequency as outcomes

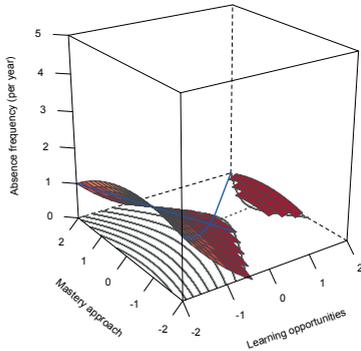
**Need for recovery**  
*Mastery approach*



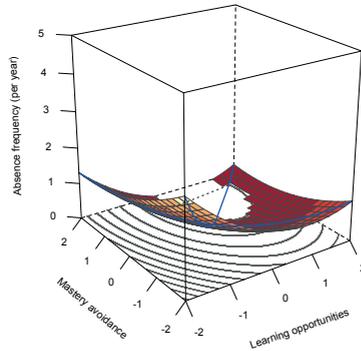
*Mastery avoidance*



**Absence frequency**  
*Mastery approach*



*Mastery avoidance*



## ABSENCE DURATION

For both models (mastery-approach and mastery-avoidance) a hurdle negative binomial regression was used; 1) count model (more than 1 day absent) and 2) zero model (zero days absent versus more than 1 day absent).

For the mastery-approach model none of the predictors in the count model was significant. Hypothesis 1e (absence duration is lower when the levels of learning opportunities and mastery-approach GO are both high than when they are both low) was not confirmed;  $a_1$  was not significant (see Table 7a). Greater negative and positive mismatch were not associated with higher absence duration ( $a_3$  and  $a_4$  not significant), so that hypotheses 2e and 3e were not confirmed.

For mastery-avoidance GO none of the surface values was significant (see Table 7b); however,  $a_4$  was marginally significant. In the count model, mastery-approach GO positively predicted absence duration significantly and performance-avoidance GO was negatively, but marginally significant, predictive.

In addition, in the zero model for mastery-approach GO, learning opportunities negatively and performance-approach GO positively predicted whether an employee was zero days absent or not (see Table 7a). For the mastery-avoidance GO model, performance-approach GO was a significant positive predictor of being absent or not and the quadratic effect of learning opportunities was also positively predictive, but marginally significant. For an overview of the results see Table 8.

**TABLE 8**

*Overview of the results for Hypotheses 1, 2 and 3 for the different outcomes*

Outcomes	Hypothesis 1: Match (linear additive) effect	Hypothesis 2 <sup>1</sup> : Negative mismatch effect	Hypothesis 3 <sup>2</sup> : Positive mismatch effect
a) Job satisfaction	–	X	X
b) Task enjoyment	X	X	X
c) Need for recovery	–	X	X
d) Absence frequency	–	–	–
e) Absence duration	–	–	–

Note. <sup>1</sup> High levels of mastery-approach GO and few learning opportunities, i.e., negative mismatch.

<sup>2</sup> Low levels of mastery-approach GO and many learning opportunities, i.e., positive mismatch. X = hypothesis confirmed. – = hypothesis rejected.

## DISCUSSION

The aim of the present study was to examine the effect of a (mis)match between dispositional mastery-approach goal orientation (GO) and perceived learning opportunities on variables that serve as indicators of positive well-being (job satisfaction and task enjoyment) and negative well-being (need for recovery, absence frequency and absence duration). In addition, we explored the effect of a (mis)match of learning opportunities and mastery-avoidance GO.

A match between a mastery-approach GO and learning opportunities contributed to job satisfaction and task enjoyment, while a negative mismatch (shortage of learning opportunities and a high mastery-approach GO) was related to lower levels of job satisfaction and task enjoyment. A positive mismatch (ample learning opportunities combined with a low mastery-approach GO) resulted in lower task enjoyment, but in contrast to our expectation, in higher job satisfaction. The overall effects of a (mis)match on negative well-being were less pronounced than the effects on positive well-being. A possible explanation for this difference is that both job satisfaction and task enjoyment are outcomes of motivational processes, while need for recovery and absenteeism may be regarded as an outcome of a strain process (Schaufeli et al., 2009). Our study confirmed that a mastery goal orientation (that is mastery-approach and -avoidance GOs) strengthens motivational processes, as reflected in a higher positive well-being (Payne, Youngcourt, & Beaubien, 2007), but at its best a mastery goal orientation was only weakly related to the strain process. We might therefore conclude that a match between mastery GO and learning opportunities was positively related to task enjoyment, but that this effect was not strong enough to buffer the strain pathway (i.e. need for recovery and absenteeism). However, a higher mastery-approach GO was associated with longer periods of absence (absence duration). An explanation might be that employees with a high mastery-approach GO go to work they are feeling a little sick and do not take time off unless they really have to and then for multiple days. Finally, although performance-approach and performance-avoidance GO were only incorporated as control variables in our study, the chance of being absent due to sickness was higher for employees who scored high on performance-approach GO. Apparently, a performance-approach GO can be directly related to more strain but more research is needed. The findings for absenteeism are rather remarkable but we should be careful about drawing strong conclusions here. The effects on absence were weak, which might be explained by the low amount of sick leave taken overall. The reasons for sick leave might be more trivial or related to more common causes (e.g., influenza), which is supported by the relatively low percentage of sick leave in this organization (3.4%) compared to an average of 5.3% in similar organizations (Central Bureau for Statistics, 2016).

Using polynomial regression analysis supplemented with surface plot analysis made more complicated (mis)fit patterns visible and easier to detect and interpret. For

example, one of the interesting findings in this study was the curvature along the line of congruence we found for the regression of learning opportunities and mastery-approach GO on job satisfaction; employees with few perceived learning opportunities and low mastery-approach GO were satisfied with their job. A possible explanation for this finding might be that employees with a low mastery-approach GO have a low self-efficacy and avoid challenges (e.g., Payne et al., 2007). This might lead to a desire to be left at peace; when one's need to develop one's competences is low and the supplies are low at the same time, one can be more satisfied than when the unwanted supplies are abundant. Yet, a low mastery-approach GO in combination with few learning opportunities resulted in a low task enjoyment. That both findings occur simultaneously is consistent with the statement that job satisfaction is a cognitive evaluation of the actual and desired features of a job (Weiss, 2002), whereas task enjoyment is an affective evaluation. These findings show the usefulness of discerning between beliefs about one's job and the affective experience of one's job. In other words, the evaluation of one's job can be positive (no desire and possibilities to learn) at the expense of affective well-being (i.e., task enjoyment).

The results of the exploration of mastery-avoidance GO contradicted the negative relationship between mastery-avoidance GO and well-being that has been found in earlier studies (e.g., Poortvliet et al., 2015). The results showed that a match between learning opportunities and mastery-avoidance GO was related to higher task enjoyment and less need for recovery. These results suggest that under the right circumstances (e.g., ample learning opportunities), mastery-avoidance GO might contribute to well-being. Apparently, the focus on competence, in combination with ample perceived learning opportunities, results in more well-being even when it is viewed in negative terms (mastery-avoidance GO; avoiding incompetence). A possible explanation might be that our sample consisted of older employees (M age was 45.1). One's goal orientation is known to change across the life span. At an older age the orientation on maintenance and prevention of loss increases, while the orientation on growth decreases (Ebner, Freund, & Baltes, 2006). In line with this argument, for younger people a mastery-avoidance GO has been found to be negatively related to well-being, while for older adults a mastery-avoidance GO is positively related to outcomes, such as task interest (Senko & Freund, 2015). This indicates that for older employees a mastery-avoidance GO may be more adaptive than for younger employees, likely resulting in higher well-being than for younger employees. Another possible explanation might be that mastery-avoidance GO only has beneficial effects when learning opportunities are not too challenging. Preenen et al. (2014) found that mastery-avoidance GO was unrelated to performing challenging tasks, indicating that employees with high mastery-avoidance GO, in comparison to employees with high mastery-approach GO, prefer less challenging tasks. In our study, perceived learning opportunities were measured but not the level of challenge. The positive effects of mastery-avoidance GO and learning opportunities might be moderated by the level of challenge in learning opportunities.

Our study contributes to the further development of achievement goal theory by providing evidence that mastery-approach and mastery-avoidance GO can be viewed as a personal resource that strengthens the positive relations between job resources and well-being. However, further research is needed to gain more insight into the role of mastery-approach and mastery-avoidance GO as a personal resource moderating the effects of job resources on well-being (see Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2009). Our study also contributes by calling for reconsideration of the negative role of mastery-avoidance GO with regard to well-being, in an older population and in the domain of work. In a meta-analysis, the relation between GO and performance was moderated by different domains (i.e., education and sports), indicating that in the sports domain, mastery-avoidance GO was unrelated to performance, whereas in the education domain, the relation between mastery-avoidance GO and performance was negative (Van Yperen, Blaga, & Postmes, 2014). However, the relationship between mastery-avoidance GO and performance in the work domain was missing, due to lack of studies. So, mastery-avoidance GO might have different effects on well-being in a work setting than, for example, in an educational or sports setting. In addition, in a work setting this might even differ between younger and older workers (see Senko & Freund, 2015). Further research on the relation between mastery-avoidance GO and other job resources (e.g., job autonomy) in the work domain is needed to get more insight in mastery-avoidance GO as a potential personal resource. Although some researchers have discarded mastery-avoidance GO (e.g., Vandewalle et al., 2019), our results show the importance of incorporating mastery-avoidance GO into research in organizational settings, certainly when it concerns the well-being of employees.

### **Limitations**

A possible limitation of the present study is that the results rely on self-report measures, except for the absence data. Self-report measures raise the concern of common method variance (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003, p. 879). However, the scales are well validated and are based on extensive empirical evidence (e.g., Van Veldhoven & Meijman, 1994; Van Yperen et al., 2014). Another reason the results of this study are less susceptible to common method variance is that the results of quadratic and interaction effects (as used in a polynomial regression) are less likely to be a result of common method bias (see Siemsen, Roth, & Oliveira, 2010). Common method bias can severely mask quadratic and interaction effects. Therefore, it is more likely that the results will fail to report effects that are present than that absent effects are incorrectly found.

Another limitation is that the study had a cross-sectional design. Therefore, causal inferences cannot be drawn with this study. However, there is theoretical and empirical evidence that there can be a causal relation between fit and positive outcomes (Kristof-Brown & Guay, 2011). Therefore, we are inclined to conclude that mastery GO is likely to

act as a person variable which, in combination with ample learning opportunities, results in more positive outcomes. However, a longitudinal study to examine the long-term effects of learning opportunities combined with mastery GO would substantiate this conclusion.

### **Practical implications**

Learning opportunities in a job make an important contribution to employees' well-being which in turn fosters good health and higher productivity. A high dispositional mastery GO (both approach and avoidance) enhances the positive effects of learning opportunities on well-being. In general, relative to mastery-avoidance GO a mastery-approach GO encompasses a more optimal form of self-regulation and as such a mastery-approach GO displays more positive effects on motivation and performance. Therefore, besides providing learning opportunities in a job, such as challenging tasks or training, more attention should be paid to assessing the GO, in particular the mastery-approach GO, of applicants when recruiting and selecting staff. Organizations can enhance the well-being of their employees also by promoting mastery-approach GO, which enables employees to benefit more from learning opportunities (Dragoni, 2005). Research has shown that mastery-approach GO can be enhanced by promoting a mastery-oriented work environment. Such an environment stimulates setting mastery-approach goals, by providing challenging tasks and de-emphasizing competition (O'Keefe, Ben-Eliyahu, & Linnenbrink-Garcia, 2013). Another promising avenue, similarly showing that mastery-approach GO can be enhanced in specific situations, is training employees to set mastery goals instead of performance goals (Noordzij, Van Hooft, Van Mierlo, Van Dam, & Born, 2013).

In addition, assessing the fit between employees' need for developing competencies and the possibilities of doing so could also help improving employees well-being. For example, our study clearly shows that when there is a shortage of learning opportunities in a job a high dispositional mastery GO is detrimental for well-being (i.e. negative misfit). In practice, in instances of both a negative (shortage of learning opportunities) and a positive mismatch (excess of learning opportunities), measures need to be taken. For example, this can be addressed by providing more challenging tasks in the case of a shortage of learning opportunities or helping employees to find tasks that evoke greater need to develop competencies when there is an excess of learning opportunities.

Finally, employees who perceive few learning opportunities and have low need to develop their competences (i.e., low mastery-approach GO) can be relatively satisfied with their job, while at same time lacking joy in their work. Therefore, it is recommended to use not only job satisfaction, but also other indicators (e.g., task enjoyment), to assess employee well-being.



## APPENDIX

### Results of the polynomial regression models

**TABLE 3A**

Parameters for surface plot analysis for job satisfaction

Learning opportunities and mastery-approach GO as predictors of job satisfaction					
	B	SE B	p	95% Confidence Interval	
				Lower	Upper
$b_0$ : Constant	3.84	0.11	.00	3.62	4.07
$b_1$ : Learning opportunities	0.05	0.12	.70	-0.20	0.29
$b_2$ : Mastery approach	-0.04	0.17	.80	-0.39	0.30
$b_3$ : Learning opportunities squared	0.03	0.05	.61	-0.08	0.13
$b_4$ : Learning opportunities x Mastery approach	0.29	0.08	.00	0.13	0.45
$b_5$ : Mastery approach squared	-0.06	0.08	.51	-0.22	0.11
Mastery avoidance	0.05	0.06	.44	-0.07	0.17
Performance approach	-0.05	0.07	.46	-0.19	0.09
Performance avoidance	-0.11	0.08	.16	-0.26	0.04
Surface values	B	SE B	p		
$a_1 = (b_1 + b_2)$	0.01	0.22	.96		
$a_2 = (b_3 + b_4 + b_5)$	0.26	0.11	.02		
$a_3 = (b_1 - b_2)$	0.09	0.20	.65		
$a_4 = (b_3 - b_4 + b_5)$	-0.32	0.12	.01		

**TABLE 3B***Parameters for surface plot analysis for job satisfaction*

Learning opportunities and mastery-avoidance GO as predictors of job satisfaction						
				95% Confidence Interval		
	B	SE B	p	Lower	Upper	
$b_0$ : Constant	3.73	0.10	.00	3.53	3.93	
$b_1$ : Learning opportunities	0.27	0.09	.01	.08	.45	
$b_2$ : Mastery avoidance	-0.18	0.09	.06	-.36	.01	
$b_3$ : Learning opportunities squared	0.02	0.05	.66	-.08	.13	
$b_4$ : Learning opportunities x Mastery avoidance	0.21	0.09	.02	.04	.38	
$b_5$ : Mastery avoidance squared	0.08	0.06	.15	-.03	.20	
Mastery approach	0.03	0.08	.69	-.12	.18	
Performance approach	-0.03	0.07	.63	-.17	.10	
Performance avoidance	-0.12	0.08	.14	-.27	.04	
Surface values	B	SE B	p			
$a_1 = (b_1 + b_2)$	0.09	0.15	.56			
$a_2 = (b_3 + b_4 + b_5)$	0.31	0.11	.01			
$a_3 = (b_1 - b_2)$	0.45	0.10	.00			
$a_4 = (b_3 - b_4 + b_5)$	-0.11	0.11	.32			

**TABLE 4A**

Parameters for surface plot analysis for task enjoyment

Learning opportunities and mastery-approach GO as predictors of task enjoyment

	B	SE B	p	95% Confidence Interval	
				Lower	Upper
$b_0$ : Constant	3.75	0.09	.00	3.58	3.92
$b_1$ : Learning opportunities	0.35	0.09	.00	0.17	0.53
$b_2$ : Mastery approach	0.11	0.13	.40	-0.15	0.36
$b_3$ : Learning opportunities squared	-0.09	0.04	.03	-0.16	-0.01
$b_4$ : Learning opportunities x Mastery approach	0.15	0.06	.01	0.03	0.27
$b_5$ : Mastery approach squared	-0.04	0.06	.53	-0.16	0.08
Mastery avoidance	0.10	0.05	.03	0.01	0.19
Performance approach	-0.08	0.05	.12	-0.18	0.02
Performance avoidance	-0.09	0.06	.13	-0.20	0.03
Surface values	B	SE B	p		
$a_1 = (b_1 + b_2)$	0.46	0.16	.02		
$a_2 = (b_3 + b_4 + b_5)$	0.02	0.09	.83		
$a_3 = (b_1 - b_2)$	0.24	0.15	.12		
$a_4 = (b_3 - b_4 + b_5)$	-0.28	0.09	.00		

**TABLE 4B**

Parameters for surface plot analysis for task enjoyment

Learning opportunities and mastery-avoidance GO as predictors of task enjoyment

	B	SE B	p	95% Confidence Interval	
				Lower	Upper
b <sub>0</sub> : Constant	3.75	0.07	.00	3.60	3.89
b <sub>1</sub> : Learning opportunities	0.40	0.07	.00	0.27	0.54
b <sub>2</sub> : Mastery avoidance	-0.09	0.07	.17	-0.23	0.04
b <sub>3</sub> : Learning opportunities squared	-0.10	0.04	.01	-0.17	-0.02
b <sub>4</sub> : Learning opportunities x Mastery avoidance	0.23	0.06	.00	0.11	0.35
b <sub>5</sub> : Mastery avoidance squared	0.02	0.04	.63	-0.06	0.10
Mastery approach	0.14	0.06	.02	0.03	0.25
Performance approach	-0.06	0.05	.23	-0.16	0.04
Performance avoidance	-0.11	0.06	.05	-0.23	0.00
Surface values	B	SE B	p		
a <sub>1</sub> = (b <sub>1</sub> + b <sub>2</sub> )	0.31	0.11	.00		
a <sub>2</sub> = (b <sub>3</sub> + b <sub>4</sub> + b <sub>5</sub> )	0.15	0.08	.07		
a <sub>3</sub> = (b <sub>1</sub> - b <sub>2</sub> )	0.49	0.09	.00		
a <sub>4</sub> = (b <sub>3</sub> - b <sub>4</sub> + b <sub>5</sub> )	-0.31	0.08	.00		

**TABLE 5A***Parameters for surface plot analysis for need for recovery*

Learning opportunities and mastery-approach GO as predictors of need for recovery

	B	SE B	p	95% Confidence Interval	
				Lower	Upper
$b_0$ : Constant	1.83	0.09	.00	1.66	2.00
$b_1$ : Learning opportunities	0.10	0.09	.27	-0.08	0.29
$b_2$ : Mastery approach	-0.02	0.13	.89	-0.28	0.24
$b_3$ : Learning opportunities squared	0.04	0.04	.32	-0.04	0.12
$b_4$ : Learning opportunities x Mastery approach	-0.16	0.06	.01	-0.29	-0.04
$b_5$ : Mastery approach squared	0.06	0.06	.33	-0.06	0.19
Mastery avoidance	-0.13	0.05	.01	-0.22	-0.04
Performance approach	0.03	0.05	.57	-0.08	0.14
Performance avoidance	0.10	0.06	.10	-0.02	0.22
Surface values	B	SE B	p		
$a_1 = (b_1 + b_2)$	0.08	0.16	.63		
$a_2 = (b_3 + b_4 + b_5)$	-0.06	0.09	.52		
$a_3 = (b_1 - b_2)$	0.12	0.15	.43		
$a_4 = (b_3 - b_4 + b_5)$	0.26	0.09	.01		

**TABLE 5B**

Parameters for surface plot analysis for need for recovery

Learning opportunities and mastery-avoidance GO as predictors of need for recovery

	B	SE B	p	95% Confidence Interval	
				Lower	Upper
$b_0$ : Constant	1.87	0.08	.00	1.72	2.03
$b_1$ : Learning opportunities	-0.01	0.07	.87	-0.15	0.13
$b_2$ : Mastery avoidance	0.02	0.07	.82	-0.12	0.16
$b_3$ : Learning opportunities squared	0.05	0.04	.25	-0.03	0.13
$b_4$ : Learning opportunities x Mastery avoidance	-0.14	0.07	.04	-0.27	-0.01
$b_5$ : Mastery avoidance squared	-0.05	0.04	.28	-0.14	0.04
Mastery approach	0.00	0.06	.98	-0.12	0.11
Performance approach	0.02	0.05	.75	-0.09	0.12
Performance avoidance	0.10	0.06	.09	-0.02	0.22
Surface values	B	SE B	p		
$a_1 = (b_1 + b_2)$	0.01	0.12	.93		
$a_2 = (b_3 + b_4 + b_5)$	-0.14	0.09	.12		
$a_3 = (b_1 - b_2)$	-0.03	0.08	.69		
$a_4 = (b_3 - b_4 + b_5)$	0.14	0.09	.12		

**TABLE 6A**

Parameters for surface plot analysis for absence frequency with a negative binomial distribution

Learning opportunities and mastery-approach GO as predictors of absence frequency

	B	SE B	p	95% Confidence Interval	
				Lower	Upper
$b_0$ : Constant	0.15	0.19	.43	-0.24	0.51
$b_1$ : Learning opportunities	-0.40	0.19	.03	-0.77	-0.02
$b_2$ : Mastery approach	-0.02	0.31	.96	-0.60	0.63
$b_3$ : Learning opportunities squared	0.21	0.09	.01	0.04	0.38
$b_4$ : Learning opportunities Mastery approach	0.08	0.13	.53	-0.17	0.34
$b_5$ : Mastery approach squared	-0.13	0.15	.41	-0.45	0.17
Mastery avoidance	-0.20	0.12	.09	-0.42	0.03
Performance approach	0.20	0.14	.14	-0.06	0.47
Performance avoidance	0.01	0.15	.93	-0.28	0.30
Surface values	B	SE B	p		
$a_1 = (b_1 + b_2)$	-0.42	0.36	.25		
$a_2 = (b_3 + b_4 + b_5)$	0.16	0.22	.46		
$a_3 = (b_1 - b_2)$	-0.38	0.36	.30		
$a_4 = (b_3 - b_4 + b_5)$	0.00	0.22	1.00		

**TABLE 6B**

Parameters for surface plot analysis for absence frequency with a negative binomial distribution

Learning opportunities and mastery-avoidance GO as predictors of absence frequency

	B	SE B	p	95% Wald Confidence Interval	
				Lower	Upper
$b_0$ : Constant	0.14	0.18	.43	-0.21	0.48
$b_1$ : Learning opportunities	-0.31	0.14	.02	-0.58	-0.04
$b_2$ : Mastery avoidance	-0.28	0.15	.06	-0.58	0.03
$b_3$ : Learning opportunities squared	0.21	0.08	.02	0.04	0.37
$b_4$ : Learning opportunities x Mastery avoidance	0.03	0.14	.81	-0.12	0.30
$b_5$ : Mastery avoidance squared	0.10	0.10	.33	-0.24	0.31
Mastery approach	-0.23	0.14	.11	-0.51	0.06
Performance approach	0.22	0.14	.11	-0.05	0.49
Performance avoidance	0.03	0.15	.85	-0.27	0.32
Surface values	B	SE B	p		
$a_1 = (b_1 + b_2)$	-0.59	0.25	.02		
$a_2 = (b_3 + b_4 + b_5)$	0.34	0.19	.07		
$a_3 = (b_1 - b_2)$	-0.03	0.15	.84		
$a_4 = (b_3 - b_4 + b_5)$	0.28	0.19	.14		

**TABLE 7A**

Parameters for surface plot analysis for absence duration with hurdle negative binomial model

Learning opportunities and mastery-approach GO as predictors of absence duration						
	B	SE B	p	Lower	Upper	
$b_0$ : Constant	-11.30	317.86	.97	-634.31	611.70	
$b_1$ : Learning opportunities	-0.38	0.66	.57	-1.68	0.93	
$b_2$ : Mastery approach	0.75	0.78	.34	-0.79	2.28	
$b_3$ : Learning opportunities squared	0.25	0.24	.31	-0.23	0.72	
$b_4$ : Learning opportunities x Mastery approach	0.17	0.50	.72	-0.80	1.14	
$b_5$ : Mastery approach squared	-0.13	0.37	.72	-0.85	0.59	
Mastery avoidance	-0.31	0.36	.39	-1.03	0.40	
Performance approach	-0.65	0.49	.18	-1.60	0.30	
Performance avoidance	0.14	0.36	.70	-0.57	0.85	
Surface values	B	SE B	p			
$a_1 = (b_1 + b_2)$	0.37	1.12	.74			
$a_2 = (b_3 + b_4 + b_5)$	0.29	0.59	.62			
$a_3 = (b_1 - b_2)$	-1.13	0.91	.22			
$a_4 = (b_3 - b_4 + b_5)$	-0.05	0.59	.93			
Zero hurdle model coefficients	B	SE B	p	Lower	Upper	
Constant	0.92	0.42	.03	0.09	1.75	
Learning opportunities	-1.08	0.48	.02	-2.02	-0.14	
Mastery approach	-0.19	0.59	.75	-1.36	0.97	
Learning opportunities squared	0.35	0.19	.07	-0.02	0.73	
Learning opportunities x Mastery approach	0.47	0.30	.11	-0.10	1.05	
Mastery approach squared	-0.18	0.29	.52	-0.74	0.38	
Mastery avoidance	-0.33	0.21	.12	-0.73	0.08	
Performance approach	0.55	0.24	.02	0.08	1.02	
Performance avoidance	0.06	0.26	.82	-0.45	0.56	

**TABLE 7B**

Parameters for surface plot analysis for absence duration with hurdle negative binomial model

Learning opportunities and mastery-avoidance GO as predictors of absence duration					
	B	SE B	p	95% Wald Confidence Interval	
				Lower	Upper
$b_0$ : Constant	-9.48	200.42	.96	-402.29	383.33
$b_1$ : Learning opportunities	-0.21	0.38	.59	-0.95	0.54
$b_2$ : Mastery avoidance	0.28	0.48	.56	-0.65	1.21
$b_3$ : Learning opportunities squared	0.09	0.25	.71	-0.40	0.58
$b_4$ : Learning opportunities x Mastery avoidance	0.20	0.40	.62	-0.58	0.98
$b_5$ : Mastery avoidance squared	-0.78	0.30	.71	-1.37	-0.19
Mastery approach	0.85	0.41	.04	0.05	1.66
Performance approach	-0.79	0.43	.06	-1.64	0.05
Performance avoidance	0.06	0.36	.16	-0.66	0.77
Surface values	B	SE B	p		
$a_1 = (b_1 + b_2)$	0.07	0.80	.93		
$a_2 = (b_3 + b_4 + b_5)$	-0.49	0.48	.31		
$a_3 = (b_1 - b_2)$	-0.49	0.72	.50		
$a_4 = (b_3 - b_4 + b_5)$	-0.89	0.48	.07		
Zero hurdle model coefficients	B	SE B	p	Lower	Upper
Constant	0.58	0.37	.11	-0.13	1.30
Learning opportunities	-0.52	0.36	.15	-1.24	0.19
Mastery avoidance	-0.56	0.36	.11	-1.26	0.13
Learning opportunities squared	0.37	0.20	.06	-0.02	0.76
Learning opportunities x Mastery avoidanc	0.47	0.30	.11	-0.63	0.60
Mastery avoidance squared	-0.01	0.31	.96	-0.09	0.74
Mastery approach	-0.28	0.26	.28	-0.78	0.22
Performance approach	0.56	0.24	.02	0.08	1.03
Performance avoidance	0.12	0.26	.64	-0.39	0.64



# **THRIVING UNDER UNCERTAINTY**

## THE EFFECT OF ACHIEVEMENT GOAL ORIENTATION ON JOB INSECURITY AND FLOURISHING

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## **ABSTRACT**

Flourishing, a construct encompassing optimal human functioning, is an indicator of well-being. The purpose of this study was to examine the direct and indirect effects of employees' achievement goal orientation (mastery-approach, mastery-avoidance, performance-approach and performance-avoidance goal orientation) on flourishing, through the appraisal of quantitative (concerns about continued existence of the job) and qualitative (concerns about continued existence of important job features) job insecurity. Data were collected among 275 employees in an organization on the brink of a substantive downsizing. The results of structural equation modelling showed that mastery approach and -avoidance goal orientation positively predicted flourishing. Furthermore, flourishing was negatively predicted by qualitative job insecurity and performance-avoidance goal orientation but not by quantitative job insecurity. There was no support for the expectation that job insecurity would mediate the effects of mastery- and performance-avoidance goal orientation on flourishing. Hence, in an environment with a substantial threat of job loss, a mastery-approach and -avoidance goal orientation contributed directly to flourishing, while a performance-avoidance goal orientation was detrimental. Our results plead for more attention to the effects of achievement goal orientation and qualitative job insecurity on flourishing under uncertainty.

Job insecurity is not only associated with negative well-being, but also seems to be a cause of it and as such is viewed as a threat to well-being (e.g., De Witte, Pienaar, & De Cuyper, 2016). During their working life almost all employees are, at a certain moment, confronted with the specific adversity of uncertainty of the future of their job and job insecurity seems to have become reality for a vast number of employees (Organisation for Economic Co-operation and Development, 1997). The results of a survey among European employees showed that 17% of them experienced job insecurity (Eurofound, 2016). Job insecurity is considered to be one of the prominent psychosocial risk factors at work (Leka & Jain, 2010) and not surprisingly, a considerable amount of cross-sectional as well as longitudinal research has been dedicated to the effects of job insecurity (e.g., Cheng & Chan, 2008; De Witte, 2010; Sverke & Hellgren, 2002).

Job insecurity refers to “the anticipation of this stressful event (i.e., *actual job loss*) in such a way that the nature and continued existence of one’s job are to be at risk.” (Sverke & Hellgren, 2002, p. 27). In addition to the uncertainty about the continuity of their job (*quantitative job insecurity*), employees are also facing changes in their work that can lead to uncertainty about the quality (e.g., stimulating job content or pay development) of their job (*qualitative job insecurity*) (Hellgren, Sverke, & Isaksson, 1999).

Research has consistently demonstrated that job insecurity is negatively related to well-being and that it therefore is detrimental for both organizations and individuals (e.g., De Witte, 2010, Griep et al., 2016). So far, research on the effects of job insecurity on well-being typically focused on (life) satisfaction and positive and negative affect (in other words, hedonic well-being). However, some researchers called for a broader look at well-being (e.g. Ryan & Deci, 2001) by incorporating eudaimonic well-being as an important aspect of well-being. Eudaimonic well-being refers to actualizing one’s human potential reflected in optimal psychological and social functioning, ranging from supportive relationships to purpose and meaning in life (Deci & Ryan, 2008; Keyes, 2007). Eudaimonic well-being is relevant in relation to the effects of job insecurity on well-being, because eudaimonic well-being makes it possible to examine further-reaching effects of job insecurity on well-being. The importance of a high eudaimonic well-being has also been demonstrated by a study that showed that the highest mental health was found among people with both high hedonic and eudaimonic well-being (Keyes, 2002). In addition, having a high hedonic well-being (i.e., being positively affective and satisfied) does not necessarily mean that someone has a high eudaimonic well-being. Thus, by examining the effects of job insecurity on eudaimonic well-being (labeled from here as flourishing), profound effects on well-being might be revealed that remain hidden if only hedonic well-being is considered.

Perceived job insecurity is typically characterized as a stressor in which the appraisal of a potential threat plays a central role (Sverke, Hellgren, & Näswall, 2002). In turn, personal goals and beliefs (e.g., self-efficacy) are important determinants of one’s appraisal

processes, which in turn mediates the relation between stressors and well-being (Lazarus & Folkman, 1987). In relation to job insecurity, the type of goal one sets might influence whether the potential loss of one's job (i.e. quantitative job insecurity) or valued job features (i.e., qualitative job insecurity), is appraised as a threat. According to the achievement goal orientation theory by Dweck and Leggett (1988), people can have different personal goal preferences in achievement situations (e.g., work) (Payne, Youngcourt, & Beaubien, 2007). Individuals' achievement goals are relevant for the appraisal process of stressors, for the reason that they create the framework within which individuals interpret and react to events (Dweck & Leggett, 1988). At the same time, one's personal goals will influence one's flourishing, with some type of goals leading to more flourishing than others (Deci & Ryan, 2000; Emmons, 2003). In sum, the kind of personal goals someone wants to achieve could not only directly influence flourishing but might, by means of one's appraisal of the insecurity of one's job, result in differences in flourishing.

The present study therefore aims to contribute to the literature by 1) investigating the direct effects of both quantitative and qualitative job insecurity as well as achievement goals on flourishing, 2) looking at the indirect effect of achievement goals on flourishing through job insecurity (quantitative and qualitative) and 3) offering opportunities to positively influence well-being in times of job uncertainty.

## **JOB INSECURITY AND FLOURISHING**

Job insecurity refers to "employed people who feel threatened by unemployment" (DeWitte, 2005, p. 1), and as such it is a subjective rather than an objective phenomenon (Greenhalgh & Rosenblatt, 1984). This implies that there might be differences between individuals in their appraisal of job insecurity even if they are exposed to the same circumstances. Job insecurity is mostly viewed as a unidimensional construct; the threat of losing one's job. However, Hellgren et al. (1999) argued that this unidimensional construct does not take into account the threat to someone's career options and employment conditions that might likely happen in times of reorganization and downsizing of organisations. They, therefore, summoned to make a distinction between quantitative and qualitative job insecurity. *Quantitative job insecurity* concerns the continued existence of one's job, and *qualitative job insecurity* concerns the continued existence of important job features. Both quantitative and qualitative insecurity are seen as job stressors. For instance, when one's job is not directly threatened, one's career opportunities can be substantially restricted by an organizational change.

The relationship of job insecurity with flourishing (eudomianic well-being) has been researched only scarcely (see for an exception, Rautenbach & Rothmann, 2017; Rothmann, 2013). Given the lack of clear empirical evidence we will base our expectations on previous findings of the relationship between job insecurity and well-being (i.e., hedonic well-being), which has shown that perceived job insecurity reduces well-being

of employees (De Witte, 2010, Griep et al., 2016). Although the effects of job insecurity on hedonic well-being and flourishing may differ these outcomes are highly correlated ( $r = 0.79$ ;  $p < 0.01$ ) (Fredrickson et al., 2013). The study by Hellgren et al. (1999) found that qualitative job insecurity was clearly related to employee well-being, cross sectionally as well as longitudinally, whereas quantitative job insecurity only (negatively) predicted job satisfaction. There is also evidence that well-being outside the work domain (e.g., at home) is negatively affected by both quantitative and qualitative job insecurity (e.g. Hellgren et al., 1999, Lim & Sng, 2006; Westman, Etzion, & Danon, 2001). Furthermore, Vander Elst, De Witte, and Cuyper (2014) reported that qualitative job insecurity was also related to depressive symptoms, such as sad feelings, a low self-worth, and a lack of interest in life. Based on the previous findings that job insecurity has a detrimental effect on hedonic well-being, a negative relation between job insecurity (qualitative and quantitative) and flourishing (eudaimonic well-being) is likely. Achievement goal orientation, job insecurity and flourishing

This study examines to what extent goal orientation has a direct and indirect effect, through job insecurity, on well-being (i.e., flourishing). Thus, we expect that goal orientation is directly related to both flourishing and job insecurity, and that it also indirectly is related to flourishing. First, we will elaborate on the achievement goal theory, after which the expected relation between goal orientation and flourishing (i.e., well-being) will be described and finally, the supposed effect of goal orientation on job insecurity.

According to the achievement goal orientation (AGO) theory (Dweck & Leggett, 1988) individuals differ in their preference for certain goals in achievement situations. Dweck and Leggett's AGO theory originally distinguished between a preference for mastery goals and a preference for performance goals, stating that mastery goals were more adaptive than performance goals. Their argument for this idea is that mastery goals focus on a task directly, and thus will contribute to learning (Dweck & Leggett, 1988). Later, Elliot and McGregor (2001) added a distinction between avoidance and approach goals to both mastery and performance goals, and argued that approach goals are more adaptive than avoidance goals because approach goals will help a person to reach positive outcomes (see also Elliot, Thrash, & Murayama, 2011). The addition of the approach-avoidance distinction resulted in the following 2x2 achievement goal orientation framework: 1) a mastery-approach (Map), implying a focus on improvement of one's competence and gaining mastery over a task, 2) a mastery-avoidance approach (Mav), in which the focus is on avoiding incompetency and preventing to lose mastery over a task, 3) a performance-approach (Pap), where the focus is on showing one's competence and gaining positive judgments from others, and 4) a performance-avoidance (Pav) approach, which focuses on avoiding to show incompetence and preventing unfavorable judgments from others.

In general, one's goals in life and at work have been shown to be indirectly related to one's well-being (e.g., by means of cognitive appraisals) but also directly (cf. Emmons,

2003). More specifically, an approach goal orientation (i.e. striving for a desired outcome) has been demonstrated to contribute to one's well-being, whereas an avoidance goal orientation (i.e. avoiding an undesired outcome) has a detrimental effect (Elliot, Sheldon, & Church, 1997). Furthermore, mastery goals are positively related to well-being (Dykman, 1988), while performance goals are negatively related to well-being (Kaplan & Maehr, 1999; Tuominen-Soini, Salmela-Aro, & Niemivirta, 2008). Based on these findings we expect a positive relation between Map goals and flourishing and a negative relation of flourishing with Pav goals. For Mav goals, a positive effect of mastery goal orientation is expected to be counteracted by a negative impact of the avoidance goal orientation. For Pap goals the positive impact of an approach goal orientation will potentially be counteracted by a negative impact of a performance goal orientation. Therefore, no relation between flourishing and both Pap and Mav goals are to be expected.

The (potential) threat of losing one's job is typically viewed as a stressor, and therefore the expected relation between job insecurity and one's goal orientation can be explained by looking at the cognitive appraisal of such a stressor. A fundamental attribute of an appraisal is that there is an assessment of a (potential) loss or gain (Lazarus & Folkman, 1987). Already before the concept of the appraisal of stress was advanced, Lazarus, Deese, and Osler (1952) had concluded that one's goals play a central role in stress: "We would then think that stress occurs when a particular situation threatens the attainment of some goal." (p. 295). Therefore, the role of personal goals in the appraisal of threat is crucial.

In a similar vein, a recent literature review on goal orientations concludes that goal orientations are related to cognitive appraisals; a Map goal orientation is negatively related to threat appraisals, a performance-avoidance goal orientation is positively related to threat appraisals and the relation with performance-approach goal orientation proves often non-significant (Vandewalle, Nerstad, & Dysvik, 2019). Moreover, adopting Map goals is associated with appraising an achievement situation not only as less of a threat, but also as more of a challenge (Elliot & Reis, 2003). For example, employees with a higher Map goal orientation might feel less threatened by the potential loss of their job (compared to colleagues with a low Map goal orientation), because they see this more of as a challenge. In contrast, employees with a high Pav goal orientation might feel threatened by the potential loss of their job, because they fear the possible negative judgements of others when they would lose their job. Furthermore, adopting Map goals is positively associated with self-directed career management (Briscoe, Hall, & Frautschy DeMuth, 2006), feeling employable and feeling that one's job is secure (Lin, 2015). In this way, we expect that employees with a high Map goal orientation will experience less job insecurity and those with a higher Pav goal orientation experience more job insecurity. However, Vandewalle et al. (2019) have unfortunately not included Mav goal orientation in their review, but earlier studies (Adie, Duda, & Ntoumanis, 2008, 2010) among participants in a competitive sports setting have shown that Mav goals were positively related to threat appraisals. Thus, earlier research

seems to suggest that employees with a higher Mav goal orientation will experience higher levels of job insecurity. However, recently the detrimental effects of Mav goals on performance and well-being have been nuanced by Senko and Freund (2015). Their study showed that Mav goals were more adaptive for older than for younger people; the negative effects on motivation and performance were more likely for the young than for the elderly. When Mav goals are more adaptive for older people, it can be assumed that these goals will also be less strongly related to threat appraisals among them. Our sample of working adults consists of older employees, and therefore we expect that the relation with threat appraisals will be absent. Thus, a relationship between both Mav and Pap goal orientation and job insecurity is not expected in our sample, but as it is too premature to exclude possible effects of both Mav and Pap goals on job insecurity, all AGO's will be included in our study.

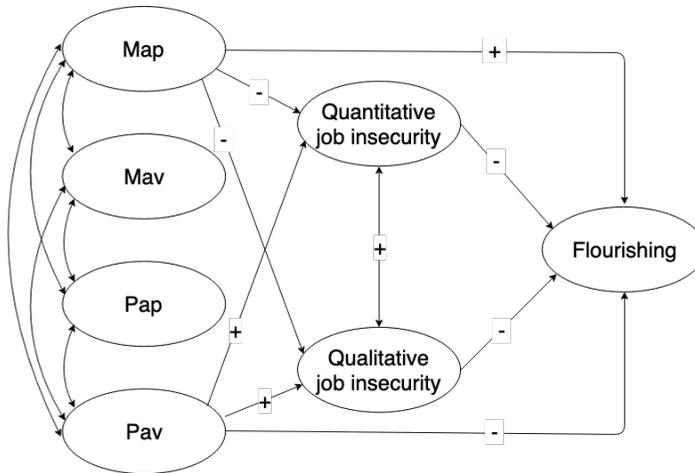
### **HYPOTHESIZED MODEL**

The present study examines the effects of AGO on flourishing and proposes that this effect is mediated by the appraisal of quantitative and qualitative job insecurity. Based on theory and previous research (e.g., Elliot & McGregor, 2001; Huang, 2011), we build a model

in which Map (positively) and Pav (negatively) are related to quantitative and qualitative job insecurity and flourishing, and flourishing is negatively related to quantitative and qualitative job insecurity (see Figure 1). For clarity, in the hypothesized model Mav and Pap goal orientation are incorporated, but no effects are hypothesized. It should be noted that mediation implies longitudinal causality, which cannot be demonstrated with cross-sectional data (MacKinnon, Fairchild, & Fritz, 2007). Therefore, our aim is to conduct a preliminary test of the hypothesized model.

**FIGURE 1**

Theoretical model: relations between achievement goal orientation, quantitative and qualitative job insecurity and flourishing.



Note. Map = Mastery-approach, Mav = Mastery-avoidance, Pap = Performance-approach, Pav = Performance-avoidance. The hypotheses are displayed by their abbreviations.

## METHOD

### Respondents and procedure

All employees ( $N = 487$ ) of an organization in the Netherlands that provides Youth Care (e.g., foster care and guiding complicated family problems), were given the opportunity receive career advice, from an independent organization, as part of a reorganization. The reorganization started in the first half of 2014 and ended in the middle of 2015, resulting in the exit of 145 employees (30%). To get a career advice, they had to complete a questionnaire. The results were presented in a report that a career professional discussed with each employee in an individual interview. All employees were invited by email to fill out an online questionnaire in Dutch from July 2014 to November 2014, wherein the confidentiality of their results, report and interview was warranted. All participants were native Dutch and proficient in the Dutch language. By filling out the questionnaire they approved with the confidentiality in handling their results. The results of the questionnaire did not affect in any way their chance to get fired. After 10 weeks the employees who had not filled out the questionnaire received a reminder.

In total, 56.5% of the employees completed the questionnaire, resulting in a final sample of 275 employees (224 females, 51 males). The relative low percentage of male workers (22.8%) is comparable to the percentage of men in similar organizations in Youth Care (23% in 2014) (Arbeidsmarkt Zorg en Welzijn, 2017). The mean age was 43.5 years (SD

= 10.81), the mean weekly working hours was 29.01 (SD = 6.47) and the average years of work experience was 20.50 (SD = 10.62). Regarding the highest educational level, 0.7% had finished primary education; 4.7% lower general secondary education; 14.2% higher general secondary education, and 80.4% had finished higher vocational training.

## MEASURES

### Achievement goal orientation

The scales to measure the four achievement goal orientations were based on the scales by VandeWalle (1997) and Baranik, Lau, Stanley, Barron, and Lance (2013). Map was measured with 4 items, an example item is: “I enjoy challenging and difficult tasks at work where I’ll learn new skills” ( $\alpha = .85$ ); Pap (4 items), example item: “I enjoy it when others at work are aware of how well I am doing” ( $\alpha = .76$ ); Pav (4 items), example item: “Avoiding a show of low ability is more important to me than learning a new skill” ( $\alpha = .73$ ); and Mav goal orientation (4 items), example item: “I just hope I am able to maintain enough skills so I am competent at my job” ( $\alpha = .77$ ). All items are scored on a 5-point Likert scale, ranging from 1 = strongly disagree to 5 = strongly agree.

### Flourishing

Flourishing was measured with the 8-item Flourishing Scale developed by Diener et al. (2010). Example items are: “I actively contribute to the happiness and well-being of others”, “I lead a purposeful and meaningful life”, and “I am engaged and interested in my daily activities” ( $\alpha = .87$ ). Items are scored on a 7-point scale, ranging from 1 = strongly disagree to 7 = strongly agree.

### Quantitative job insecurity

A 5-item scale was used to measure quantitative job insecurity (Handaja & De Witte, 2007). An example item is: “I’m afraid to be fired” ( $\alpha = .82$ ). Items are scored on a 5-point scale, ranging from 1 = strongly disagree to 5 = strongly agree. A high score indicated high job insecurity.

### Qualitative job insecurity

A 4-item scale was used to measure qualitative job insecurity (Hellgren et al., 1999). An example item is: “My future career opportunities in the organization are favourable”. Items are scored on a 5-point scale, ranging from 1 = strongly disagree to 5 = strongly agree ( $\alpha = .79$ ). Items were reverse scored so that a high score indicated high job insecurity. A confirmatory analysis (CFA; see for details below) showed that one item (“I believe that [the organization] will need my competence also in the future”) had to be removed due to a low factor loading. The reliability of the scale with the remaining items was  $\alpha = .81$ .

### **Control variables**

To control for potential effects of socio-demographic characteristics the following variables were measured: respondents' gender (0 = male, 1 = female), age (in years), highest educational level (1 = primary education, 2 = lower general secondary education, 3 = higher general secondary education, and 4 = higher vocational training), and weekly working hours. The aforementioned variables are known to be related to quantitative job insecurity and well-being (e.g., Argyle, 1999; Cheng & Chan, 2008; Näswall & DeWitte, 2003). We performed a hierarchical regression analysis in which flourishing was regressed on job insecurity, AGO and the control variables. The control variables were not significantly related to flourishing. Therefore, the control variables were excluded from further analyses.

### **Statistical analyses**

Structural Equation Modelling (SEM) was applied, with Mplus (2017) and the R package MplusAutomation (Hallquist & Wiley, 2018; R Core Team, 2012), to test the hypotheses with the use of the Maximum Likelihood Estimation (ML). ML makes the distributional assumption that variables have a multivariate normal distribution. Absolute values of the skew index which are higher than 3, and for the kurtosis index higher than 10, are regarded as violations of this assumption (Kline, 2011). The observed variables met those requirements.

The following fit indexes were used to assess the fit of the models: Tucker-Lewis index (TLI), Comparative Fit Index (CFI), Standardized Root Mean Square Residual (SRMR) and Root Mean Square Error of Approximation (RMSEA) (Hoyle, 2012; Kline, 2011). Fit indices above a value of .95 for the ML-based indices (TLI, CFI), a value lower than .08 for SRMR, and a value lower than .06 for RMSEA are recommended (Hu & Bentler, 1999). A Chi-square difference test was performed to compare the alternative nested models. We performed a two-step approach wherein in the first step, the measurement model is tested and in the second step, the structural model.

## **RESULTS**

Table 1 shows the means, standard deviations, alpha coefficients and the intercorrelations among all variables.

**TABLE 1**  
*Means, standard deviations, alpha reliabilities and intercorrelations among all measured variables*

	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	8	9
1. Gender <sup>a</sup>	0.81	0.39	-								
2. Age in years	44.62	10.85	.21**	-							
3. Level of education <sup>b</sup>	3.74	0.58	-.08	-.32**	-						
4. Mastery-approach	3.80	0.65	.04	-.07	.17**	-					
5. Mastery-avoidance	3.90	0.67	-.12*	.03	.08	.16**	-				
6. Performance-approach	2.94	0.69	-.02	-.05	.09	.25**	.22**	-			
7. Performance-avoidance	2.70	0.69	-.21**	-.01	-.02	-.21**	.25**	.31**	-		
8. Job insecurity (qualitative)	3.40	0.78	-.00	-.05	.05	-.16**	-.09	-.15*	.01	-	
9. Job insecurity (quantitative)	3.46	0.75	-.13*	-.21**	.10	-.03	.11†	.02	.12†	.50**	-
10. Flourishing	6.24	0.46	-.02	.06	.14*	.28**	.12*	.02	-.18**	-.16**	-.02

*Note.* *N* = 275. Variables 4 – 9: 5-point scale. Variable 10: 7-point scale. Higher values indicate higher scores on the constructs. <sup>a</sup> Gender: 0 = male, 1 = female, <sup>b</sup> 1 = primary education, 2 = secondary education, 3 = high school, 4 = graduated, †*p* < .10, \**p* < .05, \*\**p* < .01, \*\*\**p* < .001.

## MEASUREMENT MODEL

We conducted a confirmatory factor analysis (CFA) to investigate our measurement model (see the Appendix for the factor loadings). To reduce the number of indicators and improve the normal distribution of the endogenous variables, the items of the Flourishing Scale were parcelled. Although this procedure is not without its critics (e.g., Marsh, Lüdtke, Nagengast, Morin, & Von Davier, 2013), parcelling is an approved technique to correct for measurement error, while reducing the number of indicators and improving the distribution of variables and the fit of a model (e.g., Coffman & MacCallum, 2005; Little, Rhemtulla, Gibson, & Schoemann, 2013). Using single factor analysis, parcels were formed by first pairing the items with the highest and lowest loadings and this procedure was continued until all items were paired (Landis, Beal, & Tesluk, 2000). This method performs well when the unidimensionality of the items is defensible (Rogers & Schmitt, 2004). We followed the recommendation that a latent variable has at least three indicators (Kline, 2011, which implies that at least 6 items are required). Therefore, parcelling was only applied to the Flourishing Scale. Given the number of items and the well-documented psychometric qualities of the Flourishing Scale (Diener et al., 2010) parcelling with this method is regarded as appropriate. To form parcels, the factor loadings were determined with the use of CFA. One item of the Flourishing Scale, related to optimism, had a low factor loading. However, this 8-item scale has been extensively validated across different populations (e.g., Sumi, 2014; Villieux, Sovet, Jung, & Guilbert, 2016). Therefore, we decided to keep the item. With the 8 items four parcels were composed.

First to investigate our measurement model, we tested a six-factor model (i.e., Map, Mav, Pap, Pav goal orientation, job insecurity, and flourishing), wherein the scales of job insecurity were combined into one factor, resulting in six latent factors, wherein the factors were allowed to covary. The goodness of fit was poor ( $\chi^2$  ( $df = 362$ ) = 876.43,  $p < .001$ , TLI = .82, CFI = .84, SRMR = .08, and RMSEA = .07 (90% CI [0.07 0.08])).

Subsequently, a seven-factor model was tested, with a latent factor for each scale (i.e., Map, Mav, Pap, and Pav goal orientation, quantitative and qualitative job insecurity, and flourishing), in which the factors were allowed to covary. The goodness of fit was acceptable ( $\chi^2$  ( $df = 356$ ) = 700.28,  $p < .001$ , TLI = .88, CFI = .89, SRMR = .07, and RMSEA = .06 (90% CI [0.05, 0.07])). The Chi-square difference test was significant ( $\Delta\chi^2 = 176.16$ ,  $\Delta df = 6$ ,  $p < .001$ ), showing that the seven-factor model had better fit with the data compared to the six-factor model. After inspection of factor loadings one item of the Qualitative job insecurity scale (“I believe that this organization will need my competence also in the future”) was removed due to a low factor loading. Furthermore, inspection of the modification indices suggested to allow the error variance of two items of the quantitative job insecurity scale to covary. The modified measurement model showed adequate fit,  $\chi^2$  (328) = 565.96,  $p < .001$ , TLI = .91, CFI = .92, SRMR = .07 and RMSEA = .05 (90% CI [0.04, 0.06])). Therefore, this model was used to test the structural model.

## MODEL TESTING

To test the hypothesized model, different models were specified. For clarity, in all models Mav and Pap goal orientation were incorporated. In Model 1 (full model) all parameters were freed, which meant that the effects of Map, Mav, Pap, and Pav goal orientation on quantitative and qualitative job insecurity and flourishing were included. Model 2 only contained the hypothesized direct effects of Map and Pav goal orientation on flourishing and the indirect effects for Map and Pav goal orientation through quantitative and qualitative job insecurity on flourishing, which allowed us to detect any potential mediation effect of quantitative and qualitative job insecurity in the relation between Map and Pav goal orientation on the one hand and flourishing on the other. At last, we specified a model in which the non-significant paths (based on the results of the full model) were fixed to zero. More specifically, the following paths were fixed to zero: Pap goal orientation to flourishing, Map, Mav, Pap and Pav goal orientation to quantitative job insecurity and Mav and Pav to qualitative job insecurity. The results of the different models are presented in Table 2.

Based on the Chi-squares Model 1 and the measurement model have the best fit compared to the other models (see Table 2). Model 2 had to be rejected because of the significantly higher Chi-square. However, the Chi-square difference between Model 1 and Model 3 was not significant ( $\Delta\chi^2 = 7.35$ ,  $\Delta df = 7$ ,  $p = .39$ ), indicating that both models fit the data equally well, which was also confirmed by the other fit indices (e.g. TLI, CFI). The Chi-square index is also known to be sensitive to sample size and high correlations between variables, such as quantitative and qualitative job insecurity in our study (Kline, 2011). Therefore, we compared which model fitted better with additional measures of fit: the Akaike information criterion (AIC) and the Bayesian information criterion (BIC). Both the AIC and BIC of Model 3 were lower than the other models, indicating that Model 3 had a better fit. Moreover, Model 3 is more parsimonious and therefore more preferable (Wang & Wang, 2012). We, therefore, choose Model 3 as model that best fitted our data; the results of Model 3 are displayed in Figure 2. It should be noted that AIC and BIC only rank models; when all models are bad, they only rank from worst to even worse. The explained variance of the model ( $R^2$ ) is a better indicator of the quality of the model (Anderson, 2008). The  $R^2$  of flourishing in the two models were comparable ( $R^2_{\text{Full model}} = .19$ ;  $R^2_{\text{Model 3}} = .18$ ), indicating that both did explain variance equally well and that the quality of Model 3 is at least sufficient.

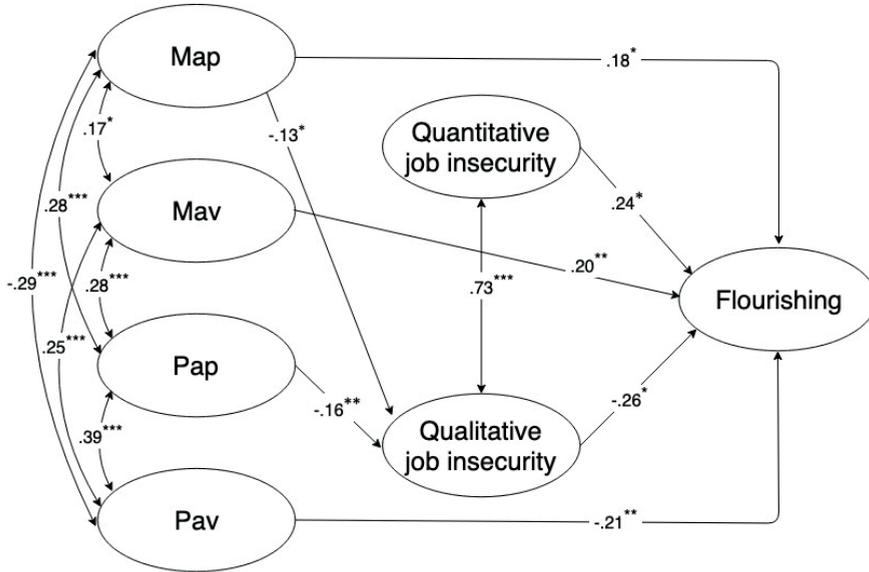
**TABLE 2**  
Fit indices of the measurement and structural models

Model	$\chi^2$	TLI	CFI	SRMR	RMSEA	$\Delta\chi^2$	df	AIC	BIC
Model 0 Measurement model (null model)	565.96***	.91	.92	.06	.051		328	16085.24	16468.62
Model 1 Direct and indirect effects of Map, Mav, Pap, Pav, quantitative and qualitative job insecurity on flourishing (full model)	565.96***	.91	.92	.07	.051	0	328	16085.24	16468.62
Model 2 Direct and indirect effects of Map, Pav, quantitative and qualitative job insecurity on flourishing (hypothesized model)	579.80***	.91	.92	.07	.052	13.84*	334	16087.08	16448.76
Model 3 Direct effects of Map, Mav, Pav, quantitative and qualitative job insecurity on flourishing; Map and Pap on qualitative job insecurity (modified model)	573.31***	.91	.92	.07	.051	-6.49n.s.	335	16078.59	16436.65

Note. N=275.  $\chi^2$  = Chi-Square, TLI = Tucker-Lewis Index, CFI = Comparative Fit Index, SRMR = Standardized Root Mean Square Residual, RMSEA = Root Mean Square Error of Approximation, AIC = Akaike information criterion, BIC = Bayesian information criterion. Map = Mastery-approach, Mav = Mastery-avoidance, Pap = Performance-approach, Pav = Performance-avoidance.

**FIGURE 2**

Structural model with path coefficients



Note. Map = Mastery-approach, Mav = Mastery-avoidance, Pap = Performance-approach, Pav = Performance-avoidance. The path coefficients are standardized. †  $p < .10$ , \*  $p < .05$ , \*\*  $p < .001$ . For the sake of clarity only (marginally) coefficients are depicted, and items serving as indicator for latent variables and error variances of the latent variables are omitted.

Inspection of the correlation matrix and the path coefficients revealed a mild suppression effect for qualitative and quantitative job insecurity and flourishing. Quantitative job insecurity was weakly and not significantly correlated with flourishing, while in Model 3 it significantly predicted flourishing. Moreover, unexpectedly quantitative job insecurity was positively related to flourishing.

The expectation that achievement goal orientation predicts flourishing was confirmed; both Map and Pav goal orientation predicted flourishing significantly (Map:  $\beta = .18$ ,  $p = .02$ ; Pav:  $\beta = -.21$ ,  $p = .01$ ). In addition, although unexpected, a Mav goal orientation positively predicted flourishing ( $\beta = .20$ ,  $p = .01$ ), while a Pap goal orientation was not significant. Flourishing was positively predicted ( $\beta = .24$ ,  $p = .05$ ) by quantitative job insecurity, and negatively predicted ( $\beta = -.26$ ,  $p = .03$ ) by qualitative job insecurity.

Our expectation that Map and Pav goal orientation predicted job insecurity (quantitative and qualitative), was only partly confirmed. None of the AGOs predicted quantitative job insecurity. It is worth noting that the correlation matrix shows that Mav and Pav goal orientation were positively correlated, although small and marginally significantly, with quantitative job insecurity (Mav:  $r = .11$ ,  $p < .10$ ; Pav:  $r = .12$ ,  $p < .10$ ), while Map and

Pap goal orientation correlated significantly negatively with qualitative job insecurity (Map:  $r = -.16$ ,  $p < .01$ ; Pap:  $r = -.15$ ,  $p < .01$ ). As expected, Map goal orientation negatively predicted qualitative job insecurity, while unexpectedly Pap goal orientation was also negative related.

To test any indirect effects of Map and Pav goal orientation on flourishing through quantitative and qualitative job insecurity, asymmetric confidence limits, based on the distribution of the product, and bootstrap estimation are most suitable (MacKinnon et al., 2007). Of the hypothesized effects, only a Map goal orientation was marginally significantly negatively related to qualitative job insecurity. The indirect effect of Map on flourishing, through qualitative job insecurity, was estimated with ML and subsequently bootstrapped (2000 samples) with the Bollen-Stine method (Bollen & Stine, 1992) and proved to be non-significant,  $b = 0.03$ , 95% CI  $[-0.01, 0.10]$ . This result implied that a mediation effect of Map and Pav goal orientation through job insecurity was not confirmed.

## DISCUSSION

The present research replicates and extends past research on the relation between achievement goal orientation (AGO), flourishing and job insecurity (both quantitative and qualitative) in different ways. As far as we know this is the first study in an organizational setting that incorporated eudaimonic well-being (i.e., flourishing), and related it to AGO and job insecurity. In line with our expectations a Map goal orientation positively predicted flourishing, even when employees' jobs were threatened. On the other hand, a Pav goal orientation negatively predicted flourishing. Surprisingly, we also found a positive relationship between a Mav goal orientation and flourishing, which contradicts the negative relationship found in previous research (e.g., Elliot & McGregor, 2001). An explanation for this finding might be that the relation between Mav goal orientation and well-being can be moderated by achievement domains. Most earlier studies have studied a Mav goal orientation in an educational setting. However, the strength of effects of the different AGOs seem to differ per domain (Van Yperen, Blaga, & Postmes, 2014). For instance, the focus of a Mav goal orientation implies that one's competencies are up to par and will not deteriorate. Such a goal orientation could be adaptive in an environment that is primarily focused on utilizing, rather than developing, competencies. However, this orientation seems less adaptive in an educational setting, where the focus will be on further developing one's competencies. Next to this notion, the effect of Mav goal orientation could be dependent on age. Maintenance and loss-prevention goals, which are similar to Mav goals, are more common in late adulthood, but they also might promote more positive outcomes in this life phase (Ebner, Freund, & Baltes, 2006, Freund, 2006). Positive effects (e.g., task interest and persistence) of a Mav goal orientation have indeed been reported especially among adults (Senko & Freund, 2015). Typically, age is higher in an organizational setting than in an educational setting. Additional research on the relation between Mav goal

orientation and a broad perspective on well-being (i.e. flourishing) and the moderating effects of age and domain therefore is needed.

In addition to the effects of AGO on flourishing, in line with Hellgren et al. (1999) we found that qualitative job insecurity was negatively related to flourishing, indicating the importance of qualitative job security for optimal psychological functioning. The impact of qualitative job insecurity on flourishing is further underlined by our finding that quantitative job insecurity was positively related to flourishing and acted as a suppressor variable for the predictive value of qualitative job insecurity on flourishing. Our finding is surprising considering numerous studies which show that quantitative job insecurity has significantly negative associations with well-being (e.g., Sverke et al., 2002). Anecdotal examples are well-known about people who are forced to leave an organization feeling a relief and/or a boost to make a postponed career change. Apparently, the relationship between quantitative job insecurity and flourishing is more ambiguous than the relationship between job insecurity and hedonic well-being. This ambiguity is reflected in earlier studies which found no or a negative relationship between flourishing and quantitative job insecurity (Rautenbach, & Rothmann, 2017; Rothmann, 2013). All the same, the importance of qualitative job insecurity for flourishing is clearly supported by the present study. Qualitative job insecurity, showed to be significantly negatively related to flourishing. Therefore, not only quantitative but also qualitative job insecurity should be taken in consideration when the relation with flourishing is researched. Earlier research has shown that the effects of qualitative and quantitative job insecurity on well-being are similar to each other (e.g., De Witte, De Cuyper, Handaja, Sverke, Näswall, & Hellgren, 2010). However, our results clearly show that qualitative job insecurity is more harmful to well-being than quantitative job insecurity. Yet, future research needs to focus on the relationship between qualitative job insecurity and flourishing (i.e., eudaimonic well-being) to reaffirm our findings.

Our expectation that Map and Pav goal orientation were related to the appraisal of quantitative and qualitative job insecurity, was only confirmed for a Map goal orientation and qualitative job insecurity. Unexpectedly, a Pap goal orientation also proved to be negatively related to qualitative job insecurity. However, the relations were weak and the weakest in the model. A possible explanation for the weak relations between AGO and qualitative job insecurity is that our study used a cross-sectional design. Lazarus and Folkman (1987) pointed out that to examine appraisal processes persons need to be viewed over time. Considering the weak effects of Map and Pap goal orientation on qualitative job insecurity and the finding that Pav goal orientation had no effect on qualitative job insecurity, a longitudinal design with analysis on the individual level (e.g., a diary study) might reveal stronger effects of AGO on the appraisal of job insecurity. Moreover, it is known that state goal orientations are stronger related to outcome variables such as job performance, than are dispositional goal orientations (Latham, Seijts, & Slocum, 2016).

For example, a diary study in which state goal orientation and perception of job insecurity are assessed, might reveal stronger associations. Especially when these are related to potentially threatful events (e.g., a message from management with information about organizational downsizing).

A possible explanation for the absence of a relation between AGO and quantitative job insecurity is that due to massive budget cuts in this population potential job loss was a reality (it was announced that nearly 30% of all employees would be dismissed). Therefore, the potential loss of their job (i.e. "I'm afraid I will lose my job") was substantial. This notion is supported by the comparison of quantitative job insecurity between our sample and a sample of Dutch employees from both private and public organizations (Vander Elst et al., 2014). An independent-samples t-test was conducted to compare the quantitative job insecurity in the two samples. There was a significant difference between the mean of quantitative job insecurity in our study ( $M = 3.46$ ,  $SD = 0.91$ ) and the sample used by Vander Elst et al. ( $M = 2.47$ ,  $SD = 0.75$ ),  $t(667) = 14.86$ ,  $p < 0.01$ . These results suggest that the sample in our study experienced a substantial amount of quantitative job insecurity. It might be possible that in an environment with a substantial threat to one's job, quantitative job insecurity is more an objective than subjective experience and therefore, less susceptible to factors that might influence this subjective experience, such as individual differences in AGO. Johns (2006) points out that context can impact organizational behaviour. Referring to Mischel (1968), Johns (2006) states that in a strong situation there is little autonomy and behaviour is constrained, thereby reducing the impact of individual differences. In a context of a substantial threat of job loss, we might expect that the autonomy of the employees with regard to quantitative job insecurity is low. This lower autonomy might obscure the relation of quantitative job insecurity with AGO. With respect to qualitative job insecurity, it is expected that employees experience more autonomy; for example, the behaviour to make a job more interesting is less restricted. This might explain that AGO is related to qualitative but not to quantitative job insecurity.

Although we found that AGO weakly influenced the appraisal of job insecurity, Map, Mav and Pav goal orientation were clearly related to flourishing. Hence, the experience of job insecurity seems not different for AGO, a mastery goal orientation (approach and avoidance) contributes to flourishing, even in an environment with a substantial threat of job loss.

### **Limitations**

When interpreting the results from the present study some limitations should be considered. An important limitation is the reliance on self-report measures and associated concerns regarding common method variance. However, AGO and job insecurity constructs are subjective in nature and not easily objectified. Presumably this is also the reason why research aimed at these constructs heavily relies upon self-reports. Thereby, the scales used

in this study are well validated and can rely on extensive empirical evidence (e.g. Diener et al., 2010; Vander Elst et al., 2014; Van Yperen et al., 2014).

Another limitation is that our sample consisted of employees who were interested in career advice. This interest could be linked to turnover intention, which is positively associated with job insecurity (see Sverke et al., 2002). We cannot determine to what extent our findings apply to employees who were not willing, for whatever reason, to get career advice. However, the willingness to get an advice can be seen as a sign of proactively coping (i.e., seeking help) given the threat of losing one's job. Therefore, we can tentatively conclude that for employees who experience job insecurity but actively cope with this situation, the detrimental effect of job insecurity on well-being diminishes, as reported else in literature (see Klehe et al., 2012). This weakened negative effect on well-being appears to occur in our study, especially for employees with a high Map goal orientation and a low Pav goal orientation.

Another important limitation is that the study had a cross-sectional design. Any dynamics in the nature of appraisal of for instance job insecurity can only be captured with a longitudinal design, in which intra-individual differences are measured on multiple points in time. Causal inferences cannot be drawn with a cross-sectional design. However, there is theoretical and empirical evidence that dispositional variables, like AGO, influence appraisal (Lazarus & Folkman, 1987) and well-being (Dweck, 1986) at a certain moment in time. Another, aforementioned, limitation might be that possible effects of AGO on the appraisal of job insecurity are obscured in a 'strong' situation. The threat of losing one's job was substantial in the organization, so that for the employees of the organization job insecurity was more an objective fact than a subjective appraisal.

### **Practical implications**

While a mastery goal orientation is related to flourishing, it might be useful to stimulate and promote this goal orientation within employees. More specifically, a Map goal orientation can be promoted by training (Noordzij, Van Hooft, Van Mierlo, Van Dam, & Born, 2013) and certain interventions could influence the psychological mastery climate within organizations (e.g., Dragoni, 2005). Moreover, in times of downsizing, organizations can hardly influence quantitative job insecurity, yet to diminish the negative effects of job insecurity on flourishing, organizations could focus on reducing qualitative job insecurity. This can be achieved in two different ways. First, by enhancing job crafting for employees who most likely will stay in the organization, but whose jobs will change. Job crafting provides a framework to strengthen valuable aspects of a job, thereby positively influencing well-being (Tims, Bakker, & Derks, 2013). Secondly, by promoting career adaptability, so that employees even when they lose their jobs are better able to find qualitative good jobs (Klehe, Zikic, Van Vianen, Koen, & Buyken, 2012). To conclude, although job insecurity is becoming more inevitable and hampers well-being, AGO provides a promising avenue to counter these negative effects.

## APPENDIX

### Confirmatory factor analysis results for measurement model

Factor loadings (standardized)

#### Mastery approach

I am willing to select a challenging work assignment that I can learn a lot from.	.76
I often look for opportunities to develop new skills and knowledge.	.73
I enjoy challenging and difficult tasks at work where I'll learn new skills.	.87
For me, at work development of my ability is important enough to take risks.	.69
I am willing to select a challenging task that I can learn a lot from.	.78

#### Mastery avoidance

My goal is to avoid being incompetent at performing the skills and tasks necessary for my job.	.66
I hope I am able to maintain enough skills so I am competent at my job.	.76
At work, I am just trying to avoid performing the tasks required for my job poorly.	.81
At work, I focus on not doing worse than I have personally done in the past on my job.	.56

#### Performance approach

I'm concerned with showing that I can perform better than my co-workers.	.61
I try to figure out what it takes to prove my ability to others at work.	.71
I enjoy it when others at work are aware of how well I am doing.	.69
I prefer to work on projects where I can prove my ability to others.	.65

#### Performance avoidance

I would avoid taking on a new task if there was a chance that I would appear rather incompetent to others.	.56
Avoiding a show of low ability is more important to me than learning a new skill.	.65
I'm concerned about taking on a task at work if my performance would reveal that I had low ability.	.86
I prefer to avoid situations at work where I might perform poorly.	.72

#### Qualitative job insecurity

My future career opportunities in this organization are favourable.	.88
I feel that this organization can provide me with a stimulating job content in the near future.	.83
My pay development in this organization is promising.	.61

#### Quantitative job insecurity

I'm afraid I will get fired.	.57
I think I will be able to stay working at this organization.	.82
I feel insecure about the future of my job.	.55
I am sure I can keep my job.	.72
Chances are I will lose my job in two years.	.57

#### Flourishing<sup>a</sup>

Parcel1 (Items 1 & 5)	.70
Parcel2 (Items 3 & 8)	.75
Parcel 3 (Items 4 & 6)	.83
Parcel 4 (Items 2 & 7)	.82

<sup>a</sup>Flourishing (Item 1= I lead a purposeful and meaningful life, 2 = My social relationships are supportive and rewarding, 3 = I am engaged and interested in my daily activities, 4 = I actively contribute to the happiness and well-being of others, 5 = I am competent and capable in the activities that are important to me, 6 = I am a good person and live a good life, 7 = I am optimistic about my future, 8 =People respect me).





# GENERAL DISCUSSION

Well-being, just like physical health, is a great good. In addition to having an intrinsic value (i.e., an overall feeling of wellness), well-being is associated with desirable outcomes such as longer life, better physical health and better work performance. At the same time, external pressures from rapidly developing societies threaten the well-being of many people. These societal developments come together at the workplace: jobs have become more complicated, because of which employees are experiencing many pressures that can threaten their well-being. In Europe, 25% of workers indicated that their health was negatively affected by their work (Eurofound, 2017). The issue of a threat to well-being is salient, for instance, in jobs such as health care professions, where employees need to work on a daily basis with people who need care. Those professionals are – among others – confronted with a high workload, lack of autonomy and role conflict. Hence, the studies in this dissertation mainly focused on employees who were active in social work. As Lloyd et al. (2011) noted, “Social work is a profession that aims to improve social functioning by the provision of practical and psychological help to people in need” (p. 262). These employees experience much day-to-day stress; burnout symptoms occur commonly in this sector (Lloyd et al., 2011). Moreover, an overall feeling of wellness is necessary for social workers to do their work properly, as they often need to work with vulnerable children and adults. While it is very important for social workers to have a high level of well-being, it is self-evident that this is also important for people in general.

One important factor among the many that influence well-being is the goals that people set for themselves (Emmons, 2003). With regard to goals that people set themselves when they want to achieve something, a distinction can be made between mastery-approach, mastery-avoidance, performance-approach and performance-avoidance goal orientations (Elliot & McGregor, 2001). These different types of achievement goals are associated with differential effects on employee motivation and performance. However, less is known about the relation between achievement goals and people’s well-being. Therefore, this dissertation aimed to gain greater insight into the relation between the type of achievement goal orientations employees have and their well-being. More specifically, this dissertation aimed to gain more knowledge about which achievement goals best serve well-being among workers and, as such, provide concrete avenues for enhancing well-being in the workplace.

Until now, research has predominantly focused on the relation between achievement goals and well-being in the educational domain (e.g., Huang, 2011) or, when conducted in the work domain, on aspects of people’s well-being such as whether they are feeling good, are not feeling bad, and sometimes on job satisfaction (e.g., Van Yperen & Janssen, 2002). In those studies, feeling good implied that people experienced positive affect, and not feeling bad referred to an absence of negative affect. Together, the presence of positive affect, absence of negative affect and being satisfied are part of a *hedonic* perspective on well-being. However, well-being involves not only the presence or absence

of positive and negative emotions, but also the actualization of own's potential; this is the eudaimonic perspective on well-being (e.g., Diener et al., 2018). Eudaimonic well-being denotes actualizing one's human potentials through optimal psychological and social functioning, during which people experience their life as meaningful to themselves and others, contribute to the life of others and are kind to themselves and to others. Hence, this dissertation aimed to gain greater insight and more knowledge into the relations of the different achievement goal orientations with hedonic and eudaimonic well-being in the workplace, and by that means to make a unique contribution to the literature on achievement goal orientation and well-being.

Finally, this dissertation aimed to gain greater insight into the interplay between employees' achievement goal orientation and the characteristics of their work environment, and how this interplay is associated with their well-being. These different aims resulted in the following two research questions that guided the studies in this dissertation:

1. What is the association between employees' achievement goal orientation and their hedonic and eudaimonic well-being?
2. What is the influence of the work environment on the relation between employees' achievement goal orientation and their hedonic and eudaimonic well-being?

First, based on the findings from the studies presented in this dissertation, the research questions will be answered and related to the existing literature. Next, the possible limitations of the findings will be considered and the needs for further research will be formulated. Subsequently, the answers to the research questions will be translated into practical implications. Finally, an overall conclusion about the findings and their implications will be drawn.

## **ACHIEVEMENT GOAL ORIENTATION AND HEDONIC AND EUDAIMONIC WELL-BEING**

### **Achievement goal orientation and hedonic well-being**

Hedonic well-being has generally been defined as happiness, that is, the presence of positive affect, the absence of negative affect and being satisfied with one's life (Ryan & Deci, 2001). While the presence of positive affect (and the absence of negative affect) are regarded as important indicators of people's hedonic well-being, it should be noted that the third aspect of hedonic well-being – one's life satisfaction – has been rarely studied in relation to people's achievement goal orientations.

Studies of achievement goal orientation have mainly been done in the educational domain. A meta-analysis by Huang (2011) demonstrated that these studies have consistently shown that among children and young adults, a high *mastery-approach* goal

orientation is related to more positive affect and less negative affect (Huang, 2011). Based on those findings, a positive relation between mastery-approach goal orientation and hedonic well-being was expected in the work domain.

The study described in Chapter 2 confirmed this expectation: mastery-approach goal orientation was positively related to employees' overall hedonic well-being. They felt happy, and were interested in – and satisfied with – their lives. However, the study in Chapter 5 showed that when job satisfaction and task enjoyment (i.e., positive affect) were measured separately as indicators of hedonic well-being, mastery-approach goal orientation was positively related to task enjoyment, but not to job satisfaction. A possible explanation for this difference is that employees with higher mastery-approach goal orientations set themselves more – and more challenging – goals. Assuming that one is satisfied when a goal is reached, employees with high mastery-approach goal orientations might not have more reasons to be satisfied than their colleagues with low mastery-approach goal orientations, as they have more goals that have not been reached, but they may enjoy more what they do.

Another finding from previous research in the educational domain is that high *performance-avoidance* goal orientation will generally be associated with less positive affect and more negative affect (cf. Huang, 2011). Yet, this finding was not supported by the studies in this dissertation. Performance-avoidance goal orientation was unrelated to overall hedonic well-being (Chapter 2), unrelated to positive affect (more specifically, task enjoyment), and unrelated to job satisfaction (Chapter 5). An explanation for this unexpected finding might be that in earlier studies, performance-avoidance goal orientation was shown to be strongly (positively) related to negative affect, but only weakly (negatively) to positive affect (Huang, 2011). As the studies described in Chapter 2 and 5 only assessed the presence of positive affect among employees, and not negative affect, this could have resulted in the absence of a relation. Another explanation for our findings might be the domain in which previous research was done. Effects of achievement goal orientation on outcomes such as performance can differ across domains, and the domain can moderate the effects (Van Yperen et al., 2014). For example, in the meta-analysis by Van Yperen et al. (2014), performance-avoidance goal orientation was negatively related to performance in the work and educational domains, but not to performance in the sports domain. The negative associations of performance-avoidance goal orientation with hedonic well-being (mainly measured as affect) found earlier might apply to the domains of education and sports (Adie & Bartholomew, 2013; Huang, 2011), but might not apply to the domain of work. Hence, the lack of a relation between performance-avoidance goal orientation and overall hedonic well-being among employed people in the Dutch adult population may suggest that performance-avoidance goal orientation might be less harmful for hedonic well-being in the workplace than in sports or education.

The expectation derived from previous research (Baranik et al., 2010) that *mastery-avoidance* goal orientation would be negatively or not related to (indicators of) hedonic

well-being was not supported in this dissertation. On the contrary, the study described in Chapter 5 indicated that mastery-avoidance goal orientation was positively related to one's task enjoyment. This finding, however, is consistent with earlier findings among older people, for whom mastery-avoidance goal orientation had a positive association with the enjoyment of their tasks (Senko & Freund, 2015). For people in late adulthood, it is more in accordance with their stage of life (compared to children and young adults) to prevent loss and to strive toward maintenance of acquired competences. Thus, it might be the case that for workers in late adulthood, but not for children and students, mastery avoidance is harmless and even helpful for one's hedonic well-being.

Previous findings on the relation between (indicators of) hedonic well-being and *performance-approach* goal orientation are mixed (Huang, 2011; Vandewalle et al., 2019), showing either no significant relationship or mixed relationships (a positive relation with both positive and negative affect). In the study described in Chapter 2 among employed people in the Dutch adult population in the Netherlands, *performance-approach* goal orientation appeared to be negatively related to overall hedonic well-being. This relationship was not found among people without employment. In contrast, the study among social workers described in Chapter 5 reported that no relationship was found between *performance-approach* goals on the one hand, and task enjoyment and job satisfaction as indicators of hedonic well-being on the other hand. These mixed findings might be explained by the fact that different types of samples were used in the two studies, namely employed and unemployed people from the Dutch adult population and social workers, respectively. One could reason that a competitive attitude (i.e., a *performance-approach* goal orientation) is not a job requirement among social workers, because these workers are not target-driven and mutual cooperation (for instance, in the form of collaborative peer supervision) is important.

In conclusion, as far as the relationship between achievement goal orientation and hedonic well-being, employees who aimed to develop their competence, those characterized by *mastery-approach* goal orientation, displayed positive feelings and were satisfied with their lives, although this does not imply that they were satisfied with their jobs. Employees with a stronger focus on showing their competence, those characterized by higher *performance-approach* goal orientation, experienced less positive feelings and satisfaction with their life. Avoiding a demonstration of incompetence, that is, *performance-avoidance* goal orientation, was not related to positive feelings and satisfaction with life. Interestingly, a focus on preventing incompetence, that is, *mastery-avoidance* goal orientation, contributed to employees' task enjoyment.

These findings confirm previous findings from the educational and sports domains. In contrast, the findings related to an avoidance orientation (either *performance-avoidance* or *mastery-avoidance* goal orientation) yielded less negative effects for hedonic well-being in the work domain than have usually been found in the educational domain.

### **Achievement goal orientation and eudaimonic well-being**

Eudaimonic well-being is defined as actualizing one's human potentials through optimal social and psychological functioning. Such functioning implies that a person experiences their life as meaningful, contributes to the life of others and is friendly to themselves and others (Deci & Ryan, 2008). The relation between eudaimonic well-being and achievement goal orientation has scarcely been researched. Although there is sufficient empirical evidence that hedonic and eudaimonic well-being differ substantially and can be meaningfully distinguished, they are strongly associated (e.g., Fredrickson et al., 2013). For that reason and for theoretical considerations, it was expected that the relations between hedonic well-being and achievement goal orientations found in the literature – positively related to mastery-approach and negatively related to performance-avoidance goal orientations – would also apply to eudaimonic well-being in the work domain.

The studies described in Chapters 2, 3, 4 and 6 showed that mastery-approach goal orientation was consistently and positively related to indicators of eudaimonic well-being, such as vigor (Chapter 3), participation in training (Chapter 4), and to overall eudaimonic well-being (Chapters 2 and 6). For performance-avoidance goal orientation, a less consistent relation with eudaimonic well-being was found. Only one study among social workers (Chapter 6) found a negative relation between performance-avoidance goal orientation and eudaimonic well-being. So, in contrast to the expectations concerning performance-avoidance goal orientation, only one out of the four studies investigating eudaimonic well-being found a negative relationship, while the other three studies found no relation, both cross-sectionally and longitudinally (see Chapters 2, 3 and 4).

Unexpectedly, mastery-avoidance goal orientation was positively related with an indicator of eudaimonic well-being in two studies, namely, with vigor, both cross-sectionally and longitudinally (Chapter 3) and with overall eudaimonic well-being (Chapter 6). This finding is in line with the idea that at an older age, more positive effects of mastery-avoidance goal orientation on well-being may be expected (Senko & Freund, 2015). However, one should be careful in drawing conclusions based on these findings, because this relation was absent in the studies described in Chapter 2, which focused on overall eudaimonic well-being among a sample of employees from the Dutch adult population, and in Chapter 4, which focused on participation in training among social workers. For performance-approach goal orientation, the lack of a relation with eudaimonic well-being was consistently found.

When combining the results of the studies on eudaimonic well-being (see Chapters 2, 3, 4 and 6), what stands out is that both approach goal orientations (mastery-approach and performance-approach) yielded the most consistent findings across the studies: mastery-approach goal orientation was positively related to eudaimonic well-being and performance-approach goal orientation was not related to eudaimonic well-being in any study. In contrast, both avoidance goal orientations (mastery-avoidance and performance-

avoidance) yielded inconsistent findings: a positive relation between eudaimonic well-being and mastery-avoidance goal orientation in two studies (Chapters 3 and 6) and no relations in the other studies (Chapters 2 and 4). For performance-avoidance goal orientation, a negative relation was found in one study (Chapter 6), and no relations in the remaining studies (Chapters 2, 3, and 4). It is possible that this inconsistency indicates that the relations between eudaimonic well-being and both performance-approach and performance-avoidance goal orientations are influenced by moderator variables (e.g., work environment factors such as stressors). For example, in the study described in Chapter 6, the social workers were facing a huge downsizing, which might imply that their high job insecurity could operate as a moderator of the relation between performance-avoidance goal orientation and eudaimonic well-being.

In conclusion, for the relationship between achievement goal orientation and eudaimonic well-being, the studies in the dissertation showed that employees with a strong desire to develop their competence (i.e., high mastery-approach goal orientation) were inclined to experience their lives as meaningful, to contribute to the life of others and to realize their human potential (i.e., self-actualization). In contrast, there seems to be no relationship between a focus on showing one's competence (i.e., performance-approach goal orientation) and realizing one's potentials. A focus on preventing displaying incompetence (i.e., performance-avoidance goal orientation) was also not or sometimes even negatively related to self-actualization. Although the findings were inconsistent across the different studies, a strong focus on preventing incompetence (i.e., mastery-avoidance goal orientation) among employees appeared not to impede them from realizing their potential; on the contrary, in some studies, this focus even appeared to be positively related to eudaimonic well-being.

### **The relation between achievement goal orientation and both types of well-being**

In answering the first research question concerning the relation of achievement goal orientation with hedonic and eudaimonic well-being, the most strong and consistent conclusion to be drawn is that mastery-approach goal orientation was related to hedonic (i.e., being happy and satisfied with life) and eudaimonic (i.e., fully realizing one's human potentials) well-being in the domain of work.

According to Keyes (2002), people with both high hedonic and eudaimonic well-being are flourishing. Based on the findings across the different studies, we might conclude that employees who scored high on mastery-approach goal orientation were more likely to flourish. The study in Chapter 2, based on the view of Keyes (2002) on flourishing, showed that in a sample representing the Dutch adult population (with or without employment), mastery-approach goal orientation most strongly predicted whether people flourished or not.

For the other three types of goal orientation, the findings were less consistent.

Regarding mastery-avoidance goal orientation, three studies found positive relations with both hedonic (Chapter 5) and eudaimonic well-being (Chapters 3 and 6), while two studies found no relationships (Chapters 2 and 4). Concerning performance-approach goal orientation, only a negative relationship with hedonic well-being (Chapter 2), but no relationship with eudaimonic well-being was found. For performance-avoidance goal orientation, no relationship with hedonic and eudaimonic well-being was found, except in one study. In other words, when people focus on developing their competence or avoiding incompetence (i.e., mastery goal orientation) this focus might be either positively or barely related to their well-being. However, no indication could be found that this focus might be negatively related to their well-being. Among people focusing on demonstrating competence or avoiding a display of incompetence (i.e., performance goal orientation), their focus might be either negatively or barely related to their well-being. Moreover, there is no sign that performance goal orientation might be positively related to well-being. Finally, the study among a representative sample of Dutch adults showed that the relation between achievement goal orientation and eudaimonic well-being was stronger than its relation with hedonic well-being. More specifically, mastery-approach goal orientation was related significantly more strongly to one's eudaimonic well-being than to one's hedonic well-being.

#### **The influence of the work environment on the relation between employees' achievement goal orientation and their hedonic and eudaimonic well-being**

It is widely recognized that taking the interaction between characteristics of a person and of their (work) environment into account will contribute to a better understanding of the person's well-being (Ahuvia et al., 2015). In the domain of work, this notion of interaction has been elaborated in the PE fit research tradition, which states that a match between a person and the work environment will be associated with positive outcomes, such as job satisfaction, whereas a mismatch will be associated with negative outcomes, such as absenteeism (Kristof-Brown & Guay, 2011).

The study described in Chapter 5 took a PE fit perspective and was able to confirm that taking a particular characteristic of the work environment (i.e., learning opportunities) into consideration contributed to explaining more variance in employee well-being. A match between mastery-approach goal orientation and the degree to which learning opportunities were provided at work was positively associated with employees' job satisfaction and their task enjoyment (an aspect of hedonic well-being). This study also reported that mismatches were negatively associated with employee hedonic well-being: a *positive mismatch* (the availability of ample learning opportunities combined with low employee mastery-approach goal orientation) and a *negative mismatch* (the availability of only few learning opportunities combined with high employee mastery-approach goal orientation) were both related to lower hedonic well-being.

This study offered another interesting insight. Although both job satisfaction and task enjoyment are regarded as indicators of hedonic well-being, the interaction effects of mastery goal orientation and the availability of learning opportunities were not the same in all respects for both indicators. More specifically, employees who had little need to develop their competencies (i.e., low mastery-approach goal orientation) and who also perceived only few learning opportunities to do so, were relatively satisfied with their work, but at the same time did not enjoy their work. These results show that within hedonic well-being, different indicators can be affected in dissimilar ways.

The cross-sectional study among social workers described in Chapter 5 was based on the same sample used in the longitudinal study described in Chapter 3. In the cross-sectional study, only data collected at time 1 (T<sub>1</sub>) were used. It was not surprising that the positive relation between employees' mastery-avoidance goal orientation and their well-being that was found longitudinally (Chapter 3) was also present in the cross-sectional study. Interestingly, the effects on well-being of a (mis)match between mastery-avoidance goal orientation and learning opportunities were also comparable to the positive associations with well-being found for mastery-approach goal orientation.

In conclusion, the study described in Chapter 5 showed that both a desire to develop one's competence (i.e., mastery-approach goal orientation) and a focus on preventing incompetence (i.e., mastery-avoidance goal orientation) thrived well in a resource-full environment providing learning opportunities, resulting in employees who felt satisfied with their job and enjoyed it more (having higher hedonic well-being). In contrast, employees with low scores on mastery-approach goal orientation and who perceived only a few learning opportunities were relatively satisfied with their work, but at the same time did not enjoy it.

Thus, by studying the interaction between mastery goal orientation (both mastery-approach and mastery-avoidance) and the work environment in terms of its learning opportunities, different patterns became visible. In other words, the relationships between employee achievement goal orientation and their well-being did not include only direct relationships, but were also influenced by the work environment. Such differential effects may have relevant consequences. For instance, an employer could conclude that all of his or her employees are doing well because they are satisfied with their jobs. However, among these satisfied employees, there may be individuals who are satisfied because they do not want to develop their competence, but at the same time are not feeling happy. The latter state of affairs generally is not seen as beneficial for either the employee or the organization.

Chapter 5 described a study that investigated the effect on well-being of the interaction of employees' achievement goal orientations with a resource-full environment providing learning opportunities, while the study described in Chapter 6 examined the effect of the interaction of employees' achievement goal orientations with a threatening

environment. The latter study was conducted in an organization for youth care where employees were experiencing high levels of job insecurity. Their organization was facing a massive downsizing at that time. Job insecurity is typically viewed as a stressor; threats can address the continuity of one's job (referred to as *quantitative job insecurity*), the quality of one's job in terms of losing interesting tasks (referred to as *qualitative job insecurity*), or both. A review by VandeWalle et al. (2019) showed that the appraisal of the threat is related to one's achievement goal orientation; employees with mastery-approach goal orientations appraise threat less negatively, whereas employees with performance-avoidance goal orientations have stronger threat appraisal. In line with premises of achievement goal theory, one's achievement goal orientation may thus reduce or strengthen the negative effects of stressors on well-being.

The findings of the study reported in Chapter 6 indeed showed that mastery-approach goal orientation and perceived qualitative job insecurity were negatively related, although this relationship was only weak. Unexpectedly, performance-approach goal orientation was also negatively related to perceived qualitative job insecurity. However, the relationships between both goal orientations (mastery-approach and performance-approach goal orientation) and qualitative job insecurity were not strong enough to demonstrate an indirect, mediation effect on eudaimonic well-being. The weak relationship between achievement goal orientation and job insecurity in this study may have been caused by the real threat of job loss. Previous research has shown that even in companies with little objective job insecurity, employees can experience perceived job insecurity, whereby personality factors such as pessimism and self-esteem influence these perceptions of job insecurity (Van Vuuren, 1990). However, the same personality factors turned out to be irrelevant in companies where employees' jobs were clearly under threat (Klandermans & Van Vuuren, 1999). Therefore, it is possible that in companies where there is no clear threat of job loss, there is a relationship between achievement goal orientation and job insecurity.

These findings seem to indicate that the relation between employees' achievement goal orientations and their eudaimonic well-being is independent of the level of job insecurity they perceive. Although there was no support for an indirect effect of achievement goal orientation on eudaimonic well-being through job insecurity, this study clearly showed a direct and positive relationship between both mastery-approach and mastery-avoidance goal orientations and eudaimonic well-being. It is remarkable that this study is the only study until now that showed a clearly negative relationship among workers between performance-avoidance goal orientation and eudaimonic well-being. Perhaps a threatening environment activates a negative relation between performance-avoidance goal orientation and eudaimonic well-being.

In conclusion, the study described in Chapter 6 showed that the relation between mastery goal orientation (a focus on developing one's competence or preventing incompetence) and eudaimonic well-being (e.g., contributing to the life of others and



hedonic well-being found in the educational domain (see Huang, 2011) appear to be less evident in the work domain. Most studies in the present dissertation did not find a direct relationship; only one study found a negative relationship between performance-avoidance goal orientation and eudaimonic well-being among employees. However, that study took place among employees in a threatening work environment (see Chapter 6). One can reason that a focus on preventing displaying incompetence to others is not beneficial for people's well-being, but this focus seems to be less maladaptive in the (social) work domain than in the educational domain. An explanation for our findings might be that in a work environment without competition, such as a social work environment, preventing a display of incompetence is not detrimental for one's task enjoyment and satisfaction, because preventing a display of incompetence is not very difficult in such an environment, and therefore not harmful for well-being. In a similar vein, preventing incompetence (mastery-avoidance goal orientation) yielded null or positive relations with well-being, while negative relations have been found with performance (see Van Yperen et al., 2014). Hence, in general, a fear of some behavior, such as making a bad impression or becoming incompetent, might have different relations with well-being than with the common outcome variables used in earlier research, such as motivation and performance.

Third, the findings from this dissertation could shed some light on the ongoing debate between the mastery goal perspective, which states that only mastery goals can be beneficial for different outcomes, and the multiple goal perspective, which states that both mastery-approach and performance-approach goal orientations could be beneficial for different outcomes. In the educational domain, the multiple goal perspective seems to have gained ground (see Senko, 2016). The studies described in this dissertation provided support for the mastery goal perspective: only mastery goal orientation, especially mastery-approach goal orientation, was found to be positive related (or unrelated) to well-being (both hedonic and eudaimonic well-being). However, relations with well-being were negative or non-existing for both performance goal orientations. The empirical evidence for the multiple goal perspective in the educational domain was derived from positive relations of approach-type goal orientations with motivation and performance, but was not based on relations with well-being. Similarly, when performance was taken as an outcome variable in the work domain, the empirical evidence appeared to be in favor of a multiple goal perspective. For example, in their meta-analysis, Van Yperen et al. (2014) found that performance-approach goal orientation among employees was positively related to their job performance. However, for well-being in the work domain, a different picture emerges from our studies, with clear support for the mastery goal perspective.

Fourth, researchers have become aware that more insight into potential moderator variables might benefit studies on the effects of achievement goal orientation (Vandewalle et al., 2019). The findings in this dissertation confirmed the relevance of moderators for better explaining the relation between employees' achievement goal orientation and their

well-being. For instance, the study described in Chapter 2 showed that being employed or not was a significant moderator in the Dutch adult population; for the non-employed, performance-avoidance goal orientation had a negative effect on eudaimonic well-being, but for those with employment this effect was absent. The impact of employment as a moderator variable was substantial, with achievement goal orientation explaining much more variance in eudaimonic well-being among people without employment than among people with employment (Nagelkerke  $R^2_{\text{Without employment}} = .31$ , Nagelkerke  $R^2_{\text{With employment}} = .16$ ). Thus, more knowledge about relevant moderator variables might benefit research into achievement goal orientation and its relation to well-being. In a similar vein, the inconsistency of the relations with well-being found for mastery-avoidance, performance-approach, and performance-avoidance goal orientations might be caused by unknown moderators such as characteristics of the work environment. For instance, a threatening environment (e.g., job insecurity; see Chapter 6) might be such a moderator.

Fifth, the study using a PE fit perspective (Chapter 5) added to what is called an interactional approach (Ahuvia et al., 2015). In the present case, an interactional approach refers to the interaction between internal (i.e., person) and external (i.e., environment) factors that are related to an increase or a decrease in employee well-being. In a similar way, this study added to the vast literature on the topic of PE fit, in which the issue of achievement goal orientation has been barely researched until now. This study showed that the interaction between mastery goal orientation (both approach and avoidance goal orientations) and a supportive working environment in terms of providing learning opportunities can be added to findings in the PE fit literature, as this interaction was able to explain differences in employees' well-being.

Finally, the studies in this dissertation clearly showed that research into the relationship between achievement goal orientation and well-being benefits from a broader view on well-being. For example, among Dutch adults the relationship between achievement goal orientation and well-being was considerably stronger for eudaimonic than for hedonic well-being (Chapter 2). In other words, by only investigating hedonic well-being, the influence of a person's achievement goal orientation on his or her well-being may be underestimated. Our findings show that besides hedonic well-being, actualizing one's human potentials through optimal psychological and social functioning (i.e., eudaimonic well-being) should be part of the research on well-being and, more importantly, it should be incorporated in theory and research on achievement goal orientation, alongside more well-known factors such as motivation and performance.

## LIMITATIONS AND FUTURE RESEARCH

This dissertation and the studies it includes are subject to several limitations. First, the way the different achievement goal orientations have been measured has been criticized by several researchers (e.g., Hulleman et al., 2010). Importantly, Senko (2016)

noted that operationalizations of achievement goal orientations, such as were used in this dissertation, are blends of reasons (e.g., appearing competent, and becoming competent), standards (e.g., doing better than others, and doing better than oneself in the past), and other elements (such as avoiding challenges). The importance of distinguishing between these elements instead of blending them, for instance, distinguishing between reasons and standards, was demonstrated in the meta-analysis by Hulleman et al. (2010): when performance-approach goals were measured as standards (e.g., doing better than others), these goals were positively correlated with performance, whereas when they were measured as reasons (e.g., appearing competent), a negative relationship occurred. Similarly, another meta-analysis examined various outcome variables and the effect on predicting these outcomes of using a specific measure of performance-approach goals (Senko & Dawson, 2016). This meta-analysis concluded that normative (i.e., standards) goals seem to be more adaptive than appearance (i.e., reasons) goals. As this dissertation did not distinguish between reasons and standards in measuring achievement goal orientation, it is not possible to know whether they had different relations with well-being.

Although Van Yperen and Orehek (2013) introduced a scale to measure achievement goal orientation for the work domain that is solely based on standards (e.g., doing better than before or doing better than others), their scale has not been widely used until now. In contrast, the customary way of measuring achievement goal orientation in organizational settings, which was used in this dissertation, relies on a longer tradition of theory and empirical evidence. Moreover, using reasons (e.g., seeking challenges in order to develop one's competence) and not only standards in the measurement of achievement goal orientation has practical relevance. For instance, when coaching employees, they can be encouraged to use specific reasons such as developing their competence when they face a challenge.

A second limitation is that the measures mainly relied on self-reports (however, see Chapter 5, for objectively measured absenteeism as an outcome variable). Still, self-reporting is unavoidable in research into subjective experiences such as well-being. Despite its shortcomings, self-reporting as an instrument appears to be valid enough to capture how someone feels (Kahneman & Krueger, 2006). The same applies for measuring people's achievement goal orientation. Despite improvements that can be made (e.g., dissecting reasons or standards for goals), the various measurement instruments have been able to uncover meaningful relationships with other constructs (e.g., with job performance and motivation) that can also be theoretically supported (see Baranik et al., 2007).

A third and related limitation could be that the relationships reported in the present studies could be the result of common method variance, implying that the shared variance was caused by the use of a common measurement method (i.e., self-report) instead of by the constructs that were measured (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, this argument would imply that, for example, the relations found between

achievement goal orientations and well-being (both hedonic and eudaimonic) should be similar for both employed and unemployed people; yet, the opposite was the case. Therefore, the effects found were at most partly based on common method variance. Moreover, it is even less likely that the interaction effects (see Chapters 2 and 5) were the result of common method variance (Siemsen, Roth, & Oliveira, 2010).

A fourth limitation is that four of the five studies had a cross-sectional design, which limits causal explanations. Due to its design, the longitudinal study (Chapter 3) also could not determine causality in the relation between achievement goal orientation and well-being. However, there is substantive theoretical and empirical evidence from earlier studies that one's goals influence one's well-being (e.g., Emmons, 2003), to which we adhere.

The last limitation is that the studies in this dissertation were mainly focused on a special vocation, namely, social workers, which limits the generalizability of the findings to a general working population. However, the results of the study in Chapter 2 investigating a representative sample of employed and non-employed Dutch adults were similar to the results of the other studies. Both in the Dutch adult population and among social workers, mastery-approach goal orientation had a positive relation with hedonic and eudaimonic well-being. This consistent finding makes it likely that these relations will be found in other working populations. In contrast, for the other achievement goal orientations, the findings across our studies were different. For example, the relationship between performance-avoidance goal orientation and eudaimonic well-being was negative among one sample of social workers (Chapter 6), but absent in another sample of social workers (Chapter 3) and in a sample representing the Dutch working population (Chapter 2). Therefore, the findings for mastery-avoidance, performance-approach, and performance-avoidance goal orientations cannot simply be generalized to other working populations.

Related to possibilities for future research, the studies in this dissertation have shown that investigating the association between employees' achievement goal orientation and their well-being yielded several promising results that would benefit from further and more in-depth research. First, research using more specified achievement goal orientation measures could reveal more detailed knowledge about the relation between achievement goal orientation and well-being. Thus, research is needed that dissects reasons, standards and other goal orientation elements to be able to investigate the relation with hedonic and eudaimonic well-being for each of these elements.

Second, more research is needed into the consequences for eudaimonic well-being of a (mis)fit between a person's achievement goal orientation and the characteristics of the person's work environment (e.g., PE fit in terms of autonomy, threat, competition, and so forth). For instance, one may argue that employees with a performance-approach goal orientation would benefit more from a competitive work environment.

Fourth, the positive associations (and the absence of negative associations) of mastery-avoidance goal orientation with well-being might be more adaptive among the

employed in late adulthood (in comparison to young adults), as found in this dissertation. Therefore, more research is needed to determine what the effects could be of age as a moderator in the relationship between mastery-avoidance goal orientation and well-being.

Fifth, more research is needed that investigates whether employees' mastery-approach goal orientations will influence their cognitive, affective and behavioral processes, which in turn may contribute to their hedonic and eudaimonic well-being. For instance, concepts that are related to achievement goal orientation, such as acceptance of negative emotions (affective) and goal reengagement (behavioral) have also been found to be related to eudaimonic well-being (North, Holahan, Carlson, & Pahl, 2014). Research into such process variables explaining the positive effects of mastery-approach goal orientation on well-being might also reveal any potential deleterious effects of the other achievement goal orientations on well-being.

Finally, and related to the practical implications of this dissertation, the positive relation found between mastery-approach goal orientation and well-being could also be substantiated by means of interventions in a work context. This kind of research needs a longitudinal design and could also examine the existence of any causal relations. An earlier study has shown that training job seekers in setting mastery-approach goals increased their chance of finding work (Noordzij & Van Hooft, 2008). Unfortunately, well-being was not part of that study. Hence, research is needed to examine the (longitudinal) effects on well-being (hedonic and eudaimonic) of interventions among employed and unemployed people aimed at setting mastery-approach goals.

## **PRACTICAL IMPLICATIONS**

Several implications can be derived for practitioners from the findings in this dissertation, in combination with findings from earlier studies. Employers are encouraged to take a broad perspective on the well-being of their employees. For instance, focusing solely on employees' job satisfaction can be misleading. Satisfied employees may have a profile that employers would find too limiting, if their employees are not happy or not also simultaneously focused on developing their competence and not seeing opportunities to do so. A broader view on well-being – used in the present dissertation – also warrants gaining greater insight into employee's mental health; employees with the best mental health are not those who are only happy and satisfied, but those who are happy (have high hedonic well-being) and also fulfill their potentials (i.e., have high eudaimonic well-being).

Employees who aim to develop their competence have both better performance (Van Yperen et al., 2014) and higher well-being (hedonic and eudaimonic; this dissertation). Therefore, employers are advised to encourage their employees to focus on learning, which includes learning from mistakes and from colleagues, and employers are advised to create an environment that facilitates learning. In addition, an environment that facilitates a mastery-approach goal orientation rewards and values both employee development



potential. Returning to *Moby Dick*, Ishmael stated that any human thing that is supposed to be complete must for that very reason infallibly be faulty. From this dissertation, the following can be added to his statement: when people suppose that they are complete and believe that they have nothing left to learn, they do not realize that those who learn the most are those who flourish the most.





≡ **NEDERLANDSE SAMENVATTING**  
(SUMMARY IN DUTCH)

**SUMMARY**

**REFERENCES**

**CURRICULUM VITAE**

DANKWOORD



## SAMENVATTING (SUMMARY IN DUTCH)

Welbevinden is, net als gezondheid, een groot goed. Niet alleen heeft welbevinden een intrinsieke waarde - je goed voelen - maar het hangt ook samen met andere gewenste uitkomsten, zoals een langere levensduur, een betere gezondheid en betere prestaties. Tegelijkertijd wordt het welbevinden van veel mensen bedreigd door de externe druk die een snel veranderende samenleving met zich meebrengt. De ontwikkelingen in de samenleving zijn duidelijk zichtbaar op de werkplek: banen worden gecompliceerder, werknemers ervaren veel druk en hun welbevinden wordt bedreigd. Daarom wil dit proefschrift bijdragen aan meer kennis over welke factoren het welbevinden van werknemers bevorderen, om vervolgens concrete manieren te kunnen bieden om het welbevinden op de werkplek te vergroten.

Eén van de vele factoren die het welbevinden beïnvloeden zijn de soorten doelen die mensen zichzelf stellen, waarbij het ene soort doel meer bijdraagt aan het welbevinden dan het andere. Het eerste doel van dit proefschrift was er dan ook op gericht meer inzicht te krijgen in de relatie tussen de voorkeur van werknemers voor een specifiek soort doel (dat wil zeggen, hun doeloriëntatie; in het Engels *achievement goal orientation*) en hun welbevinden. Het tweede doel was om te bepalen wat de invloed van een werkomgeving is op de relatie tussen iemands doeloriëntatie en diens welbevinden: kunnen kenmerken van de werkomgeving deze relatie versterken of juist afzwakken?

De algemene inleiding (**Hoofdstuk 1**) introduceert de begrippen welbevinden en doeloriëntatie. Bij welbevinden wordt een onderscheid gemaakt in *hedonisch* en *eudaimonisch* welbevinden (Deci & Ryan, 2008). Hedonisch welbevinden betekent dat iemand gelukkig en tevreden is met zijn of haar leven. Eudaimonisch welbevinden verwijst naar het verwezenlijken van iemands potentieel, wat zich uit in zowel sociaal als psychisch optimaal functioneren: iemand ervaart het eigen leven als zinvol, heeft het gevoel van betekenis te zijn voor anderen en is vriendelijk voor zichzelf en voor anderen. Een doeloriëntatie verwijst naar de voorkeur die mensen hebben voor bepaalde doelen wanneer ze iets willen bereiken. Aanvankelijk werd binnen de doeloriëntatietheorie alleen een onderscheid gemaakt tussen *leerdoelen* (ontwikkelen van competenties) en *prestatiedoelen* (competenties aan anderen laten zien). Deze indeling in leer- en prestatiedoelen is later uitgebreid met het onderscheid tussen *streefdoelen* (streven naar een gewenste uitkomst) en *vermijddoelen* (vermijden van een ongewenste uitkomst). De combinatie van deze twee indelingen resulteert in vier (2 x 2) doeloriëntaties (Elliot & McGregor, 2001; zie Tabel 1).

**TABEL 1**

Schema van 2 x 2 doeloriëntaties

	<b>Leren</b> (competentie ontwikkelen)	<b>Prestatie</b> (competentie laten zien)
<b>Streven</b> (streven naar succes)	Leer-streefdoeloriëntatie	Prestatie-streefdoeloriëntatie
<b>Vermijden</b> (vermijden van falen)	Leer-vermijddoeloriëntatie	Prestatie-vermijddoeloriëntatie

Eerder onderzoek, voornamelijk bij kinderen en studenten, heeft aangetoond dat een leer-streefdoeloriëntatie positief en een prestatie-vermijddoeloriëntatie negatief samenhangt met hedonisch welbevinden. Echter, over deze relatie is bij werkende volwassenen aanzienlijk minder bekend. Hetzelfde geldt voor de relatie van doeloriëntatie met eudaimonisch welbevinden. Op basis van de doeloriëntatietheorie en empirische bevindingen zijn twee onderzoeksvragen geformuleerd die ten grondslag liggen aan dit proefschrift:

1. Wat is het verband tussen doeloriëntatie en zowel hedonisch als eudaimonisch welbevinden bij werkende volwassenen? (Hoofdstukken 2, 3 en 4)
2. Wat is de invloed van de werkomgeving op de relatie tussen doeloriëntatie en zowel hedonisch als eudaimonisch welbevinden bij werkende volwassenen? (Hoofdstukken 5 en 6)

De studie beschreven in **Hoofdstuk 2** onderzocht de relatie tussen doeloriëntatie en welbevinden (hedonisch en eudaimonisch). Het doel van de studie was om na te gaan of de in eerder onderzoek gevonden relatie onder kinderen en jongvolwassenen met hedonisch welbevinden te generaliseren zou zijn naar werkende volwassenen, en ook met betrekking tot hun eudaimonisch welbevinden aanwezig zou zijn. Hiervoor werd de relatie tussen doeloriëntatie en *floreren* (zowel hoog hedonisch als eudaimonisch welbevinden) bestudeerd onder een representatieve steekproef van 305 Nederlandse volwassenen (153 vrouwen en 152 mannen, met een gemiddelde leeftijd van ruim 45 jaar). Wanneer hedonisch en eudaimonisch welbevinden beide hoog zijn is er sprake van *floreren*. Wanneer beide laag zijn is er daarentegen sprake van *wegkwijnen*. De overige scorecombinaties worden bestempeld als *matig welbevinden*.

Zoals verwacht, bleek dat hoe hoger iemands leer-streefdoeloriëntatie was des te

groter de kans was dat iemand floreerde. Ter illustratie, bij elke volgende stap op een Likert-schaal van 1 tot 7 die iemands leer-streefdoeloriëntatie mat, was de kans dat deze persoon floreerde ongeveer twee keer zo groot. Bovendien bleek dat wanneer iemand daarnaast een lage prestatie-vermijddoeloriëntatie had de kans nog groter was dat diegene floreerde. Over het geheel genomen was de relatie tussen doeloriëntatie en eudaimonisch welbevinden duidelijk sterker dan de relatie van doeloriëntatie met hedonisch welbevinden.

In deze studie werd ook gekeken naar de relatie tussen doeloriëntatie en floreren bij een groep mensen zonder baan ( $n = 97$ ). Voor zowel werkenden als niet-werkenden werd hun kans groter dat ze floreerden als hun leer-streefdoeloriëntatie hoger was. Opvallend was dat voor deze niet-werkenden de doeloriëntatie veel sterker samenhang met al dan niet floreren: twee keer meer variantie in het al dan niet floreren kon onder niet-werkenden worden verklaard door iemands doeloriëntatie dan onder werkenden. Zo hing voor niet-werkenden ook een prestatie-vermijddoeloriëntatie sterk negatief samen met de kans op floreren, terwijl voor werkenden de prestatie-vermijddoeloriëntatie hier geen verband mee had. Het al dan niet hebben van werk bleek dus van invloed op de sterkte van de relatie tussen doeloriëntatie en floreren. Onder werkenden bleek doeloriëntatie een verband te hebben met iemands geluk (hedonisch welbevinden) en met het verwezenlijken van iemands potentieel (eudaimonisch welbevinden) terwijl dit onder niet-werkenden alleen gold voor het verwezenlijken van iemands potentieel (eudaimonisch welbevinden).

Samenvattend, uit deze studie kunnen de volgende conclusies getrokken worden: 1) iemands doeloriëntatie hangt positief samen met het zich gelukkig voelen (hedonisch welbevinden) maar vooral met het optimaal psychologisch en sociaal functioneren (eudaimonisch welbevinden), 2) voor niet-werkenden hangt de doeloriëntatie sterker samen met floreren dan voor werkenden, mogelijk omdat de angst om een negatieve indruk te maken op anderen (een hoge prestatie-vermijddoeloriëntatie) voor mensen zonder werk meer ondermijnd is dan voor werkenden, en 3) de positieve samenhang tussen een leer-streefdoeloriëntatie en floreren is voor zowel werkenden als niet-werkenden ongeveer even sterk.

De studie in **Hoofdstuk 3** ging na wat de relatie is tussen doeloriëntatie onder werkenden en hun welbevinden over een langere tijd, namelijk over een periode van vier jaar. In deze studie werd onderzocht of iemands doeloriëntatie kon voorspellen in hoeverre deze persoon van stress kon herstellen. Twee indicatoren van dit herstelproces werden daartoe gebruikt: 1) iemands energie tijdens het werk (eudaimonisch welbevinden; Hahn, Frese, Binnewies & Schmitt, 2012; Ryan & Deci, 2001) en 2) iemands herstelbehoefte na het werk (bijvoorbeeld de periode dat iemand na de werkdag met rust gelaten moet worden).

Voor de studie werden 238 medewerkers van een jeugdzorginstelling gedurende vier jaar gevolgd, waarbij op drie meetmomenten (T1, T2 en T3) aan hen onder andere werd gevraagd hoe energiek zij zich voelden in hun werk en hoe groot hun herstelbehoefte was. Om de resultaten te analyseren werd gebruikgemaakt van latente groei modellen. Omdat de

scores van energie tijdens het werk en de herstelbehoefte - over de drie meetmomenten - stabiel bleken, was de vraag niet meer relevant of iemands doeloriëntatie invloed had op het toe- of afnemen van energie tijdens het werk. Bovendien bleek dat iemands doeloriëntatie over vier jaar behoorlijk stabiel was. Wel bleek dat medewerkers die meer gericht waren op het ontwikkelen van hun competenties (een leer-streefdoeloriëntatie) of het voorkómen van incompetentie (een leer-vermijddoeloriëntatie) zich doorgaans - op elk van de drie meetmomenten - energiever voelden in hun werk. Dit verband bleef ook aanwezig als er werd gecontroleerd voor een belangrijke energiebron in het werk, namelijk taakautonomie, en als er werd gecontroleerd voor taakeisen, namelijk werktempo en -hoeveelheid. Iemands doeloriëntatie had overigens niet of nauwelijks effect op diens herstelbehoefte.

Al met al werd uit deze studie duidelijk dat een leer-streefdoeloriëntatie en een leer-vermijddoeloriëntatie beide een unieke positieve bijdrage leverden aan hoe energiek iemand zich voelde tijdens het werk (dat wil zeggen aan eudaimonisch welbevinden). Dat een leer-vermijddoeloriëntatie positief samenhangt met iemands energie tijdens het werk wijkt af van wat doorgaans in de onderzoeksliteratuur wordt gerapporteerd. Eerder onderzoek laat juist zien dat een leer-vermijddoeloriëntatie negatieve of gemengde relaties had met hedonisch welbevinden. Echter, voor oudere volwassenen laat eerder onderzoek zien dat een leer-vermijddoeloriëntatie een positieve relatie kan hebben met iemands hedonisch welbevinden, zoals het hebben van meer plezier in een taak. Uit de resultaten van het huidige onderzoek bleek dat voor de onderzochte groep volwassen medewerkers - zij hadden een gemiddelde leeftijd van 45 jaar - het voorkómen van incompetentie samenhangt met een energiever gevoel en daarmee dat een leer-vermijddoeloriëntatie ook een positieve relatie kan hebben met eudaimonisch welbevinden. Voor een prestatiedoeloriëntatie (zowel een prestatie-streef- als een prestatie-vermijddoeloriëntatie) en eudaimonisch welbevinden werd geen verband gevonden.

Samenvattend kan uit deze studie worden geconcludeerd dat voor medewerkers van jeugdzorginstellingen, en wellicht ook voor werknemers in andere sectoren, een gerichtheid op het ontwikkelen van competenties (een hoge leer-streefdoeloriëntatie) en op het voorkómen van incompetentie (een hoge leer-vermijddoeloriëntatie) samengaat met een hoger eudaimonisch welbevinden.

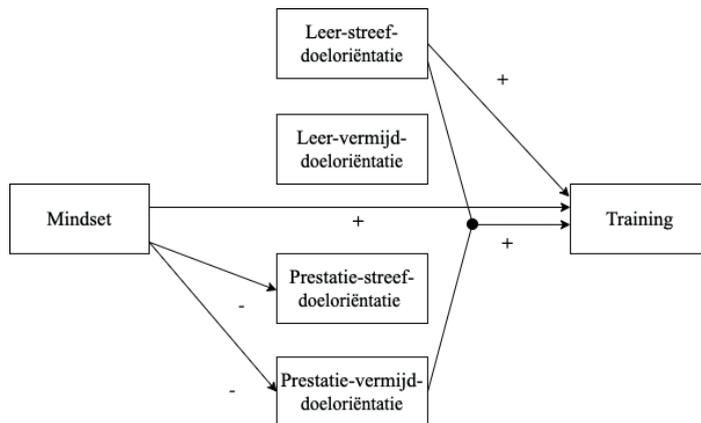
In de studie beschreven in **Hoofdstuk 4** werd niet alleen de relatie tussen doeloriëntatie en welbevinden onderzocht, maar ook een van de onderliggende uitgangspunten van de doeloriëntatietheorie, namelijk de relatie tussen zogeheten *mindsets* (manieren van denken over de veranderbaarheid van mensen) en doeloriëntaties. Volgens deze theorie van Dweck en Legget uit 1998 hangt iemands doeloriëntatie samen met diens onderliggende overtuiging over de mogelijkheid dat eigenschappen (zoals intelligentie) kunnen veranderen. De overtuiging dat eigenschappen kunnen veranderen (een *groeimindset*) is volgens deze doeloriëntatietheorie gerelateerd aan een voorkeur voor leerdoelen en de overtuiging dat eigenschappen min of meer vastliggen (een *fixed-mindset*) aan een

voorkeur voor prestatiedoelen. Ondanks dat deze notie een onderliggend uitgangspunt van de doeloriëntatietheorie is, blijkt er interessant genoeg maar weinig onderzoek gedaan te zijn naar de relatie tussen iemands mindset en diens doeloriëntatie en zeker niet naar de vraag of er verschillen zijn tussen doeloriëntatie en mindset in hun relatie tot welbevinden.

Het doel van deze studie was om de relatie na te gaan tussen doeloriëntatie, mindset en deelname aan een professionele training in het voorgaande jaar. Deelname aan professionele trainingen wordt volgens Ryff (2018) beschouwd als een uiting van iemands eudaimonisch welbevinden. Om de onderlinge relaties tussen mindset, doeloriëntatie en deelname aan professionele training te kunnen bestuderen werd een mediatiemodel opgesteld. Data van een steekproef van 623 sociaal werkers uit verschillende organisaties werden gebruikt om dit model te toetsen. De sociaal werkers hadden banen in onder andere jeugdzorgorganisaties, de verstandelijk gehandicaptenzorg en de geestelijke gezondheidszorg.

### FIGUUR 1

Mediatiemodel voor mindset, doeloriëntatie en het volgen van professionele training



N.B. Alleen de significante paden zijn weergegeven: + = positieve relatie, - = negatieve relatie. Mindset: een hoge score vertegenwoordigt een groei-mindset en een lage score een fixed-mindset.

Uit de resultaten (weergegeven in Figuur 1) bleek dat medewerkers met een sterkere fixed-mindset een grotere voorkeur hadden voor een prestatie-streef- en -vermijddoeloriëntatie. Dit effect was slechts klein, want niet meer dan 1% van de variantie in prestatie-streef- en prestatie-vermijddoeloriëntatie kon worden voorspeld uit iemands mindset. Voor een groei-mindset werd geen verband met leer-streef- en leer-vermijddoeloriëntaties gevonden. Wel bleek er een relatie te zijn tussen iemands groei-mindset en trainingsdeelname: medewerkers met een groei-mindset hadden vaker deelgenomen

aan een professionele training. Echter, de sterkste voorspeller voor deelname aan een professionele training bleek een leer-streefdoeloriëntatie: bij elke volgende stap op een Likert-schaal van 1 tot 5 die iemands leer-streefdoeloriëntatie meet, werd de kans dat iemand een training had gevolgd twee keer zo groot. Ook bleek dat een lage prestatie-vermijddoeloriëntatie in combinatie met een hoge leer-streefdoeloriëntatie samenhang met meer deelname aan training. Een leer-vermijd- en een prestatie-streefdoeloriëntatie konden de deelname aan training niet voorspellen.

Samenvattend kan uit de studie beschreven in Hoofdstuk 4 afgeleid worden dat het uitgangspunt van de doeloriëntatietheorie, over de relatie tussen mindsets en doeloriëntaties, minder sterk empirisch onderbouwd lijkt te zijn dan werd aangenomen (zie ook Burgoyne et al., 2020). Wel bleek in onze studie dat een groei-mindset, net als een leer-streefdoeloriëntatie, positief samenhang met eudaimonisch welbevinden (in de vorm van deelname aan training). Deze positieve relatie van een groei-mindset met eudaimonisch welbevinden was onafhankelijk van de positieve relatie met een leer-streefdoeloriëntatie. Daarnaast bleek de combinatie van doeloriëntaties van belang: sociaal werkers met zowel een hoge leer-streefdoeloriëntatie als een lage prestatie-vermijddoeloriëntatie namen het meest deel aan training (dat wil zeggen, hadden een hoog eudaimonisch welbevinden). Anders gezegd, en in lijn met de resultaten van Hoofdstuk 2, blijkt de positieve samenhang van het sterk gericht zijn op het ontwikkelen van de eigen competenties (een hoge leer-streefdoeloriëntatie) met eudaimonisch welbevinden versterkt te worden als men weinig gericht is op het voorkómen van het tonen van incompetentie (een lage prestatie-vermijddoeloriëntatie).

De studie in **Hoofdstuk 5** onderzocht de effecten op welbevinden van het samenspel tussen de persoon en de (werk)omgeving. Specifieker gezegd, het ging in deze studie om het effect op welbevinden van de interactie tussen iemands leer-streef- en leer-vermijddoeloriëntatie en de leermogelijkheden in de werkomgeving. Volgens de persoon-omgeving fit theorie (Person-Environment Fit; PE fit theorie) van Kristof-Brown en Guay uit 2011 hangt een overeenkomst (*match*) - tussen de (werk)omgeving en de kenmerken van een persoon - samen met positieve uitkomsten (bijvoorbeeld met een hoog welbevinden), terwijl een verkeerde combinatie (*mismatch*) samenhangt met negatieve resultaten (bijvoorbeeld met een laag welbevinden).

Het doel van deze studie was om te onderzoeken of de PE fit theorie ook geldt voor de overeenkomst (*match*) en het gebrek aan overeenkomst (*mismatch*) tussen iemands leerdoeloriëntatie en de aanwezige energiebronnen - in dit geval leermogelijkheden - in diens werkomgeving. Om deze vraag te beantwoorden maakte deze studie gebruik van dezelfde steekproef (T1) als de studie van Hoofdstuk 3, met als te voorspellen uitkomstmaten positief welbevinden (tevredenheid met het werk en werkplezier; dat wil zeggen, hedonisch welbevinden) en negatief welbevinden (herstelbehoefte en ziekteverzuim over de periode van één jaar, zowel in duur als in frequentie).

Uit de resultaten bleek dat als een hoge leer-streefdoeloriëntatie samenging met veel leermogelijkheden (een *positieve match*) een hogere tevredenheid met het werk en meer werkplezier optraden, terwijl er geen effecten werden gevonden voor herstelbehoefte en ziekteverzuim. Wanneer een hoge leer-streefdoeloriëntatie samenging met weinig leermogelijkheden (een *negatieve mismatch*) bleken medewerkers minder tevreden te zijn met het werk, en minder werkplezier en meer herstelbehoefte te hebben, terwijl er geen effecten voor verzuim werden gevonden. Een interessante bevinding was dat het samengaan van een lage leer-streefdoeloriëntatie met veel leermogelijkheden (*positieve mismatch*) enerzijds resulteerde in minder werkplezier, maar anderzijds in een relatief hoge tevredenheid met het werk. Zowel een match als een mismatch tussen een leer-vermijddoeloriëntatie en leermogelijkheden vertoonde vergelijkbare patronen als tussen een leer-streefdoeloriëntatie en leermogelijkheden.

Samenvattend kan uit deze studie geconcludeerd worden dat, zoals de PE fit theorie voorspelt, de werkomgeving invloed heeft op de relatie tussen een leerdoeloriëntatie (zowel een leer-streef- als een leer-vermijddoeloriëntatie) en iemands welbevinden op het werk. Een rijke werkomgeving met veel leermogelijkheden blijkt de positieve relatie tussen iemands leerdoeloriëntatie en diens welbevinden te versterken, terwijl een arme werkomgeving met weinig leermogelijkheden deze relatie verzwakt. Anders gezegd, het hedonisch welbevinden van medewerkers is niet alleen afhankelijk van hun behoefte om hun competenties te ontwikkelen of van hun behoefte aan het voorkómen van incompetentie, maar ook van de mate waarin er op het werk mogelijkheden zijn om zich te ontwikkelen. Ook laat deze studie zien dat het belangrijk is om meerdere indicatoren van welbevinden onder medewerkers te onderscheiden. Dat wil zeggen dat niet alleen werktevredenheid relevant kan zijn, maar ook andere indicatoren zoals werkplezier, waardoor complexere patronen zichtbaar worden die meer inzicht bieden in de relatie tussen doeloriëntatie en welbevinden.

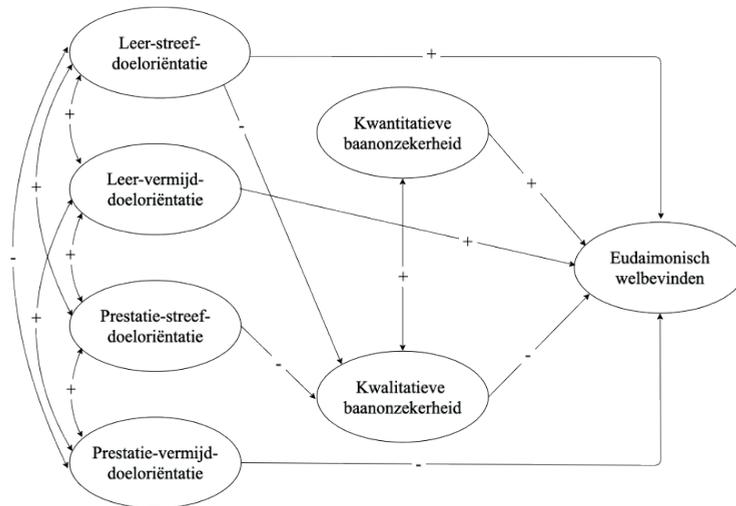
De studie beschreven in **Hoofdstuk 6** was gericht op het bestuderen van de invloed van de werkomgeving op de relatie tussen doeloriëntatie en welbevinden. In deze studie werden niet mogelijke energiebronnen - zoals leermogelijkheden - onderzocht, maar mogelijke stressoren, in dit geval baanonzekerheid. In de studie werd nagegaan wat de invloed van deze stressor was op de relatie tussen de doeloriëntatie en het eudaimonisch welbevinden van medewerkers. Uit eerdere onderzoeken is bekend dat iemands doeloriëntatie van invloed is op diens beoordeling (*appraisal*) van stressoren. Iemand met een hogere leer-streefdoeloriëntatie ervaart bijvoorbeeld minder dreiging, terwijl iemand met een hogere prestatie-vermijddoeloriëntatie meer dreiging ervaart. Het ervaren van dreiging beïnvloedt op zijn beurt weer iemands welbevinden.

Het doel van deze studie was om na te gaan wat de relatie is tussen doeloriëntatie en het ervaren van baanonzekerheid, waarbij de verwachting was dat de ervaren baanonzekerheid op haar beurt iemands eudaimonisch welbevinden zou beïnvloeden.

Meer specifiek werd onderzocht of medewerkers met een hogere leer-streefdoeloriëntatie minder dreiging (baanonzekerheid) zouden ervaren en of een minder ervaren dreiging op haar beurt positief zou samenhangen met hun welbevinden. Ook werd onderzocht of bij mensen met een hogere prestatie-vermijddoeloriëntatie het tegenovergestelde – meer ervaren dreiging (baanonzekerheid) en minder welbevinden – zou optreden. Met betrekking tot baanonzekerheid werd onderscheid gemaakt tussen iemands onzekerheid over de continuïteit van een baan (*kwantitatieve baanonzekerheid*) en de ervaren onzekerheid over de kwaliteit (bijvoorbeeld aantrekkelijke taken of salarisontwikkeling) van een baan (*kwalitatieve baanonzekerheid*). Om de verwachtingen te toetsen werd een mediatiemodel gebruikt.

## FIGUUR 2

Mediatiemodel voor doeloriëntatie, kwantitatieve en kwalitatieve baanonzekerheid en eudaimonisch welbevinden



N.B. Alleen significante verbanden zijn weergegeven, + = positieve relatie, - = negatieve relatie.

Gegevens werden verzameld onder 275 medewerkers in een jeugdzorgorganisatie waarin een drastische reorganisatie was aangekondigd en waarbij veel medewerkers hun baan zouden verliezen. Uit de resultaten (zie Figuur 2) bleek dat een leer-streefdoeloriëntatie en een prestatie-streefdoeloriëntatie beide in negatieve zin samenhangen met kwalitatieve baanonzekerheid (onzekerheid over de kwaliteit van de eigen baan in de toekomst). De relatie tussen doeloriëntatie en kwalitatieve baanonzekerheid was echter te zwak om - via kwalitatieve baanonzekerheid - een samenhang te hebben met het welbevinden. Doeloriëntatie had wel een direct verband met eudaimonisch welbevinden: een leer-streef- en een leer-vermijddoeloriëntatie hingen positief samen en

een prestatie-vermijddoeloriëntatie hing negatief samen met eudaimonisch welbevinden (zie ook Hoofdstuk 2). Interessant genoeg liet deze studie, evenals de studie beschreven in Hoofdstuk 3, een positief verband zien tussen een leer-vermijddoeloriëntatie en eudaimonisch welbevinden.

Samenvattend kan uit deze studie geconcludeerd worden dat, ondanks de dreiging van baanverlies, medewerkers die meer gericht waren op het ontwikkelen van zichzelf of het voorkómen van incompetentie een hoger eudaimonisch welbevinden hadden dan hun collega's die minder gericht waren op het ontwikkelen van zichzelf of het voorkómen van incompetentie. Daarnaast bleek uit deze studie dat medewerkers die niet incompetent willen overkomen op anderen (een hoge prestatie-vermijddoeloriëntatie) een minder hoog eudaimonisch welbevinden hebben.

**Hoofdstuk 7** bevat een algemene discussie waarbij antwoord wordt gegeven op de twee onderzoeksvragen van dit proefschrift, te weten 1) wat is de relatie tussen doeloriëntatie en welbevinden (zowel hedonisch als eudaimonisch) onder werkende volwassenen en 2) wat is de invloed van de werkomgeving op deze relatie?

Uit de studies beschreven in dit proefschrift bleek systematisch dat een sterke wens om competentier te worden (een hoge leer-streefdoeloriëntatie) positief samenhangt met iemands geluk (een hoger hedonisch welzijn) en met iemands psychologisch en sociaal optimaal functioneren (een hoger eudaimonisch welzijn). Voor een leer-vermijddoeloriëntatie (een focus op het voorkómen van incompetentie) werden geen of positieve relaties met welbevinden gevonden, in tegenstelling tot eerder onderzoek waarin deze doeloriëntatie vaak negatief samenhangt met welbevinden. Voor een prestatie-streef- (een focus op het laten zien van competenties) en een prestatie-vermijddoeloriëntatie (een focus op het vermijden dat anderen de eigen incompetentie zien) werden geen of negatieve relaties met welbevinden gevonden.

De positieve relatie van een leer-streefdoeloriëntatie met welbevinden werd versterkt door een ondersteunende werkomgeving (met ruime leermogelijkheden). De positieve relatie tussen een leer-streefdoeloriëntatie en welbevinden van medewerkers bleef ook intact in een werkomgeving waar banen op de tocht stonden. Het was al bekend dat een leer-streefdoeloriëntatie bijdraagt aan meer motivatie en betere prestaties, maar het welbevinden van medewerkers heeft er ook baat bij om gericht te zijn op leren in een omgeving die dit faciliteert. Deze bevindingen betekenen dat het voor werkgevers belangrijk is om niet alleen oog te hebben voor het soort doelen dat medewerkers zichzelf stellen maar om ook aandacht te hebben voor een werkomgeving die deze leerdoelen ondersteunt.



## SUMMARY

Well-being, like health, is a great good. Not only does well-being have an intrinsic value – feeling good – but it is also related to other desired outcomes, such as a longer life, better health and better performance. At the same time, the external pressures of rapidly developing societies threaten the well-being of many people. These societal developments can be seen in the workplace: jobs have become more complicated and result in employees who experience many pressures that may threaten their well-being. Therefore, this dissertation aims to contribute to gaining knowledge about factors affecting employee well-being, and subsequently to offer concrete avenues for increasing well-being in the workplace.

An important factor out of many that may influence people's well-being is the type of goals people set for themselves, such that one type of goal may contribute to well-being more than another. The first aim of this dissertation was therefore to gain greater insight into the relationship between employees' preference for a certain type of goal (that is, their achievement goal orientation) and their well-being. The second aim was to determine the influence of characteristics of the work environment on the relationship between achievement goal orientation and employee well-being: can characteristics of the work environment strengthen or weaken this relationship?

The general introduction (**Chapter 1**) introduces the concepts of well-being and achievement goal orientation. With regard to well-being, a distinction has been made between hedonic and eudaimonic well-being (Deci & Ryan, 2008). Hedonic well-being implies that a person is happy and satisfied with his or her life. Eudaimonic well-being refers to actualizing one's potential as reflected in both socially and psychologically optimal functioning; one experiences life as meaningful, contributes to the life of others and is kind to oneself and to others. Achievement goal orientation refers to the preference people have for certain types of goals when they want to achieve something. Initially, achievement goal orientation theory distinguished only between *mastery* goals (developing one's competencies) and *performance* goals (showing one's competence to others). Along with this distinction between mastery and performance goals, a separate distinction was later introduced between approach goals (aiming for a desired outcome) and avoidance goals (avoiding an undesired outcome). The combination of these two dimensions results in four (2 x 2) possible goal orientations (Elliot & McGregor, 2001; see Table 1).

**TABLE 1**

Overview of 2 x 2 goal orientations

	Mastery (developing one's competence)	Performance (showing one's competence)
Approach (striving for success)	Mastery-approach goal orientation	Performance-approach goal orientation
Avoidance (avoidance of failure)	Mastery-avoidance goal orientation	Performance-avoidance goal orientation

Until now, research on goal orientations has been conducted mainly among children and students. That research has shown that mastery-approach goal orientation is positively related to hedonic well-being, whereas performance-avoidance goal orientation is negatively related to hedonic well-being. However, far less is known about this relation among working adults. The same applies to the relationship of achievement goal orientation with eudaimonic well-being. Based on achievement goal orientation theory and on empirical findings from earlier studies, two research questions were formulated that form the basis of this thesis:

1. What is the association between achievement goal orientation and hedonic and eudaimonic well-being among working adults? (Chapters 2, 3 and 4)
2. What is the influence of the work environment on the relation between achievement goal orientation and hedonic and eudaimonic well-being among working adults? (Chapters 5 and 6)

The study described in **Chapter 2** examined the relationship between achievement goal orientation and well-being (hedonic and eudaimonic). The aim of the study was to investigate whether the relationship with hedonic well-being found in previous research among children and young adults could be generalized to working adults, and would also be present with regard to their eudaimonic well-being. To this end, the relationship between achievement goal orientation and flourishing (both high hedonic and high eudaimonic well-being) was studied among a representative sample of 305 Dutch adults (153 women and 152 men, with an average age of around 45 years). People having both high hedonic and high eudaimonic well-being are regarded as *flourishing*; when both are low for a person, this person is regarded as *languishing*, and people having in-between scores for hedonic and eudaimonic well-being are regarded as having *moderate well-being*.

As expected, the results showed that mastery-approach goal orientation was positively correlated with flourishing. To illustrate, an increase of one point on a Likert scale from 1 to 7 that measured someone's mastery-approach goal orientation meant that the chance that this person was flourishing was about twice as high. Moreover, a high mastery-approach goal orientation combined with a low performance-avoidance goal orientation increased the chances of flourishing even further. Overall, the relationship between people's achievement goal orientation and their eudaimonic well-being was stronger than the relationship with their hedonic well-being.

The relationship between achievement goal orientation and flourishing was also examined among non-employed people ( $n = 97$ ). Both the employed and the non-employed were more likely to flourish if their mastery-approach goal orientation was higher. Remarkably, among this non-employed group, achievement goal orientation was more strongly associated with whether someone flourished or not than among employed people: twice as much variance in flourishing could be explained by someone's goal orientation among non-employed compared to employed people. In particular, for non-employed people, performance-avoidance goal orientation was significantly and negatively related to whether someone flourished or not, whereas for employed people, performance-avoidance goal orientation was not associated with flourishing. Thus, being employed or not turned out to affect the strength of the relationship between achievement goal orientation and flourishing. More specifically, among employed people, achievement goal orientation also appeared to influence happiness (hedonic well-being) and not just – as with the unemployed – realization of potential (eudaimonic well-being).

In sum, the following conclusions can be drawn from this study: 1) a person's goal orientation is related not only to feelings of happiness (hedonic well-being), but also to optimal psychological and social functioning (eudaimonic well-being); 2) for non-employed people, goal orientation is more closely related to flourishing than for employed people, possibly because for people without employment the fear of a making a negative impression on others (high performance-avoidance goal orientation) is more debilitating than for employed people; and 3) the positive relationship between mastery-approach goal orientation and flourishing is approximately equally strong for both the employed and the unemployed.

The study in **Chapter 3** examined the relationship between employees' goal orientation and their well-being over a period of four years. That study investigated whether goal orientation could predict the extent to which employees could recover from stress. For this purpose, two indicators of this recovery process were used: 1) vigor (eudaimonic well-being; Hahn, Frese, Binnewies & Schmitt, 2012; Ryan & Deci, 2001) and 2) a person's need for recovery (for example, the amount of time that someone needs to be left alone after the workday).

In this study, 238 employees of a youth care institution were followed for four years,

during which they completed a survey at three measurement points (T<sub>1</sub>, T<sub>2</sub> and T<sub>3</sub>) on how energetic they felt during their work and how high their need for recovery was. By means of latent growth modeling, it could be concluded that their energy during work and their need for recovery were stable over time across the three measurement points. Therefore, the question whether goal orientation influenced the increase or decrease in energy during someone's work was no longer relevant. Employees' goal orientations over four years also proved to be fairly stable. However, the results showed that employees who were focused on developing their competence (mastery-approach goal orientation) or on preventing incompetence (mastery-avoidance goal orientation) at each of the three measurement points felt more energetic at work. This relationship was also present after controlling for an important job resource, namely, job autonomy, and after controlling for perceived workload, an important job demand. Moreover, employees' goal orientation was weakly or not related to their need for recovery.

This study clearly showed that both mastery-approach goal orientation and mastery-avoidance goal orientation were positively related to how energetic employees felt during a work day (that is, to their eudaimonic well-being). The finding that mastery-avoidance goal orientation correlated positively with employees' feeling energetic at work deviates from what is commonly reported in the research literature. Previous research showed negative (Sideridis, 2008) to mixed effects (Baranik et al., 2010) of mastery-avoidance goal orientation on well-being. However, previous research had also shown that among older adults, mastery-avoidance goal orientation had a positive effect on their hedonic well-being (for example, they had greater task enjoyment; Senko & Freund, 2015). The current study showed similar results, namely, that adult employees (the average age was 45 years) who were strongly focused on preventing incompetence were also feeling more energetic at work. No association was found between performance goal orientation (both performance-approach and performance-avoidance) and eudaimonic well-being.

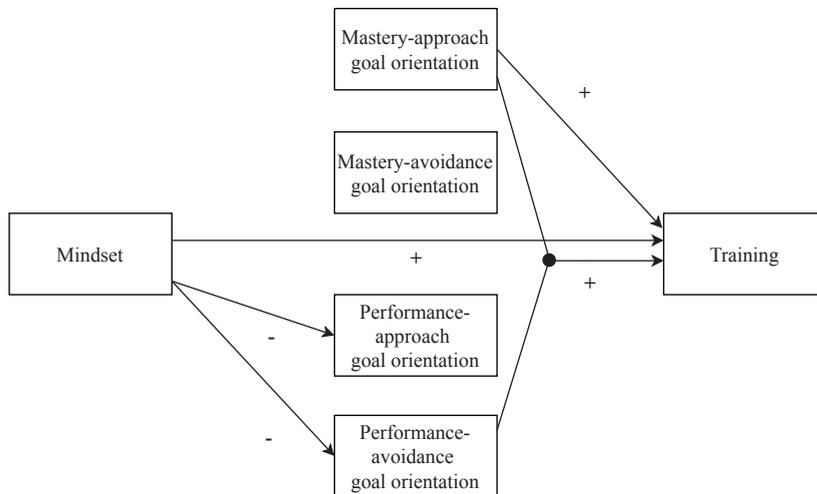
In summary, from this study the conclusion follows that among employees of youth care institutions, a focus on the development of one's competence (a high mastery-approach goal orientation) and on the prevention of incompetence (a high mastery-avoidance goal orientation) was associated with higher eudaimonic well-being. These findings may possibly be generalized to employees in other organizations.

The study described in **Chapter 4** examined the relationship between achievement goal orientation and well-being, as well as one of the assumptions of achievement goal theory, namely, the relationship between what are called mindsets (ways of thinking about people's changeability) and goal orientations. According to this theory (see Dweck & Legget, 1988) someone's goal orientation depends on underlying beliefs about the changeability of a person's attributes (for instance, their intelligence). This theory assumes that the belief that attributes can change (a growth mindset) is linked to a preference for mastery goals and the belief that attributes are fixed (a fixed mindset) is

linked to a preference for performance goals. Interestingly, this assumption has scarcely been empirically tested until now. The aim of this study was therefore to examine the relationship between employees' achievement goal orientation, mindset, and participation in professional training during the preceding year. According to Ryff (2018), participation in professional training can be regarded as an expression of eudaimonic well-being. A mediation model was specified to study the mutual relationships between mindset, achievement goal orientation and professional training. Data were collected among a sample of 623 employees working in various social service organizations, including youth care, care for the mentally disabled, and mental health care.

**FIGURE 1**

Mediation model for mindset, goal orientations and participation in professional training (i.e., eudaimonic well-being)



Note. Only the significant paths are shown: + = positive relationship, - = negative relationship. Mindset: a high score represents a growth mindset and a low score represents a fixed mindset.

The results (shown in Figure 1) showed that employees with a stronger fixed mindset had a stronger preference for performance-approach and performance-avoidance goal orientations. However, these were only weak effects, as no more than 1% of the variance in performance-approach and performance-avoidance goal orientation could be predicted by mindset. There was no association between (mastery) goal orientations and growth mindset. However, a relationship was found between employees' growth mindset and their eudaimonic well-being: employees with a growth mindset had participated more often in professional training. The strongest predictor of participating in professional training was mastery-approach goal orientation: with every one-point increase on a Likert scale from

1 to 5 that measured mastery-approach goal orientation, the likelihood of participating in training was twice as high. Furthermore, low performance-avoidance goal orientation in combination with high mastery-approach goal orientation was associated with more participation in training. Mastery-avoidance goal orientation and performance-approach goal orientation did not predict participation in training.

In summary, from the study described in Chapter 4 it can be deduced that the assumption in achievement goal theory about the relation between mindset and goal orientations seems to be less empirically substantiated than could be expected (see also Burgoyne et al., 2020). Still, this study found that growth mindset, in addition to its positive relation with mastery-approach goal orientation, was positively associated with eudaimonic well-being (in the form of participation in professional training). The combination of goal orientations was important: social workers with both high mastery-approach goal orientation and low performance-avoidance goal orientation participated most often in training (they had the highest eudaimonic well-being). In line with the results from Chapter 2, the positive effects of being strongly focused on developing one's competence (high mastery-approach goal orientation) on one's psychological and social functioning (eudaimonic well-being) appear to be strengthened by a weak focus on preventing the display of incompetence (low performance-avoidance goal orientation; see also Chapter 2).

The study described in **Chapter 5** examined the effects on well-being of the interaction between the person and their (work) environment. More specifically, this study focused on the effect on well-being of the interaction between a person's mastery-approach- and mastery-avoidance goal orientations and the learning opportunities in the work environment. According to the person-environment fit theory (Person-Environment Fit; PE fit theory; Kristof-Brown & Guay, 2011) a match between the (work) environment and the person's characteristics is associated with positive outcomes (for example, high well-being), while a mismatch is associated with negative outcomes (low well-being).

The aim of this study was to investigate whether PE fit theory also applies to a match or mismatch between mastery-approach goal orientation, mastery-avoidance goal orientation and the available job sources in the work environment (in this case, the available learning opportunities). To answer this question, the same sample (T1) was used as in the study reported in Chapter 3, but in the present case, the outcome variables of positive well-being (task enjoyment and job satisfaction; that is, hedonic well-being) and negative well-being (needs for recovery and absence due to sickness in the following year, both duration and frequency) were used.

The findings showed that a match between high mastery-approach goal orientation and ample learning opportunities (a *positive match*) was associated with greater task enjoyment and higher job satisfaction, while no associations were found with one's need for recovery and absenteeism. When high mastery-approach goal orientation occurred together with few learning opportunities (a *negative mismatch*), employees had less task

enjoyment, less job satisfaction and greater need for recovery, while no associations with absenteeism were found. An interesting result was that the combination of low mastery-approach goal orientation with many learning opportunities (a *positive mismatch*) was associated on the one hand with less task enjoyment, but on the other hand with relatively high job satisfaction. Both a match and a mismatch between mastery-avoidance goal orientation and learning opportunities showed similar patterns to mastery-approach goal orientation.

In summary, from this study it can be concluded that in accordance with PE fit theory, the environment influences the relationship between employees' mastery goal orientation (both mastery-approach and mastery-avoidance goal orientation) and their well-being at work. A rich environment with many learning opportunities proved to strengthen the positive relationship between mastery goal orientation and well-being, while a poor work environment with few learning opportunities weakened this relationship. In other words, the hedonic well-being of employees depends not only on their need to develop their competence or their need to prevent incompetence, but also on the extent to which there are opportunities to develop themselves at work. This study also shows that it is important to distinguish multiple indicators of well-being among employees – not just job satisfaction – as multiple indicators reveal more complex patterns and greater insight into the relationship between achievement goal orientation and well-being.

The study described in **Chapter 6** aimed to investigate the influence of the work environment on the relationship between employee achievement goal orientation and well-being. This study did not examine potential job resources, such as learning opportunities, but potential stressors, in this case, job insecurity. The influence of this stressor on the relationship between employees' achievement goal orientation and eudaimonic well-being was looked into. It is known from previous research that people's goal orientation influences their appraisal of stressors. Someone with higher mastery-approach goal orientation experiences less threat, while someone with higher performance-avoidance goal orientation experiences more threat (Vandewalle et al., 2019). It has been demonstrated that, in turn, experiencing threat affects a person's well-being.

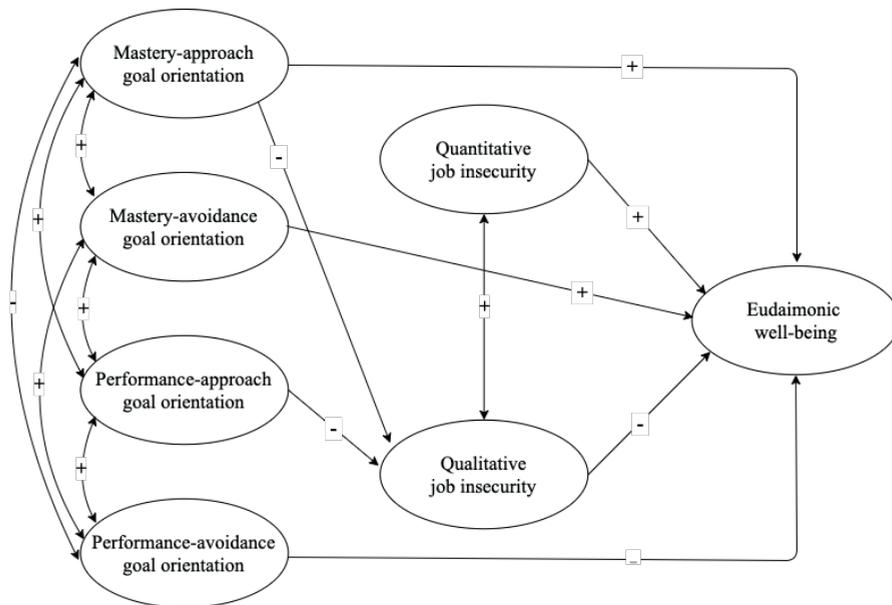
The aim of this study was to examine the influence of employees' achievement goal orientation on their appraisal of job insecurity, with the expectation that their appraisal of job insecurity, in turn, would be related to their eudaimonic well-being. More specifically, what was tested was whether employees with higher mastery-approach goal orientation would perceive less threat (job insecurity) and whether less perceived threat, in turn, would be positively related to their well-being. The study also tested whether the opposite – greater perceived threat and lower well-being – would occur among people with higher performance-avoidance goal orientation. With regard to job insecurity, a distinction was made between someone's uncertainty about the continuity of their job (quantitative job insecurity) and a person's perceived uncertainty about the quality (for example, attractive

tasks or salary increases) of their job (qualitative job insecurity). A mediation model was used to test these expectations.

Data were collected among 275 employees working for a youth care organization in which a drastic reorganization had been announced, and it was known that many employees would lose their jobs. The results of the study (see Figure 2) showed that mastery-approach goal orientation and performance-approach goal orientation were negatively related to employee qualitative job insecurity (uncertainty about the quality of one's own job in the future). However, the relationship between people's achievement goal orientation and their qualitative job insecurity was too weak to influence their well-being through qualitative job insecurity (i.e., no mediation effect). Their achievement goal orientation was directly related to eudaimonic well-being: mastery-approach and mastery-avoidance goal orientation showed positive associations and performance-avoidance goal orientation showed negative associations with their eudaimonic well-being (see also Chapter 2). Interestingly, and similar to findings from the study described in Chapter 3, the present study showed a positive association between mastery-avoidance goal orientation and eudaimonic well-being among employees.

**FIGURE 2**

Mediation model for goal orientation, quantitative and qualitative job insecurity and eudaimonic well-being



Note. Only significant relationships are shown, + = positive relationship, - = negative relationship.

In summary, from the findings in this study it can be concluded that despite the threat of job loss, employees who were more focused on developing their competence or preventing incompetence reported higher eudaimonic well-being than their colleagues who were less focused on developing competence or preventing incompetence. In addition, this study showed that being motivated to avoid displaying one's incompetence to others (high performance-avoidance goal orientation) was negatively related to eudaimonic well-being.

Chapter 7 contains a general discussion related to the two research questions of this dissertation, namely 1) what is the relationship between achievement goal orientation and well-being (both hedonic and eudaimonic) among working adults and 2) what is the influence of the work environment on this relationship? The overall results from the studies described in this dissertation showed that both employed and non-employed people who focus on developing their competence (high mastery-approach goal orientation) feel happy and satisfied (hedonic well-being), but also experience optimal psychological and social functioning (eudaimonic well-being). In contrast to previous research in which a negative relation was regularly found, in this dissertation, mastery-avoidance goal orientation (that is, a focus on prevention of incompetence) had a positive relation or no relation with well-being. For performance-approach goal orientation (a focus on showing competence) and performance-avoidance goal orientation (a focus on avoiding showing incompetence), no or negative relations with well-being were found. Furthermore, the positive relation of mastery-approach goal orientation with well-being was enhanced by a supportive work environment with ample learning opportunities. Additionally, the positive relation between mastery-approach goal orientation and well-being remained intact in a work environment where jobs were at risk.

It was already known that a mastery-approach goal orientation contributes to greater motivation and better performance. This dissertation provides support for the notion that the well-being of employees also benefits from being focused on developing one's competence (mastery-approach goal orientation) in an environment that facilitates this motivation. To a lesser extent, such support was found for a focus on preventing incompetence (mastery-avoidance goal orientation). Therefore, it is important for employers to pay attention to the type of goals that employees set for themselves, and also to consider whether their work environment supports their employees' mastery goals.



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# CURRICULUM VITAE

Arjan van Dam was born in Putten on September 17th, 1970. In 1996, he received his master's degree in Psychology of Occupational Health at Utrecht University. For his master's thesis, he examined whether burnout could be diagnosed with an existing symptom checklist (the SCL-90). After receiving his master's degree, he worked at various organizations, including public and commercial employment services. His most recent employer gave him the opportunity to focus also on research: how can scientific research contribute to more effective re-employment services. Arjan's research interests developed in the direction of the role of mastery goals in learning, job skill development, and beyond, leading him to write and publish a book, *The Art of Failure [De Kunst van het Falen – Hoe je door effectief leren succesvol kunt presteren]*, Ambo, 2009). In the same year, he started his own training and consultancy agency Fidare (<http://www.fidare.nl/>), with the aim of developing and applying psychological knowledge in the contexts of professional skill development and successful job reintegration. This includes providing professional training on topics such as psychological interviewing, occupational mental health, and remediation of stress and burnout. Arjan also established a foundation, together with dr. Gera Noordzij (Erasmus University Rotterdam), that addresses developing goal-setting tools and training in relation to groups of job seekers. Arjan regularly consults with a variety of professional organizations in order to improve the vitality of their employees, and to boost both their performance and well-being. In 2014, he expanded his research interests by starting out as an external PhD student at Erasmus University Rotterdam. The results of his PhD project are presented in this dissertation. He presented his work at scientific conferences (WAOP 2015 and 2016) and published his work in journals such as *Journal of Social Work*, *Journal of Personnel Psychology* and *Social Indicators Research*. During his PhD project, Arjan gave several lectures on the art of failure as related to mastery goals.

