Self-leadership in Healthcare

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How healthcare workers can lead themselves
to better work engagement, health, and performance

Pauline van Dorssen-Boog

Open Universiteit

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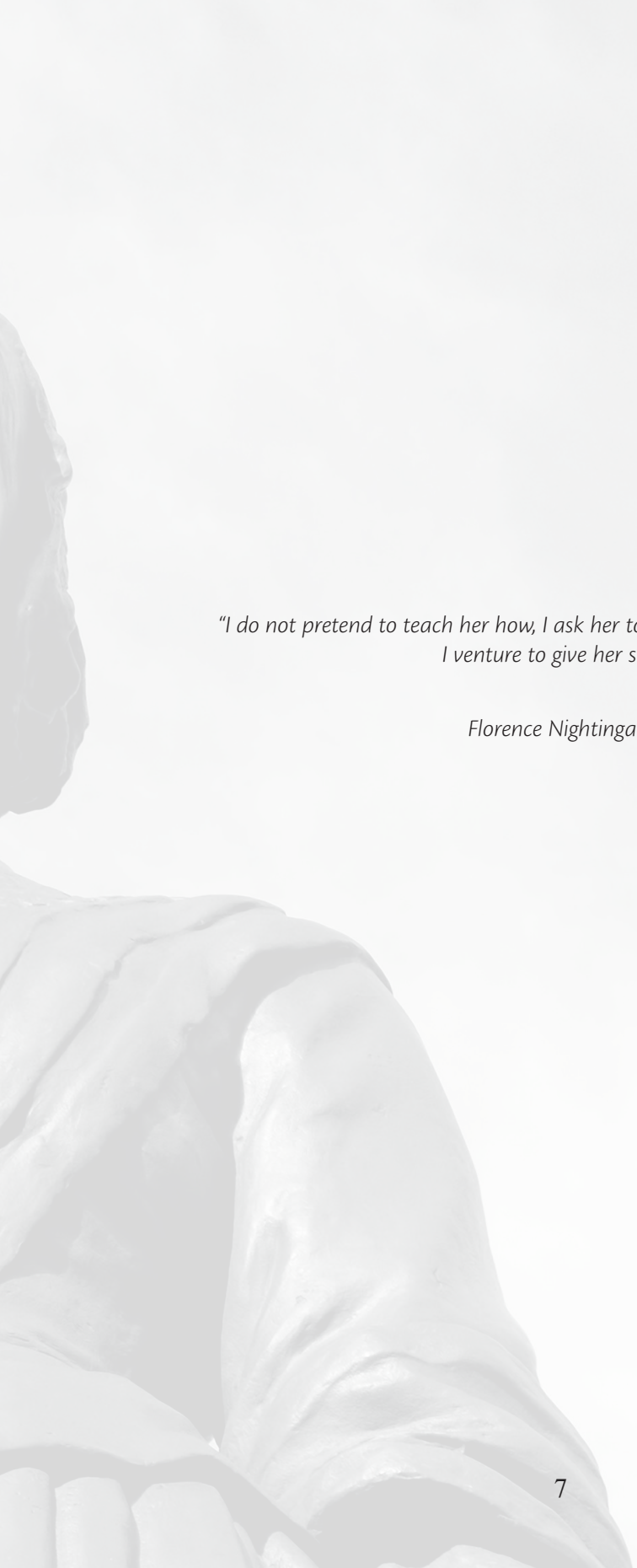
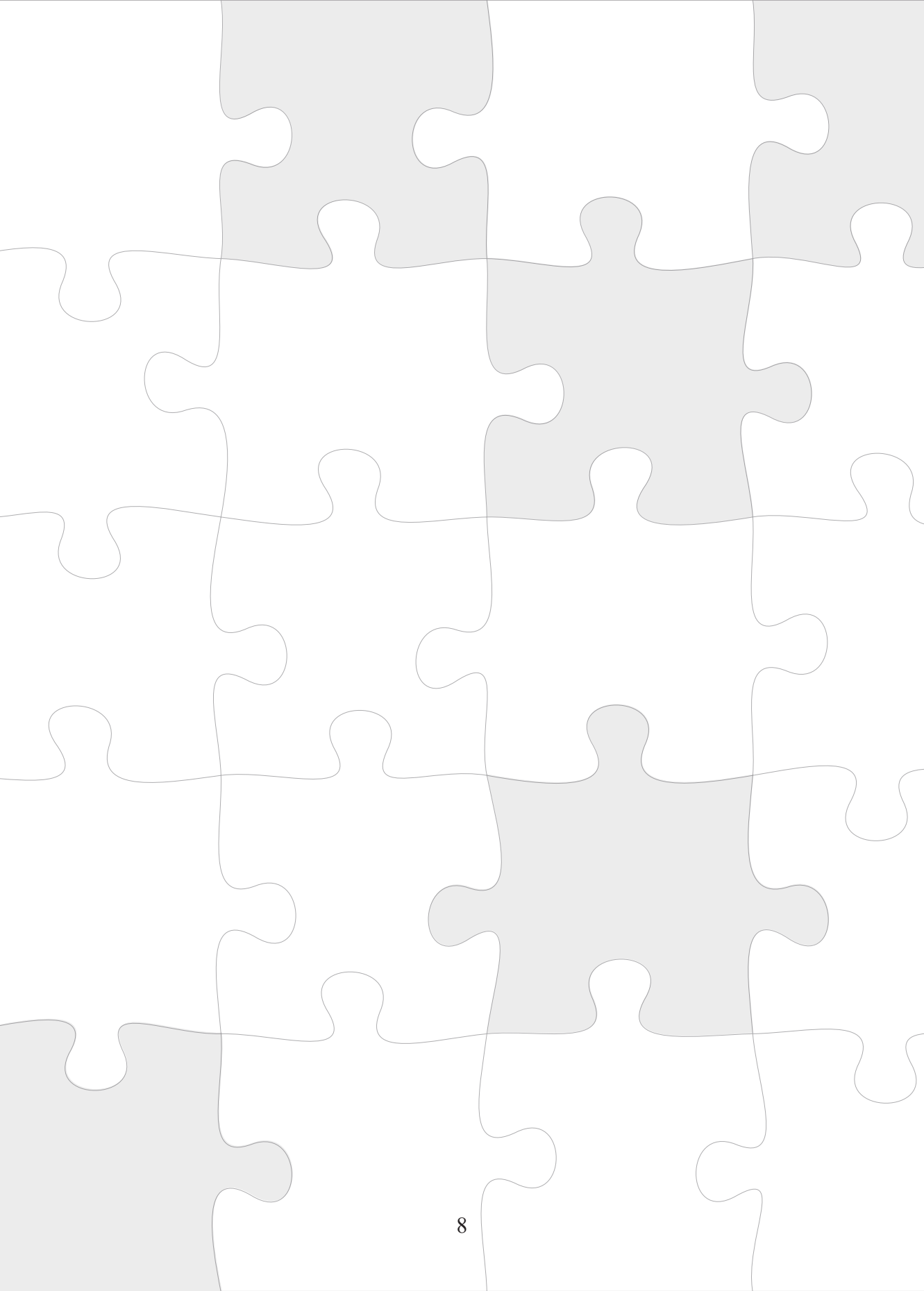


"I do not pretend to teach her how, I ask her to teach herself, and for this purpose I venture to give her some hints"

Florence Nightingale (1860)



Chapter 1

General introduction

Chapter 1 - General introduction

Every day, more than a million healthcare professionals take care of people in Dutch nursing homes, hospitals, disability care homes, and other healthcare and well-being organizations (CBS, 2021). They love to care for the wellbeing and health of their clients, as this gives them feelings of meaningfulness, joy, and engagement (De Cooman, De Gieter, Pepermans et al., 2008; Toode, Routasalo & Suominen, 2011). However, healthcare professionals around the world also report that their job can be demanding and stressful (Broetje, Jenny & Bauer, 2020; McVicar, 2016). The high work load, the many formal standards and procedures which must be followed, as well as disturbances in social relations at work are often reported to be important causes of distress (McVicar, 2016). On top of this, the global pandemic of the Corona Virus Disease 2019 (COVID-19) increased the work related stress and resulted in even more mental and physical exhaustion (Van Roekel, Van der Fels, Bakker & Tummers, 2021). For decades, the Dutch healthcare and welfare industry has had the highest absenteeism when compared with other professional sectors; in 2019, before the pandemic, the absenteeism rate was 5.7%, which during 2020 further raised up to 6.4% (CBS, 2021). While due to aging society there is a growing need for even more healthcare workers, about 9% of the healthcare workers decide to quit working in this industry (CBS, 2021). Healthcare organizations are faced with unfulfilled vacancies, specifically related to nursing professions in nursing homes and hospitals (Ministerie van VWS, 2020). Therefore, employers and policy makers are left with the challenging question how to not only attract, but also retain employees for the healthcare industry (Terpstra, Driel, Ten Hoonte, Rullmann & Schouten, 2018).

The healthcare literature, policy makers, and healthcare workers propose that it would help if healthcare workers gain more autonomy within their job (e.g., Broetje et al., 2020; Zorginnovatieplatform, 2009; VenVN, 2011). To be specific, they need to gain more freedom to make their own decisions concerning work related issues and they need to have more responsibility for the outcomes of their work (Cicolini, Comparcini, Simonetti, 2014; Laschinger, Finegan, Shamian & Almost, 2001; Broetje et al., 2020). Indeed, the healthcare literature supports the idea that job autonomy contributes to job satisfaction and general health of healthcare workers (Cicolini et al., 2014; Widerszal-Bazyl, Radkiewicz, Hasselhorn & Conway, 2003; Toode, Routasalo & Suominen, 2011). By referring

to the Job Demand Control model of Karasek (1979) Laschinger et al. (2001) propose that job autonomy as a job design measure will help healthcare workers to better organize the work load (Laschinger et al., 2001). However, research suggests that healthcare workers, while working in the same work environment, can experience job autonomy differently, as well as subsequent outcomes related to distress (Presseau et al., 2014). Whether one functions autonomously in one's job may be a result of both the formal decision latitude within a job, as well as one's actual competences for self-leadership (Lovelace, Alves & Manz, 2007; Manz, 1986).

Self-leadership theory argues that employees are not just reactive responders to external directions by supervisors or by formal standards and procedures. Employees have the potential to take responsibility for their own performance (Manz & Sims, 1980; Manz, 1986). By using cognitive and behavioural self-influencing strategies, they can observe and evaluate the effectiveness of their own performance and motivate and direct themselves in order to optimize their functioning (Neck & Houghton, 2006). Self-leaders are highly reflective concerning the "what" and "why" of their activities, as well as "how" they do their activities. (Stewart, Courtright & Manz, 2011; Manz, 2015). They make sure that they do activities because they fully agree with the purpose of the activity. Thus, whereas job autonomy refers to a characteristic of the job design, which is extrinsic to the person, self-leadership refers to specific competences of the employee. Self-leadership is generally defined as the self-influencing process of self-motivation and self-direction with the aim to optimize performance (Neck & Hougthon, 2006; Manz, 1986).

According to Lovelace et al. (2007), healthcare workers may benefit from developing self-leadership as it will help them to take charge of the work load. In line with Karasek's Job Demand Control model (1979) they proposed that self-leadership will contribute to stress reduction, since self-leadership can lead to more self-efficacy, and subsequently to better performance (Lovelace et al., 2007; Prussia, Anderson & Manz, 1998). Moreover, self-leadership can positively contribute to experiences of flow and work engagement (Lovelace, et al., 2007).

The idea that healthcare workers need to take the lead in their job is not new. Florence Nightingale (1860), who is one of the founders of nursing as a profession, encouraged nurses to always critically reflect on their own activities and not simply follow the standards. She introduced her "Notes on nursing" as

"hints for thought to women who have personal charge of the health of others". She directly appealed nurses to not simply follow her ideas, as every patient, every disease, and every situation may have unique characteristics which need a unique treatment. She encouraged nurses to take responsibility for their own decisions, and to make sure that nurses can truly endorse their own nursing practices.

> *"I do not pretend to teach her how, I ask her to teach herself, and for this purpose I venture to give her some hints" (Florence Nightingale, 1860, p. 7).*

In fact, Florence Nightingale appealed to nurses to act on the basis of self-leadership.

Purpose of the study

The present thesis aims to investigate whether self-leadership is beneficial for healthcare workers in terms of their work engagement, health, and performance. Self-leadership theory generally refers to the self-influencing process of self-motivation and self-direction (Manz, 1986; 2015; Neck & Houghton, 2006). By practicing specific cognitive and behavioural focused self-leadership strategies, people can self-influence their own performance (Stewart et al., 2011; Neck & Houghton, 2006). Indeed in a recent meta-analysis of self-leadership studies, strong evidence was found that self-leadership contributes to performance as well as to creativity. Both directly, and through mediation effects of self-efficacy, work engagement, and job satisfaction (Knotts et al., 2021). Despite these promising benefits of self-leadership, only a small number of studies have investigated self-leadership within the healthcare industry; specifically in the clinical hospital setting (e.g., Kayral & Dülger, 2019; Kim & Kim, 2019) and in maternity care (Breevaart, Bakker & Demerouti, 2014). However, in the Netherlands, only 22% of the healthcare workers work in hospital settings (CBS, 2021), and less than 1% in maternity care (Brancheorganisatie Geboortezorg BO, 2020). Most healthcare workers work in other places such as nursing homes and homecare (33%), and disability care (13%) (CBS, 2021). Research on self-leadership among healthcare workers in these healthcare branches is still missing, and therefore the potential effects of self-leadership remain unclear.

Within the field of self-leadership theory it is debated that self-leadership

may be less applicable for healthcare workers, such as nurses and assistant nurses. Firstly, because it is assumed that the self-leadership strategies may be most applicable for people working in complex and conceptual jobs, which require creativity and complex thinking (Konradt, Andressen & Ellwart, 2009; Manz, 2015). However, self-leadership may not only be applicable for complex job tasks, but also for dealing with job tasks which are demanding in a different manner (e.g., emotionally, physically, socially) (Manz, Houghton, Neck, Fugate & Pearce, 2016; Lovelace et al., 2007). Besides, it is suggested, that healthcare professionals, such as nurses working in clinical hospitals, in fact do have complex and challenging jobs, which require self-leadership skills (e.g., Jooste & Cairns, 2014; Cable & Graham, 2018). Secondly, Alves et al. (2006) proposed that self-leadership may be less applicable for employees working in healthcare, as healthcare organizations are more feminine than masculine. They explain that self-leadership theory is developed within the masculine society of the USA, with the general focus on optimizing performance. In contrast, feminine societies and organizations, such as those within the healthcare industry, emphasize nurturing, care for others, social relationships and quality of life (Alves et al., 2006). Healthcare workers have their professional focus on servicing the needs and goals of others, which can easily distract their attention from personal goals and their own well-being. However, Alves et al. (2006) also propose that these employees may benefit from self-leadership, though probably in a different way. They may not primarily focus on performance goals, but more on intuition oriented conditions related to intrinsic motivation and relationships.

This thesis explores self-leadership within the Dutch healthcare industry, specifically among healthcare workers who are employed in nursing homes, disability care, hospitals and homecare. By applying a positive psychology perspective on the development of self-leadership, I propose that by practicing self-leadership, healthcare workers can self-influence their own work engagement, health, and performance. If healthcare workers are able to take the lead in their jobs, they will be able to focus better on working goals, as well as on intrinsically motivating aspects of the job, rather than the stressful aspects the job demands (Lovelace et al., 2007). And as a result, healthcare workers will feel more engaged, healthier and also report better performance.

Introduction of self-leadership theory: strategies and actual behaviour

Self-leadership theory is positioned as a normative theory which is defined as "a comprehensive self-influence perspective that concerns leading oneself towards performance of naturally motivating tasks as well as managing oneself to do work that must be done, but is not naturally motivating" (Manz, 1986, p. 589). The theory is inspired by insights from classical self-regulation and motivation theories, such as social cognitive theory (Bandura, 1991), self-regulation theory (Carver & Scheier, 1981), cognitive evaluation theory (Deci, 1975), self-management and self-control theories (e.g., Mahoney & Arnkoff, 1978; Thoresen & Mahoney, 1974). Based on these insights, self-leadership theory has prescribed cognitive and behavioural focused strategies which are assumed to be helpful in the self-influencing process to optimal performance (Manz, 1986; Neck & Houghton, 2006). *Behavioural focused strategies* are aimed to foster both extrinsic motivation and intrinsic motivation. These strategies include self-observation, self-goal setting, self-cueing, and self-reward (Neck & Houghton, 2006; Houghton & Neck, 2002). *Constructive thought pattern strategies* aim to manage functional patterns of habitual thinking. These thoughts take an optimistic and solution focused perspective on achieving successful performance, even in difficult, challenging situations (Neck & Manz, 1996; Neck & Manz, 1992). *Natural rewards strategies* refer to both behavioural focused and cognitive strategies, and have the specific aim to increase natural rewards or intrinsic motivation for doing a job task (Neck & Houghton, 2006; Houghton & Neck, 2002; Manz, 1986).

Although self-leadership theory prescribes broad sets of self-influencing strategies, it is assumed that these sets of strategies are not complete. Manz (2015) suggested to expand the self-influencing strategies with other perspectives like emotional self-leadership, physical fitness, or collaboration with others to extend capacities beyond one's own limitations (Manz, 2015). And Manz et al. (2016) proposed five categories for emotional self-leadership strategies (environmental focused, action focused, natural rewards focused, cognitive focused, physiological focused) (Manz et al., 2016). Remarkably, these proposals for expansion of self-leadership strategies are also based on a normative research perspective. They are based on how one *should* behave.

Despite the practical applicability of normative theories, this type of theory can also have its blind spots. The explicit focus on the prescribed norms

can easily lead to a false interpretaton of results, since other phenomena related to the construct are not included in the research (Elqayam & Evans, 2011). Normative theories are focused on idealized behaviour, thus how one should behave. With descriptive science the researcher 'simply defines, delineates and documents its findings, leaving them free of value judgement' (Linley, Joseph, Harrington, & Wood, 2006; p. 13). Thus, descriptive research is focused on how the construct actually functions in practice.

It is surprising that theory development on self-leadership is based on a narrow prescriptive research perspective, as in the long history of leadership research, knowledge and insight are highly based on descriptive research. Scholars have extensively observed and described traits and behaviours of leaders, unconscious and conscious motivation strategies, positive and negative effects, and the influence of the social context on leadership, in order to better understand leadership (Avolio, Walumba, & Weber, 2009; Antonakis, Avolio, & Sivasubramaniam, 2003; House & Aditya, 1997). There are only a few leadership theories that include a prescriptive perspective as well. For instance the Decision Making Theory is primarily developed as a normative theory which prescribed how a leader should make decisions in specific situations (Vroom & Yetton, 1973; Vroom & Jago, 1974). However, Vroom and Jago (1974) suggested that this perspective should be complemented with a descriptive research perspective, which would focus on how leaders actually make decisions in practice (Vroom & Jago, 1974). In an attempt to validate the Vroom Yetton model, it became clear that the original prescriptive research perspective was too simple to understand how decision making processes function in practice (Vroom & Jago, 1978). Characteristics of people and situational factors were important influencers for the actual decision making process. As a result, the prescriptive model for decision making improved on basis of insights from descriptive research (Vroom, 2000).

The explicit normative focus of self-leadership theory may also lead to a misinterpretation of self-leadership. If we observe self-leadership as it actually functions in practice, we may find that people take responsibility for their own job tasks, take initiative in daily problem solving, and determine their own activities, while not using the full range of self-leadership strategies. To exemplify, this may have been the case in the study among employees from a Turkish hospital. It was found that with the growing age and tenure, these people were making less use of self-leadership strategies (Ugurluoglu, Saygili, Ozer & Santas, 2015). A reason might be that people lead themselves on basis of their many years of work and life

experience, which makes them act on a more unconscious or intuitive basis.

In the early scale-development for measuring self-leadership, Cox (1993) proposed a subscale with a meta-dimension of self-leadership, based on self-responsibility, initiative, and autonomous problem solving behaviour. Presumably for the practical advantages of a short self-leadership scale, a few researchers used this subscale in their studies as a way to get an indication of self-leadership (Yun, Cox & Sims, 2006; Breevaart, Bakker, Demerouti & Derks, 2016). We agree that this scale represents self-leadership, since self-leaders are assumed to act highly self-responsible in their own jobs, tend to determine their own way of working, and take initiative to achieve their goals (Stewart et al., 2011; Manz, 2015). However, it remains unclear whether the actual self-leadership behaviour always comes along with self-leadership strategies. Moreover, if people show this self-leadership behaviour they may function well, while not using the full set of self-leadership strategies. Therefore, when only focusing on the use of strategies, the actual self-leadership behaviour will be excluded from research. As a result, we may misinterpret our study results. Therefore, in the present thesis, the research includes both self-leadership strategies and the actual self-leadership behaviour. I propose that for better understanding of the construct of self-leadership, it is necessary to combine the prescribed self-leadership strategies with this measurement of actual self-leadership behaviour.

Research problems

The role of autonomy in the self-leadership process

The healthcare literature suggests that if healthcare workers experience job autonomy this will contribute to their well-being (Ciccolini et al., 2014; Laschinger et al., 2001; Broetje et al., 2020). Self-Determination Theory (SDT, Deci & Ryan, 2000) explains that the experience of autonomy in a social context facilitates autonomous motivation. It enables employees to determine their own goals and to act in alignment with personal values and interests. As a result of the autonomous motivation, people experience high levels of energy, health and also are motivated for delivering high quality performance (Gagné & Deci, 2005; Deci, Olafsen & Ryan, 2017). However, SDT does not explain how employees in fact function autonomously (Bakker & Van Woerkom, 2017). In contrast, the self-leadership literature assumes that highly autonomous work environments

stimulate employees to actually lead themselves autonomously (Alves et al., 2006; Stewart et al., 2011). The experience of job autonomy leads to an increased use of self-influencing strategies in order to motivate and direct oneself to optimal functioning (Müller & Niessen, 2019). This suggests that the positive effects of job autonomy on outcomes related to motivation and health are explained by self-leadership.

Yet, the Person Environment fit theory (PE fit theory) (Kristof-Brown, Zimmerman, & Johnson, 2005; Caplan, 1987) points out that presumed relationships between job design, attitudes and behaviour are mostly more complex. Employees are not just reactively responding to their work context, as they can be active designers of their job (Frese & Fay, 2001; Wrzesniewski & Dutton, 2001). Since job autonomy is theorized to be a desirable job resource for improving well-being (Bakker & Demerouti, 2007), people may attempt to increase it (Tims, Bakker & Derks, 2013). Following that line, self-leaders may be able to organize more job autonomy for themselves. This suggests that job autonomy and self-leadership have a reciprocal relationship.

However, notably, Self-Determination Theory explains that it is not the amount of autonomy, but the satisfaction of one's need for autonomy that leads to intrinsic motivation and health (Van den Broeck, Vansteenkiste, De Witte & Lens, 2008). Due to multiple reasons, such as professional responsibilities (Iliopoulou & While, 2010), individuals' need for structure (Roberts & Foti, 1998), or learning experiences concerning autonomous functioning in childhood (Schüler, Sheldon, Prentice & Halusic, 2016), people can differ in their need for job autonomy. Hence, the reciprocal relationship between job autonomy and self-leadership may be moderated by the degree to which one actually has a need for job autonomy. And vice versa, the effects of self-leadership on one's job autonomy may be influenced by individual's need for job autonomy.

While the healthcare literature assumes an important role for job autonomy as job design measure for healthcare workers (Ciccolini et al., 2014; Laschinger et al., 2001), it is not investigated how healthcare workers actually deal with the experienced autonomy. In the present thesis it is proposed that self-leadership explains the relationship between job autonomy and respectively work engagement and health. Moreover, it is hypothesized that job autonomy and self-leadership have a reciprocal relationship which is influenced by need for job autonomy.

Alternative pathways for explaining effects of self-leadership

Within self-leadership theory it is theorized that if people develop self-leadership they will grow their self-efficacy, which subsequently explains improvements on performance (Prussia et al., 1998; Neck & Houghton, 2006). Besides, through self-leadership training individuals will build and conserve all kinds of resources, resulting in the reduction of stress and positive affect (e.g., Unsworth & Mason, 2012). Resources can be objects, personal characteristics, conditions, or energies, that are valued by the individual or that serve as means for attainment of other resources (Hobfoll, 1989). Until now, self-leadership theory has not focused on the role of autonomous motivation to explain positive outcomes related to motivation and performance. This is remarkable due to the fact that self-leadership is especially recognized by the self-determined goals and activities, and the intrinsic motivation for these activities (Manz, 1986; Stewart et al., 2011). Self-leaders are highly reflective concerning the "what", "why" and "how" of their behaviour, and make sure that they can fully endorse their own activities (Stewart et al., 2011). Therefore, it can be assumed that if people act on the basis of self-leadership, this will contribute to their autonomous motivation. If goals and activities are based on autonomous motivation, they are experienced as enjoyable and/or meaningful. Autonomous motivation is assumed to be a powerful driving force for high quality performance, and is also associated with vitality, health, and personal growth (Deci, Olafsen & Ryan, 2017). In contrast, controlled motivation is focused on external rewards or the avoidance of punishment, thus based on an urge which can deplete the energy which is available to the self (Van den Broeck et al., 2011; Ryan & Deci, 2008). Therefore, controlled motivation can easily lead to increased stress levels and impairment of health (Gagné & Deci, 2005; Van den Broek et al., 2011). SDT assumes that people are inherently intrinsically motivated, which can be thwarted if the basic psychological needs, including the need for autonomy, are not satisfied (Deci & Ryan, 2000). It does not explicate *how* people may self-influence their autonomous functioning (Bakker & Van Woerkom, 2017). However, according to self-leadership theory, people have the potential capacity to self-influence their motivation such that they become more autonomously motivated. Through exercising self-leadership people can develop their ability to self-organize experience and behaviour, and to have activity be concordant with their own values, interests, and goals.

By integrating insights from SDT in self-leadership theory, it is

hypothesized in this thesis that if healthcare workers take the lead, this will result in more work engagement and better health. Work engagement is theorized to indicate the general autonomous motivation for one's job (Van Beek, Hu, Schaufeli, Taris & Schreurs, 2012; Salanova & Schaufeli, 2008). Engaged workers work because they genuinely *want* to work; they experience the activities of a job as enjoyable, interesting, and valuable (Bakker, Demerouti & Sanz-Vergel, 2014; Salanova & Schaufeli, 2008). Furthermore, building on SDT it is hypothesized that the presumed effects of self-leadership on performance can be explained by the work engagement of healthcare workers. The effects of self-leadership on work engagement might explain why self-leading employees deliver high quality performance (Deci et al., 2017; Bakker, 2014).

The development of self-leadership within healthcare

Since self-leadership refers to competences rather than personality traits, it is assumed that people can develop self-leadership (Neck & Houghton, 2006; Furtner, Sachse & Exenberger, 2012). Intervention studies in other profit and not-for-profit industries have already shown that the development of self-leadership through training can help employees to reduce stress and increase positive affect (Unsworth & Mason, 2012; Neck & Manz, 1996; Sampl, Maran & Furtner, 2017), while it also contributes to the improvement of physical and mental performance (e.g., Lucke & Furtner, 2015; Neck & Manz, 1996). However, when in 2015 this intervention study was started, the effects of self-leadership training had not been tested within the healthcare industry.

Prior intervention studies for healthcare workers have mainly focused on the development of coping strategies for dealing with negative experiences related to stress and work load (McVicar, 2016; Ruotsalainen, Verbeek, Marine & Serra, 2015). However, if research continues to focus on problem solving of negative experiences, it neglects the potential benefits of building positive qualities (Seligman & Csikszentmihalyi, 2000; Linley et al., 2006). Still, if research is focused on understanding the development of intrinsic work motivation and positive organization behaviour, this may uncover new valuable perspectives on the development of well-being of employees as compared to the more traditional research focus on reducing problems (Bakker & Van Woerkom, 2017; Deci et al., 2017; Bakker & Schaufeli, 2008). In this thesis it is hypothesized that if self-leadership training for healthcare workers is focused on improving self-determination and vitality, this will positively contribute to their

work engagement, health, and performance. Since work engagement is assumed to represent autonomous work motivation (Van Beek et al., 2012; Salanova & Schaufeli, 2008), it is hypothesized by referring to Self-Determination Theory (Deci et al., 2017) that work engagement mediates the effects of self-leadership training on health and performance.

In order to test the hypotheses a voluntary based training program for healthcare workers is developed. It is assumed that this voluntary base will contribute to the effort that participants will put in the training, as it will be based on autonomous motivation. However, the voluntary base may have the practical implication that only a small group of healthcare workers are willing to participate in such a training. In order to create a positive spiral for improving the sustainable employability of healthcare workers, it seems necessary to also explore opportunities for a wider target group. Therefore, the present thesis also investigates an integrated approach for self-leadership development at the level of individuals, teams, and managers. It is assumed that with an integrated approach for self-leadership development, individual team members will experience more joy and engagement, while teams can develop their shared leadership, resulting in more engagement and effectiveness within the team.

Research questions

The central research question of this thesis is:

> *How can healthcare workers benefit from self-leadership in terms of their work engagement, health, and performance?*

This central research question is divided in four sub-questions, which will be addressed in four separate studies.

1. Does self-leadership mediate between job autonomy and respectively work engagement and health?

The healthcare literature has repeatedly suggested that for improving the well-being of healthcare workers, jobs need to be designed with more job autonomy (Ciccolini et al., 2014; Laschinger et al., 2001; Broetje et al., 2020). Job autonomy is assumed to enable healthcare workers to deal with the work load, while it also contributes to their well-being (Cicolini et al., 2014; Widerszal-Bazyl et al., 2003; Toode et al., 2011). However, job autonomy appeals for competences in

self-leadership (Stewart et al., 2011; Alves et al., 2006). It is proposed that self-leadership can help healthcare workers to control their job tasks and to influence their general functioning, as well as to positively influence their work engagement and health (Lovelace et al., 2007).

Specifically, this first study is focused on answering the following question:

- Does self-leadership explain the relationship between job autonomy and respectively work engagement and health of healthcare workers?

2. How are job autonomy, self-leadership, and need for job autonomy related?

While the relationship between job autonomy and self-leadership is proposed (Stewart et al., 2011; Alves et al., 2006) and also substantiated by some evidence (e.g., Ho & Nesbit, 2014; Müller & Niessen, 2019), this relationship may be more complex than initially assumed. First, people who take the lead may be able to self-influence their job autonomy. Second, not every individual has the same need for autonomy (Van den Broeck et al., 2008). As a result, the presumed reciprocal relationship between job autonomy and self-leadership may be moderated by individual's need for job autonomy.

Therefore, this second study focuses on the following research questions:

- Do job autonomy and self-leadership have a causal and reverse relationship?
- Does the need for job autonomy moderate the causal and reverse relationship between job autonomy and self-leadership?

3. How can healthcare workers benefit from self-leadership training in terms of work engagement, health, and performance?

Prior research in other profit and not-for-profit industries showed that employees can benefit from self-leadership training, as it contributes to their stress reduction, positive affect, and performance (e.g., Unsworth & Mason, 2012; Lucke & Furtner, 2015). The third study takes a positive psychology perspective on developing self-leadership, as it is assumed that if healthcare workers develop their self-determination and self-leadership with the aim to improve vitality, this will impact their work engagement, health, and performance. Moreover, it is hypothesized that the development of self-leadership will contribute to

the work engagement of healthcare workers, which subsequently explains the improvements on performance and health.

Therefore, this third study focuses on the following research questions:

- Does the training self-leadership contribute to the positive development of work engagement, health, and performance of healthcare workers?
- Does the development of work engagement as a result of self-leadership training explain the relationship between self-leadership training and respectively performance and health?

4. How can self-leadership be developed within setting of a healthcare team?

As the voluntary basis of self-leadership training may limit the range of healthcare workers which can potentially benefit from it, the fourth study will investigate alternative ways for developing self-leadership within healthcare. By applying an integrative approach, individual team members, teams, as well as their team managers, will participate in self-leadership training. The aim of the intervention program is to develop self-leadership competences, both at the individual level and at the team level. It is assumed that with an integrated approach for self-leadership development, individual team members will experience more joy and engagement, while teams conjointly experience more engagement and effectiveness within the team.

Therefore, this fourth study focuses on the following research question:

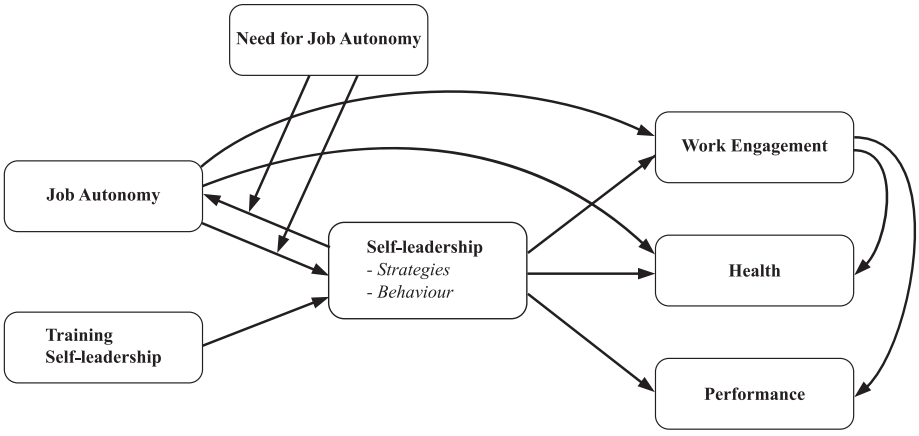
- How can self-leadership be developed within the setting of a healthcare team?

In sum

The research is aimed to investigate how healthcare workers can benefit from self-leadership, including its development, in terms of their work engagement, health, and performance (Figure 1-1). It is assumed that job autonomy will influence self-leadership, which subsequently leads to work engagement and health. Besides, it is investigated whether job autonomy and self-leadership have a reciprocal relationship and if this relationship is influenced by individual's need for job autonomy. Furthermore, the thesis tests the effectiveness of self-

leadership intervention programs. Self-leadership will be operationalized by both self-leadership strategies and actual self-leadership behaviour. Healthcare workers from disability care organizations, nursing homes and homecare, and hospitals are included in the studies, since these types of organizations employ most healthcare workers in the Dutch healthcare industry (CBS, 2021). Hence, this thesis contributes both to self-leadership literature and healthcare literature.

Figure 1-1: Conceptual model of thesis



Outline of the thesis

In the first study, chapter 2, it is theorized and tested how job autonomy influences work engagement and general health of healthcare workers, both directly and through mediation of self-leadership (strategies and behaviour).

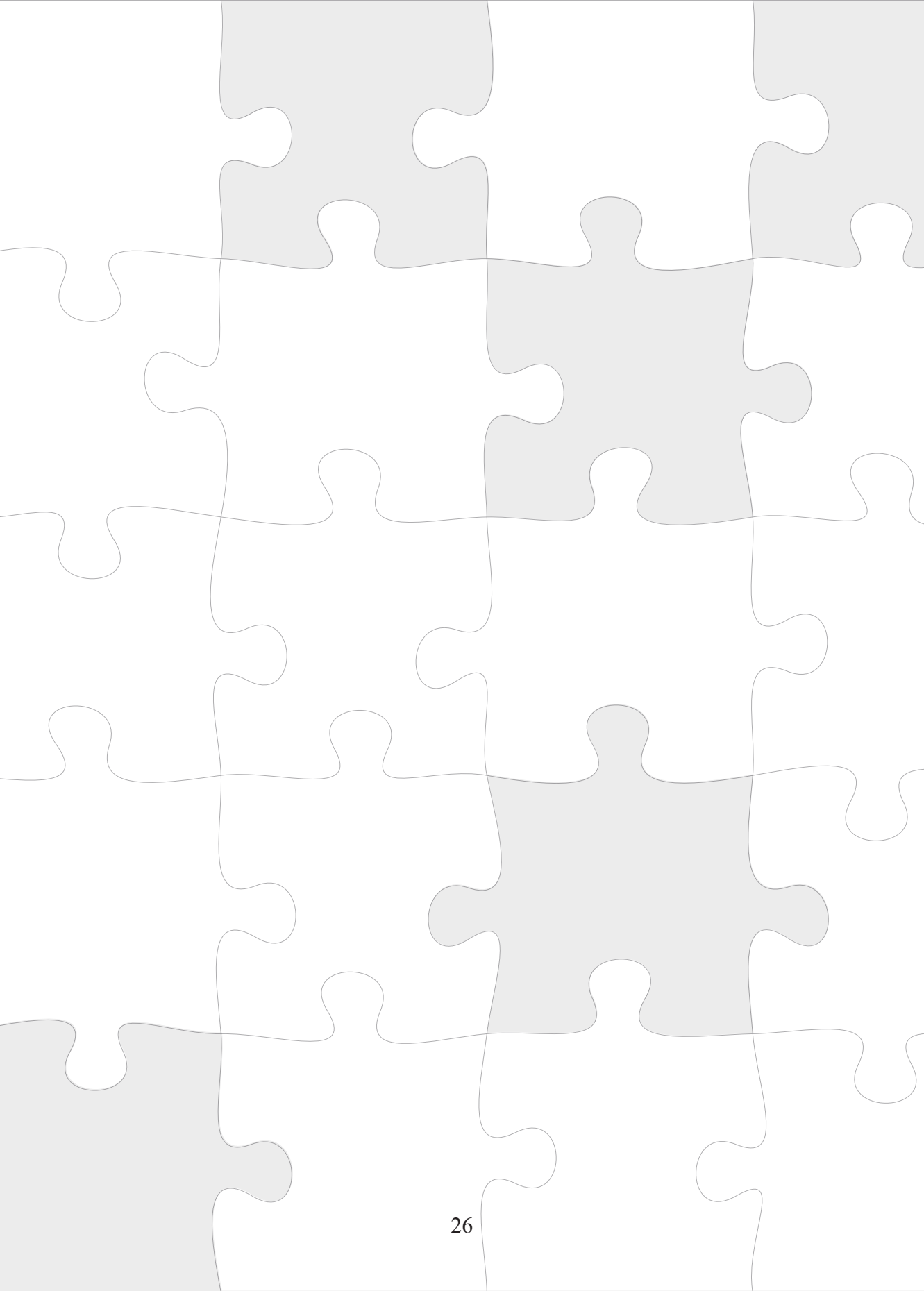
In the second study, chapter 3, the causal and reverse relation between job autonomy and self-leadership (strategies and behaviour) is investigated. Hereby, individuals' need for job autonomy is included, as it is expected that the need for job autonomy moderates the relationship between job autonomy and self-leadership in both directions.

The third study, chapter 4, tests a self-leadership intervention for healthcare professionals. The self-leadership intervention is designed to improve the self-determination of healthcare workers, as well as their vitality. It is hypothesized that the self-leadership intervention will contribute to work engagement, health, and performance of the participants. Moreover, it is assumed that work engagement explains the longitudinal effects of the training for health

and performance.

Chapter 5 describes a qualitative evaluation study of an integrated intervention approach for improving self-leadership at individual and team level with the aim to contribute to work engagement, health, and performance of healthcare workers.

In chapter 6 conclusions of this thesis will be discussed and directions for future research will be suggested.



Chapter 2

Self-leadership among healthcare workers: A mediator for the effects of job autonomy on work engagement and health

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Chapter 2 - Self-leadership among healthcare workers: a mediator for the effects of job autonomy on work engagement and health

Working within healthcare is often valued as meaningful, energizing and engaging as this type of work is expected to generate feelings of meaningfulness and joy throughout a career (De Cooman et al., 2008; Toode, Routasalo & Suominen, 2011). However, healthcare workers around the world also report that their work is demanding, stressful and dissatisfying, resulting in high rates of absenteeism and premature exit from this specific labor market (Hayes et al., 2012; Garrosa, Moreno-Jiménez, Liang & González, 2008; Estryn-Behar, van der Heijden, Fry & Hasselhorn, 2010).

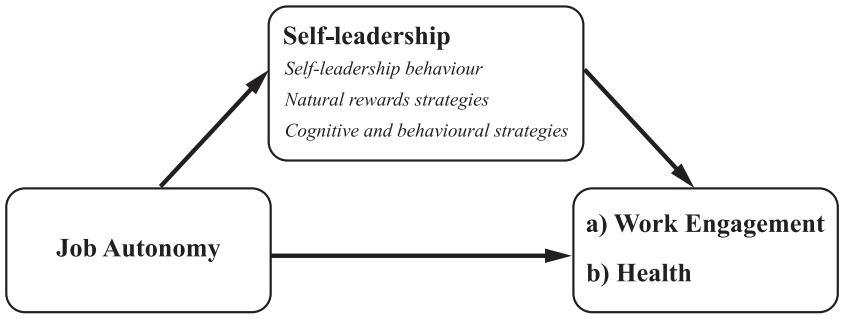
Drawing on the Job Demand Control model (Karasek, 1979), it has been repeatedly suggested that reduced well-being among healthcare workers is a result of the interaction between the high work load and low job control of the jobs within the healthcare industry (e.g., Laschinger, Finegan, Shamian, & Almost, 2001). Therefore, scholars suggest that increasing job autonomy will be one of the job design measures that should be taken in order to improve the motivation and health of healthcare workers (Cicolini, Comparcini, Simonetti, 2014; Widerszal-Bazyl, Radkiewicz, Hasselhorn & Conway, 2003). Job autonomy refers to the amount of freedom and independence within a job, as well as the discretion to the individual in scheduling the work and determining the procedures (Hackman & Oldman, 1976). Self-Determination Theory (SDT, Deci, Olafsen & Ryan, 2017) explains that people have a basic psychological need for autonomy which they want to satisfy. Through satisfaction of this need people are allowed to make their own choices, bring activities in line with their own values and interests, leading to autonomous motivation, vitality, personal growth and general health (Ryan & Deci, 2000; Ryan & Deci, 2008). According to Hall (1968), job autonomy enables dedicated professionals, such as nurses and social workers, to self-regulate their job tasks in a responsible way (Hall, 1968). The basic assumption is that if employees are well educated for their profession they are assumed to be willing and able to autonomously regulate their own job tasks responsibly. They will be able to solve daily problems, and will proactively ask feedback from colleagues if necessary. Therefore, the facilitation of job autonomy is needed for being able to professionally do one's job as healthcare professional (Hall, 1968).

However, despite the growing support for job autonomy as an important job design measure for healthcare professionals, employees seem to differ in the effectiveness of the interaction between job control and job demands (Presseau et al., 2014). If healthcare workers are confronted with high job demands while being facilitated with job autonomy, they need to possess competences for self-control and self-determination (Wagner et al., 2010). In other words, we propose that they need to have competences for self-leadership.

Self-leadership theory assumes that people can autonomously direct and motivate themselves (Manz, 1986; 2015). Self-leadership refers to "a comprehensive self-influence perspective that concerns leading oneself toward performance of naturally motivating tasks as well as managing oneself to do work that must be done but is not naturally motivating" (Manz, 1986, p. 589). It is assumed that self-leadership can play a distinctive role for healthcare professionals working in high strain jobs (Lovelace, Manz & Alves, 2007). Through practicing self-leadership people might be able to positively influence their motivation and health, even if their job autonomy is low (Lovelace et al., 2007; Stewart, Courtight & Manz, 2019). Within the healthcare literature there is growing evidence for the potential benefits of self-leadership for the well-being and performance of healthcare professionals (e.g., Jooste & Cairns, 2014; Kim & Kim, 2019; Kayral & Dülger, 2019). Still, self-leadership theory assumes that an autonomy-supportive work context will be beneficial for the self-leadership of employees, as they will be encouraged to actually take up responsibility for their job, and will increasingly use cognitive and behavioural self-influencing strategies in order to optimize own motivation and performance (Stewart et al., 2019).

In the present study, we draw on Self-Determination Theory (Deci, Olafsen & Ryan, 2017; Ryan & Deci, 2017) to explain why self-leadership is a critical mediator in the relationships between job autonomy and work engagement and health of healthcare professionals. We propose that if healthcare professionals are facilitated with job autonomy this will directly associate with work engagement and health, but also indirectly through the practice of self-leadership (Stewart et al., 2011; Lovelace et al., 2007) (Figure 2-1). The assumptions are tested with a sample of healthcare professionals from two different Dutch organizations: a nursing home and an organization for disability- and psychiatric care.

Figure 2-1: Conceptual model



With this study we aim to contribute to the existing literature in several ways. First, we integrate insights from SDT in the motivational process (Deci et al., 2017; Gagné & Deci, 2005) with self-leadership theory (Stewart et al., 2019; Manz, 2015). SDT proposes that people are inherently intrinsically motivated, which can be thwarted if the basic psychological need for autonomy is not satisfied, for instance by a controlling work context. However, self-leadership theory assumes that people are not merely a result of controlling external regulation, as they can self-influence their motivation and behaviour, including their health (Lovelace et al., 2007). In the present study we test whether self-leadership explains the proposed relationship between job autonomy and work engagement and health respectively.

Second, we contribute to the self-leadership literature as we have separated three different aspects of the self-leadership process: actual self-leadership behaviour, natural rewards strategies, and the use of behavioural and cognitive strategies. Self-leadership studies often focus on one dimension of self-leadership (e.g., Yun, Cox & Sims, 2006; Zeijen, Peeters, Hakanen, 2018) resulting in a limited insight in the self-leadership process. The present study included both the self-influencing strategies (i.e. natural rewards strategies and cognitive and behavioural strategies), and the actual self-leadership behaviour as these might have different relationships with job autonomy, and the outcomes on work engagement and health.

Third, the present study is specifically focused on healthcare professionals. Healthcare literature assumes that both organizational interventions and individual coping strategies (McVicar, 2003) are important considerations to investigate optimal work conditions for these professionals. The present study is

among the first to test the influence of both job autonomy and self-leadership on the work engagement and health of healthcare professionals.

Theoretical background

The role of autonomy in the process to optimal work engagement and health

According to Self Determination Theory (SDT), autonomy plays an important role in the motivational process of employees. Autonomy refers to the regulation by the self (Ryan & Deci, 2006). It involves acting with a sense of volition and having the experience of choice (Gagné & Deci, 2005, p. 333). By referring to the philosopher Dworkin (1988), SDT theorizes that autonomy is represented by the full endorsement of one's actions at the highest level of reflection (Gagné & Deci, 2005).

SDT assumes that people have a basic psychological need for autonomy which they want to satisfy (Deci & Ryan, 2000). The psychological experience of autonomy allows people to freely choose their activities. If motivation is based on autonomy, it is more integrated with personal goals, values and interests, and ultimately based on intrinsic motivation (Gagné & Deci, 2005). Intrinsic motivation is recognized by the implicit interest and enjoyment for a task or activity itself. Intrinsic motivation is fully volitional and is associated with increased levels of vitality, energy, health, and personal growth (Ryan & Deci, 2008; Deci et al., 2017).

In contrast, if activities are not based on autonomous choices, they require external behaviour regulation. The enactment depends upon the perception of the contingency between the behaviour and another desired consequence. For instance, one acts to avoid negative feedback or to receive specific tangible rewards. If motivation is externally regulated it is based on control (Gagné & Deci, 2005; Ryan & Deci, 2000). Activities are done because they must be done, which will trigger a sense of pressure and strain. Therefore, extrinsic or controlled motivation is associated with increased levels of stress and with the impairment of health (Ryan & Deci, 2008; Weinstein & Ryan, 2011; Van den Broeck et al., 2011).

SDT assumes that if the job context is highly controlling, meaning that the level of freedom and independence in a job is low, this can reduce the intrinsic motivation and health since the basic need for autonomy is thwarted

(Deci, Koestner & Ryan, 1999; Gagné & Deci, 2005). If professions such as healthcare workers are not free to responsibly determine their own way of working, their behavioural intentions will be regulated by external control. For instance, if healthcare institutions try to regulate employees' behaviours through an abundance of procedures and feedback systems, employees might be more motivated to achieve these external goals, than to deliver the care they want to deliver to their clients. More specifically, employees might act in order to prevent themselves from negative feedback from the manager, or in order to receive compliments by managers as a way to boost their self-esteem. Work behaviour will tend to be based on what one must do (controlled motivation) instead of what one is willing to do (autonomous motivation). It is assumed that even if nurses are originally intrinsically motivated for a job task, the implementation of external control can easily distract them, leading to an increased strain and reduced intrinsic motivation (Gagné & Deci, 2005). In contrast, if employees can define their own way of working more freely, they are assumed to value the work more for its inherent joy and meaningfulness.

Intrinsic work motivation is theorized to be represented by the concept of work engagement (Salanova & Schaufeli, 2008). Work engagement refers to a positive, fulfilling, work-related state of mind which is characterized by dedication (i.e. strong involvement, enthusiasm, pride and experience of significance), vigor (i.e., high levels of energy and mental resilience), and absorption (full concentration and difficulties with detaching oneself from work) (Schaufeli, Bakker & Salanova, 2006). Work engagement is assumed to be an indicator of the general autonomous and intrinsic motivation at work (Salanova & Schaufeli, 2008; Van Beek, Hu, Schaufeli, Taris & Schreurs, 2012). Where intrinsic motivation can be specifically focused on one job task, work engagement is not specifically focused on a momentary state, object, event, individual or behaviour. It reflects a more persistent and pervasive affective-cognitive state (Schaufeli, Bakker & Salanova, 2006). Engaged workers work because they genuinely want to work (Salanova & Schaufeli, 2008). It is assumed that work engagement predicts positive organizational outcomes, such as customer satisfaction, since engaged workers are willing to walk the extra mile (Bakker et al., 2014).

There is abundant evidence available to support that job autonomy is an important resource for work engagement and health (Bakker, Demerouti & Sanz-Vergel, 2014; Bakker & Demerouti, 2007; Van den Broeck, Vansteenkiste, De Witte & Lens, 2008). Within healthcare job autonomy seems to be a predicting

factor for work engagement and mental and physical health of healthcare workers (Toode, Routasalo & Suominen, 2011). For instance, evidence is found that homecare nurses report significantly more work engagement and lower levels of burnout when facilitated with autonomy (Vander Elst et al., 2016). Furthermore, it was proven that job autonomy is an important resource for nurses working within the hospital setting, as it contributes to their work engagement (Vera, Martínez, Lorente & Chambel, 2016). And Madathil et al. (2014) found in a sample of psychiatric nurses that they report lower levels of burnout if they are facilitated with job autonomy (Madathil, Heck & Schuldberg, 2014).

Therefore, we hypothesize:

> **Hypothesis 1:** Job autonomy is positively associated with a) work engagement and b) general health of healthcare workers.

Self-leadership – the actual autonomous functioning

While SDT has the premise that satisfaction of the need for autonomy plays an important role in work engagement and health (Deci et al., 2017; Ryan & Deci, 2008; Van den Broeck et al., 2008), it does not describe strategies on *how* people can autonomously control the motivational process (Bakker & Van Woerkom, 2017). In fact, SDT assumes that the satisfaction of the need for autonomy will inherently lead to autonomous functioning and intrinsic motivation (Ryan & Deci, 2017).

However, self-leadership theory describes the process of self-influence with the aim to optimize motivation and general performance (Neck & Houghton, 2006). Self-leaders strive to regulate their cognition and behaviour in such a way that work and life become more aligned with personal goals, needs and interests and therefore become more valuable, meaningful and enjoyable (Manz, 1986, 2015). People who take the lead, act on basis of authentic or autonomous choices (Stewart et al., 2017; Manz, 2015; Yun, Cox & Sims, 2006). A self-leader is assumed to autonomously define what to do (standards and objectives), why to do things (strategy) and how to do things (methodology), while being less dependent on contextual control systems (Stewart et al., 2011; Manz, 1986). True self-leadership represents autonomous functioning, as one can fully endorse personal activities and act on a basis of higher order reflections (Manz, 2015).

So as to effectively function in an autonomous way, self-leaders are

assumed to use specific behavioural and cognitive self-influencing strategies with the aim to optimize motivation, well-being, and performance (Manz, 1986; 2015; Neck & Houghton, 2006). These strategies are classified in three basic categories, which are behaviour focused strategies, constructive thought pattern strategies, and natural reward strategies. Behaviour focused strategies (e.g., self-observation, self-goal setting) can be used for self-motivation and self-direction in case that tasks are difficult, boring or otherwise challenging, but still need to be done. They are especially helpful in tasks and goals which are based on extrinsic motivation (Houghton & Neck, 2002; Manz, 1986; Neck & Houghton, 2006). Constructive thought pattern strategies (e.g., mental imagery, positive self-talk, and evaluation of thoughts and assumptions) aim to mentally motivate oneself to achieve job tasks and manage functional patterns of habitual thinking (Neck & Manz, 1992; Neck & Manz, 1996). They generally focus on opportunities rather than threats and can help to reduce negative thoughts about a job task or situation, and to construct more positive and helpful thoughts (Neck & Houghton, 2006). And finally, natural reward strategies refer to both behavioural and cognitive strategies, aimed at fostering positive affect and intrinsic motivation (Neck & Houghton, 2006). Natural rewards can be achieved by actively creating more attractive job conditions. Aside from that, one can also cognitively increase natural rewards, by changing the mental focus from unpleasant aspects within a task to pleasant, naturally rewarding aspects of the task (Neck & Houghton, 2006).

Job autonomy and self-leadership

Several scholars have theorized that self-leadership can be facilitated by highly autonomous job contexts (Stewart et al., 2019; Alves et al., 2006). It is assumed that if employees are given substantial freedom in their jobs, employees will tend to more autonomously define what to do, why to do things and how to do things, while being less dependent on instructions by external leaders (Stewart et al., 2011; Manz, 1986). Moreover, as a result of job autonomy, employees are more dependent on their own cognitive and behavioural self-influencing strategies, as the external directions and cues are missing (Alves et al., 2006; Müller & Niessen, 2019). Indeed, Müller and Niessen (2019) in a study among teleworkers found that on days when employees work from home, they make significantly more use of self-leadership strategies (self-reward, self-goal setting, visualization of successful performance, and evaluation of beliefs and assumptions) which was explained by the perceived job autonomy. Furthermore, some studies found

evidence for the moderating influence of job autonomy on the association between self-leadership and job satisfaction (Roberts & Foti, 1998; Ho & Nesbit, 2014) and performance respectively (Ho & Nesbit, 2014). Moreover, Hornung and Rousseau (2007) found that job autonomy can have long term effects on personal initiative of hospital workers over a time period of 18 months, while the reverse effect measured in the same period was not significant.

The effects of self-leadership on work engagement and health

Self-leadership theory is based on the early work by Deci (1975) as it acknowledges the difference between extrinsic and intrinsic motivation for behavioural outcomes and well-being. True self-leadership is based on autonomous choices and intrinsic motivation (Manz 1986; 2015). However, self-leadership theory recognizes that a job will always have tasks which are not naturally motivating, though simply need to be done. For these type of tasks self-leaders can use the self-management strategies (Manz, 1986; Stewart et al., 2011; 2019). Self-management refers to the self-influencing process aiming to meet externally set standards and objectives. For instance, when an employee needs to follow strict regulations within a job task, this procedure is not autonomously chosen, hence externally determined. Still, the individual can self-manage their motivation and behaviour by using cognitive and behavioural self-influencing strategies. The use of behaviour focused strategies such as self-observation, goal-setting and tangible self-rewards can function as powerful motivators for actual performance. And constructive thought pattern strategies and natural rewards strategies are helpful for making boring, difficult or otherwise challenging job tasks, more naturally rewarding, or at least more meaningful (Neck & Houghton, 2006).

Indeed, evidence is growing for the influence of self-leadership on outcomes related to work engagement. Breevaart et al. (2016) found support for the idea that actual autonomous self-leadership behaviour (i.e., taking responsibility and initiative in an independent way) is associated with work engagement. In a weekly diary study it was found that in weeks where employees show more self-leadership they also report higher rates of work engagement (Breevaart, Bakker, Demerouti & Derks, 2016). Furthermore, Breevaart et al. (2014) found in a daily diary study among maternity nurses that behaviour focused self-leadership strategies (self-goalsetting, self-observation and self-cueing) had positive effects on work engagement through the mediating effect

of the specific job resources "feedback" and "developmental opportunities" (Breevaart, Bakker & Demerouti, 2014). There is also evidence for the influence of cognitive self-leadership strategies on outcomes related to well-being and job satisfaction, as it was confirmed that this relationship is negatively mediated by dysfunctional thought processes (Houghton & Jinkerson, 2007). Furthermore, natural rewards strategies are assumed to play a central role in the motivational process, as they are specifically aimed to improve intrinsic motivation (Furtner, Rauthmann & Sachse, 2015). Furtner, Sachse and Exenberger (2012) investigated with an intervention study among a group of psychology students which self-leadership strategies were perceived as most beneficial for improving their motivation and performance for their studies. It was found that the students most appreciated the natural rewards strategies, as these were helpful to increase their intrinsic motivation during their studies (Furtner, Sachse & Exenberger, 2012). Furthermore, evidence is found that natural rewards strategies are negatively associated with fear of failure (Furtner & Rauthmann, 2011) while these strategies have a unique and strong relationship with job performance (Furtner et al., 2015).

Besides the positive effects of self-leadership on work engagement, there is also some evidence for the positive effects of self-leadership on outcomes related to mental and physical health. Lucke and Furtner (2015) found that training of self-leadership for soldiers contributed to their physical and mental performance. And Unsworth and Mason (2012) found that a self-leadership intervention among healthcare workers helps to reduce work related strain, while self-efficacy and positive affect increased (Unsworth & Mason, 2012).

The mediating role of self-leadership

We assume that self-leadership will mediate the relationship between job autonomy and work engagement and health respectively in three different ways. First, job autonomy will encourage healthcare workers to take up responsibility and act on the basis of their own professional insights (Hall, 1968; Hackman & Oldman, 1976). SDT explains that the experience of freedom within a job will change the motivation from controlled to autonomous motivation (Gagné & Deci, 2005). The reduction of external control, and thus the improvement of job autonomy, will stimulate actual self-leadership behaviour. The actual autonomous functioning will satisfy the basic need for autonomy and therefore contribute to work engagement and health. Second, job autonomy will facilitate employees to determine their own way of working, and to bring this in line with

personal preferences (Deci & Ryan, 2000). The absence of external control allows healthcare workers to complete their tasks in their own favourite way, and also to concentrate their mental focus on the naturally rewarding aspects of the job, rather than on the things that must be done. Since natural rewards strategies aim to improve intrinsic motivation and reduce the focus on external behaviour regulations, we expect an increase in work engagement and health (Ryan & Deci, 2008).

And third, job autonomy enables healthcare workers to take charge of job demands and the achievement of work related goals (Bakker & Demerouti, 2007). The job demands of healthcare workers can sometimes be challenging, difficult or boring, though still need to be done. Experiencing job autonomy will encourage employees to take charge of organising job demands by using behavioural and cognitive self-leadership strategies (Müller & Niessen, 2019). By using these strategies healthcare workers will experience more control in their work, leading to more work engagement and health, even in a highly demanding work environment (Lovelace et al., 2007).

Based on the arguments above, we propose that the facilitation of job autonomy will encourage healthcare professionals to take the lead, which explains the positive effects of job autonomy on work engagement and health.

We hypothesize that:

Hypothesis 2: Self-leadership behaviour mediates the relationship between job autonomy and a) work engagement and b) general health of healthcare workers.

Hypothesis 3: Self-leadership Natural rewards strategies mediate the relationship between job autonomy and a) work engagement and b) general health of healthcare workers.

Hypothesis 4: Self-leadership cognitive and behavioural strategies mediate the relationship between job autonomy and a) work engagement and b) general health of healthcare workers.

Sample and procedure

Data was collected from two samples from organizations within the Dutch Healthcare Industry. The Dutch Healthcare Industry (including the welfare sector) is one of the largest employers in the Netherlands. Almost 1 in 6 working people (more than 1.2 million people) work in healthcare, including hospitals, nursing homes, disability care, psychiatric care, home care, and youth care. The majority (more than 70 percent) of these employees are women. Employees in this sector are, on average, slightly older than in the rest of the Dutch labor market (CBS, 2019).

The first sample (Organization A) was collected within three divisions (N = 722) of an organization for disabled and/or psychiatric clients. The second sample was collected among the full working population of a nursing home *(*N = 377) (Organization B). The first organization uses a management strategy which stimulates self-leadership. Employees work in self-management teams, although managers are still responsible. Within this organization employees are strongly encouraged to take ownership for work related problems and solve these problems independently. The second organization is a more traditionally organized nursing home, where every team has its own manager, and self-leadership is not actively stimulated.

Employees were invited by email to fill in an online questionnaire, while a paper version of the questionnaire was also available. Respondents were ensured of anonymity, while, as an incentive, they could fill in their email address if they appreciated individual feedback on their score. Data collection resulted in a response-rate of 31% (n = 224) in Organization A and 30% (n = 113) in Organization B. Respondents were social workers, nurses and paramedical staff members. Only 1,5% (n = 5) had a management role. In Organization A, 69% (n = 155) of the respondents were female, and in Organization B this percentage was about 86% (n = 93). The uneven distribution of males and females in our sample is in line with the overall distribution of gender across healthcare organizations in the Netherlands. The average age of respondents was similar across both organizations (Organization A: 41.5 and Organization B: 40.1). Finally, 9% of the respondents in Organization A completed primary/secondary school, 36% completed vocational training and 52% completed a college degree.

In organization B, 26% completed primary/secondary school, 54% completed vocational training and 20% completed a college degree. The average age of the merged sample was 41 years (*SD* = 12,8) and 75% was female. And 15% completed primary/secondary school, 42% completed vocational training and 41% completed a college degree.

Measurement instruments

Job autonomy

In line with suggestions by self-leadership theory (Stewart et al., 2011) job autonomy was measured with the nine-item scale for job autonomy developed by Morgeson and Humphrey (2006). This scale captures a broad range of aspects concerning job autonomy, which is within self-leadership theory theorized to be representative for the degree to which employees experience autonomy within their job. Three dimensions of job autonomy are included, which are decision making autonomy, work scheduling autonomy, and work method autonomy. These items refer to decision making autonomy (3 items; e.g., 'The job allows me to make a lot of decisions on my own'), work scheduling autonomy (3 items; e.g., 'The job allows me to decide on the order in which things are done on the job'), and work method autonomy (3 items; e.g., 'The job allows me to make decisions about what methods I use to complete my work'). The full 9-item scale shows sufficient reliability ($\alpha = .95$). Employees responded on a 5-point response scale ranging from strongly disagree (1) to strongly agree (5).

Self-leadership

For getting insight into the self-leadership process we chose three different perspectives on self-leadership. Self-leadership behaviour (SLB) is assumed to represent the actual autonomous behaviour of employees (Yun et al., 2006). And by following the suggestions by Houghton et al. (2012) we used both the Abbreviated self-leadership questionnaire (ASLQ) (Houghton, Dawley, & Diliello, 2012) for getting insight into the cognitive and behavioural strategies (SLS), and the Natural rewards subscale (Houghton & Neck, 2002) as these might separately influence outcomes related to motivation.

Self-leadership behaviour (SLB) was measured by the six-item self-leadership measure as used by Yun et al. (2006). Example items of this scale are 'I solve problems when they pop up, without always getting my supervisor's stamp of approval', 'I take initiatives on my own', and 'I assume responsibilities on my

own'. The reliability of the Self-leadership behaviour-scale was good (α = .90). Employees responded on a 5-point response scale ranging from strongly disagree (1) to strongly agree (5).

Self-leadership natural rewards strategies were measured with the five items Natural self-rewards strategies scale (Houghton & Neck, 2002). Sample items are "I seek out activities in my work that I enjoy doing" and "I focus my thinking on the pleasant rather than the unpleasant aspects of my job activities". Employees responded on a 5-point response scale ranging from strongly disagree (1) to strongly agree (5). The measure showed sufficient reliability (α = .85). Employees responded on a 5-point response scale ranging from strongly disagree (1) to strongly agree (5).

Self-leadership cognitive and behavioural strategies (SLS) were measured by the Abbreviated Self-leadership Questionnaire (ASLQ) (Houghton, Dawley, & Diliello, 2012) which represents three subfactors "behaviour awareness and volition" (goal-setting and self-observation), "task motivation" (mental imagery and self-reward) and "constructive cognition" (positive self-talk and evaluation of beliefs and assumptions). A sample item for behavioural awareness and volition is: 'I establish specific goals for my own performance'. A sample item for task motivation is: 'I visualize myself successfully performing a task before I do it'. A sample item for constructive cognition is : "I try to mentally evaluate the accuracy of my own beliefs about situations I am having problems with". The ASLQ showed good reliability (α = .88). Employees responded on a 5-point response scale ranging from strongly disagree (1) to strongly agree (5).

Work engagement was measured using the nine item Utrecht Work Engagement Scale (Schaufeli, Bakker, & Salanova, 2006) which consists of three subscales: vigor, dedication and absorption. A sample item is: 'At my work, I feel strong and vigorous'. Employees responded on a 7-point response scale ranging from never (1) to always (7). The measure showed good reliability (α = .93).

General health was measured with a single item "How would you rate your general health at this moment" (Hooftman et al., 2017). Respondents answer on a 6-point Likert scale ranging from very bad (1) to very well (6).

Control variables

We controlled for age, gender, organization and educational level, since prior research pointed that these influence self-leadership (Ugurluoglu, Saygili, Ozer & Santas, 2015).

Analyses

We tested our hypotheses using a series of regressions in Mplus (Muthén & Muthén, 2017). First, we tested Hypothesis 1 by regressing the two dependent variables work engagement and health on job autonomy, including our control variables. To test Hypothesis 2, 3 and 4 we first regressed our mediators (self-leadership behaviour, self-leadership cognitive and behavioural strategies, and self-leadership natural rewards strategies) on job autonomy. In the second step, we regressed the dependent variables work engagement and health on the mediators and job autonomy. To assess the significance of the indirect effects proposed on hypothesis 2, 3 and 4, we used bootstrapping with 5000 resamples. Because we are not interested in comparing effect sizes, we report the unstandardized beta-weights.

Results

Measurement model

Before we tested our hypotheses, we examined the discriminant validity of our measurement model. We used a CFA to test different models using different combinations of our main study variables. Because our measures of job autonomy (decision making autonomy, work scheduling autonomy, and work method autonomy), self-leadership strategies (behaviour awareness & volition, task motivation, and constructive cognition), and work engagement (vigor, dedication, and absorption) consist of multiple dimensions, we model these constructs as second order factors with underlying first order factors. First, we tested a model in which all variables (job autonomy, self-leadership behaviour, self-leadership cognitive and behavioural strategies, natural rewards, and work engagement) load on one single factor ($\chi 2$ (665) = 5710.37, $p < .001$, RMSEA = 0.15, CFI = 0.38, TLI = 0.34). Second, we tested a 3-factor model in which all self-leadership-variables load on one factor ($\chi 2$ (662) = 3300.44, $p < .001$, RMSEA = 0.11, CFI = 0.67, TLI = 0.67). Next, we tested a 5-factor model in which all variables load on 5 separate factors with the underlying dimensions of job autonomy, self-leadership strategies, and work engagement loading on second order factors ($\chi 2$ (646) = 1321.83, $p < .001$, RMSEA = 0.056, CFI = 0.92, TLI = 0.91). Finally, we also tested a 11-factor model without second-order factors in which each subdimension was considered a separate construct ($\chi 2$ (610) = 1227.18, $p < .001$,

RMSEA = 0.055, CFI = 0.92, TLI = 0.91). The 11-factor model shows a better fit compared to the 5-factor model with second order factors ($\Delta \chi 2=95(36)$, p <.001). However, we chose the more parsimonious 5-factor model when testing the hypotheses because the second order constructs each show a high level of reliability, and because the other fit indices are highly equal across both models.

Hypotheses testing

Table 2-1 shows the means, standard deviations, and correlations of the variables used in this study. Table 2-2 shows the results of the regressions used to test the hypotheses. Hypothesis 1 predicted that job autonomy is positively associated with a) work engagement and b) general health of healthcare workers. The results show that job autonomy is positively associated with both work engagement (B = .39(.09), p < .001) and general health (B = .20(.09), p < .05), which confirms Hypothesis 1.

Table 2-1: Correlations, Means, and SDs of main variables (n=337)

		Mean	*SD*	1	2	3	4	5	6	7	8	9
1	Work engagement	3.87	1.06	1								
2	General Health	4.16	1.13	0.25***	1							
3	Job autonomy	3.29	0.75	0.26***	0.16**	1						
4	SLB	3.89	0.67	0.19**	0.12*	0.44***	1					
5	NR	3.67	0.59	0.54***	0.28***	0.36***	0.33***	1				
6	SLS	3.21	0.64	0.32***	0.04	0.21***	0.29***	0.41***	1			
7	Organisation[a]	0.34	0.47	−0.03	0.02	−0.24***	−0.21***	−0.06	−0.12*	1		
8	Age	40.9	12.8	0.15*	−0.08	0.09	0.06	0.13*	0.05	−0.05	1	
9	Gender[b]	0.25	0.43	−0.09	0.03	0.04	−0.09	−0.05	−0.09	−0.18**	0.16**	1
10	Educational level[c]	6.90	1.66	−0.01	0.14**	0.15**	0.23***	0.02	0.07	−0.27***	−0.19**	0.12*

** p<.05; ** p<.01; *** p<.001; SLB=Self-leadership behaviour; NR=Natural rewards strategies; SLS=Self-leadership cognitive and behavioural strategies; [a]0=Organization A; [b]0=female; [c]1-5= primary/secondary school, 6-7=, vocational training, 8-9=college degree.*

Hypothesis 2 predicts that self-leadership behaviour mediates the relationship between job autonomy and a) work engagement and b) general health.

Table 2-2: Regressions (n=337)

	SLB	NR	SLS	Work engagement		Health	
				Step 1	Step 2	Step 1	Step 2
Intercept	2.46 (0.35)***	2.52 (0.31)***	2.60 (0.30)***	2.48 (0.64)***	2.49 (0.64)***	2.70 (0.55)***	1.77 (0.68)**
Control variables							
Organisation[a]	−0.10 (0.09)	0.06 (0.08)	−0.11 (0.08)	0.01 (0.02)	0.01 (0.13)	0.12 (0.14)	0.07 (0.13)
Age	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.01 (0.00)*	0.01 (0.01)	0.00 (0.01)	−0.01 (0.01)
Gender[b]	−0.21 (0.08)*	−0.04 (0.08)	−0.14 (0.08)†	−0.23 (0.16)	−0.17 (0.13)	0.08 (0.14)	0.09 (0.14)
Educational level[c]	0.09 (0.03)**	−0.01 (0.03)	0.03 (0.02)	−0.02 (0.05)	−0.02 (0.04)	0.09 (0.04)*	0.09 (0.04)*
Independent variables							
Job autonomy	0.32 (0.06)***	0.30 (0.05)***	0.14 (0.05)**	0.39 (0.09)***	0.09 (0.09)	0.20 (0.09)*	0.04 (0.09)
SLB					−0.02 (0.12)		0.10 (0.11)
NR					0.86 (0.11)***		0.56 (0.12)***
SLS					0.27 (0.12)*		−0.27 (0.12)*
R^2	0.25	0.16	0.08	0.10	0.32	0.05	0.16

*†p<0.10, * p<0.05; ** p<0.01; *** p<0.001; SLB=Self-leadership behaviour; NR=Natural rewards strategies; SLS=Self-leadership cognitive and behavioural strategies; Step 1=direct effect; Step 2=mediation effect; [a]0=Organization A; [b]0=female; [c]1-5= primary/secondary school, 6-7= vocational training, 8-9=college degree.*

The results in Table 2-2 show that job autonomy is positively related to self-leadership behaviour (B = .32(.06), p < .001), but self-leadership behaviour is not associated with work engagement (B = -.02(.12), p = ns) and general health (B = .10(.11), p = ns), which rejects Hypothesis 2. Hypothesis 3 proposes that natural rewards strategies mediate between job autonomy and work engagement and health, respectively. We found that job autonomy is positively related to natural rewards (B = .30(.05), p < .001), and natural rewards is also associated with work engagement (B = .86(.11), p < .001) and general health (B = .56(.12), p < .001). An analysis of the indirect effect shows that the associations between job autonomy and work engagement (B = .26(.05), p < .001, CI95%=.17;.37) and general health (B = .17(.05), p < .001, CI95% = .09;.28) via natural rewards is significant, which accepts Hypothesis 3. Finally, Hypothesis 4 proposed that cognitive and behavioural self-leadership strategies will mediate between job autonomy and work engagement and health, respectively. The results in Table 2-2 show that job autonomy is positively related to self-leadership strategies (B = .14(.05), p < .01), and self-leadership strategies is also positively associated with work engagement (B = .27(.12), p < .05) and negatively with general health (B = -.27(.12), p < .05). An analysis of the indirect effect of cognitive and behavioural self-leadership strategies shows that the associations between job autonomy and work engagement (B = .04(.02), p < .10, CI95% = .01;.09) and general health (B = -.04(.02), p < .10, CI 95% = .-.09; -.01) are marginally significant with small effect sizes. To summarize, the results from testing the mediating role of self-leadership behaviour (H2), self-leadership natural rewards strategies (H3), and self-leadership cognitive and behavioural strategies (H4), we conclude that only hypothesis 3 was fully confirmed. Furthermore, there is marginal support for hypothesis 4 regarding the mediation effect of behaviour and cognitive strategies, although the effect size is small.

Discussion

Job autonomy is broadly recognized to be one of the important job design measures for improving the willingness and ability of healthcare professionals to continue working within their industry (Cicolini et al., 2014). Building on the Job Demand Control model by Karasek (1979) it is assumed that if healthcare workers are facilitated with more autonomy in their work, they will be able to handle the high job demands better (Laschinger et al., 2001). According to SDT this might be

explained by the facilitation of autonomy in the social context, as this is assumed to satisfy the basic psychological need for autonomy (Van den Broeck et al., 2008; Deci et al., 2017). Indeed, the present study confirmed that job autonomy is positively associated with work engagement and general health. However, we also found that self-leadership (Stewart et al., 2011) explained partly the relationship between job autonomy and work engagement and health respectively. Specifically, the use of natural rewards strategies fully mediated both relationships. Besides, the mediating effect of cognitive and behavioural self-influencing strategies was marginally significant, though with a small effect size. Surprisingly, the cognitive and behavioural strategies were positively associated with work engagement, but negatively with general health. Actual autonomous self-leadership behaviour had no role in the relationship between job autonomy and work engagement and health.

Implications for theory

Job autonomy, self-leadership, work engagement and health

SDT assumes that the facilitation of autonomy in the context will allow employees to fully endorse what they do, and therefore positively contributes to the motivation and health. Interestingly, in the present study autonomous self-leadership behaviour, which explicitly represents the actual autonomous work behaviour, did not explain the relationship between job autonomy and work engagement and health. On the basis of the present study we propose that the theorized impact of job autonomy on the motivational process (Gagné & Deci, 2005) requires competences in self-leadership. Specifically, natural rewards strategies, and marginally, cognitive and behavioural strategies explain the relationship between job autonomy and work engagement and health respectively.

However, many job types, such as those of nurses and social workers, are not facilitated with full autonomy as there are numerous procedures and instructions which need to be followed. Therefore, the original intrinsic motivation can easily be thwarted by job tasks which simply must be done, resulting in controlled regulations for motivation (Gagné & Deci, 2005). Self-leadership theory assumes that people can still self-influence their motivation and performance (Stewart et al., 2019). Indeed, the present study showed that people can influence their own motivation and health by using natural rewards strategies. Natural rewards strategies represent changing both the mental focus towards

positive naturally rewarding aspects of a job, and also the behaviours with the aim to make a job more intrinsically motivating. By practicing natural rewards strategies healthcare professionals might alter the motivation from what must be done, to what one is willing to do. Moreover, it was confirmed that behavioural and cognitive strategies influence work engagement, although they also have a negative association with general health. This trend is in line with Zeijen et al. (2018) who found that specifically goal-setting and self-punishment thoughts are associated with workaholism, while self-observation and goal-setting were also positively associated with work engagement. Workaholism reflects the tendency to work excessively hard and being obsessed with work (Schaufeli, Taris & Van Rhenen, 2008). Within SDT it is found that workaholism has a negative influence on health, which is explained by the controlled regulation of motivation (Van den Broeck et al., 2011). SDT assumes that goals are only beneficial for intrinsic motivation if these are aligned with personal values (Deci & Ryan, 2000; Sheldon & Elliot, 1999). It is proposed that goal-striving only has long term and positive effects on well-being if the goals are in concordance with personal values and needs. While self-leadership theory also theorizes that behaviour intentions which are based on autonomy, will give high quality outcomes related to general functioning (Manz, 2015), it does not explicate goal-setting strategies into intrinsic and extrinsic goals. By referring to Latham and Locke (1991) as well as to Bandura (1977) self-leadership theory assumes that goal-setting in general will contribute to self-motivation for the actual goal-achievement (Neck & Houghton, 2006). However, on the basis of the present study and on insights by SDT (Ryan & Deci, 2017) we propose to make a difference between extrinsic and intrinsic regulated self-leadership strategies. If the self-leadership strategies are fully endorsed by the individual, they will be based on autonomy. As a result, they might contribute to both work engagement and health. However, if behavioural or cognitive strategies are based on controlled regulations for behaviour, this might negatively influence the health of the employees (Weinstein & Ryan, 2011). For instance, Zeijen et al. (2018) included self-punishment within the study. Self-punishment thoughts are highly critical and self-controlling and therefore are assumed to reflect introjected motivation as theorized by SDT (Gagné & Deci, 2005). Introjected regulation refers to intrapersonal processes with the aim to control personal behaviour in order to build better self-esteem. Self-leadership scholars already argued that these type of strategies can be detrimental for motivation and performance and therefore should be avoided (Neck & Houghton,

2006). In contrast, the cognitive natural rewards strategies seem to be better strategies as the present study confirmed their positive impact on both work engagement and health.

Notably, both SDT (Gagné & Deci, 2005) and self-leadership theory (Stewart et al., 2011) use a continuum for explaining the regulation of motivation. SDT explains the motivational process along a continuum from controlled to autonomously regulated motivation. Self-leadership theory explains the self-influencing process from low control to high control over the What, Why, and How of the job. We propose that the self-leadership continuum might be extended by more explicitly using insights from SDT. Future research should include the full range motivational continuum as explained by SDT (Gagné & Deci, 2005) and subsequently test how the different self-leadership strategies can influence the motivational process in such a way that motivation will become more autonomously regulated, while controlled motivation reduces.

The contribution of self-leadership for healthcare workers

The present study found evidence for the relevance of self-leadership regarding work engagement and health of healthcare professionals. While the healthcare literature assumes that increasing job autonomy is important for the well-being of the employees, the present study showed that individual's self-leadership should be taken into account. If healthcare workers are able to take the lead they will be able to make better use of the job autonomy. Whereas the two organizations within our sample differed in their management strategy concerning the level of autonomy, this did not influence our results. This is in line with findings by Presseau et al. (2014). It seems that specifically the individual's self-leadership explains the outcomes of job autonomy on work engagement and health. We propose that if healthcare workers experience job autonomy, they still might have the idea that they do their activities on a basis of what must be done. Kubicek, Korunka and Tement (2014) even found that too much job autonomy can have detrimental effects on the health and work engagement of healthcare workers. Probably, the increased responsibility which comes along with the increased job autonomy might feed the controlled motivation, as one is insecure concerning the actual autonomous functioning. However, the self-leadership literature assumes that through self-leadership people will increase the self-efficacy concerning their performance (Prussia, Anderson & Manz, 1998) and moreover, self-efficacy will buffer the negative effects of high-strain work environments (Lovelace et al.,

2007; Unsworth & Mason, 2012). If we follow that line, in order to increase the job autonomy of healthcare professionals, attention needs to be paid to the training of self-leadership. Especially if they are not sufficiently able to take the lead.

Limitations

This study has several strengths, including the single focus on healthcare organizations, and the multidimensional measurement of self-leadership. However, this study also has a number of limitations. First, causality cannot be unequivocally determined given the cross-sectional nature of the data. However, theoretical justification and logical arguments have been provided in support of the proposed directionality of the relationships examined. Nevertheless, it is also theorized that engaged employees are more proactive (Bakker et al., 2014), which might result in more initiative concerning the achievement of personal goals and the satisfaction of psychological needs. The job crafting literature (e.g., Demerouti, Bakker, & Halbesleben, 2015) has already shown that people can also proactively organize more job resources such as job autonomy for themselves, which consequently will function as nutriment for the work engagement. Furthermore, the Broaden-and-Build theory proposes a positive gain spiral between thought, actions and emotions (Fredrickson, 2001). If self-leadership leads to positive affect this will function as positive feedback and as such further encourage the use of self-leadership. This might also explain the high correlation between natural rewards strategies and the work engagement in our study. The actual strategies might directly result in work engagement, which in turn will lead to even more use of natural rewards strategies. Future research should test our hypotheses and potential reciprocal relationships by using longitudinal designs, or by using interventions that aim at increasing job autonomy and/or self-leadership.

Second, we assessed health using a self-reported single item measure. Although this measure is well established and used in a broad range of studies, future research should aim to assess health on several dimensions, or use more objective measures such as sickness or absenteeism.

A third limitation is that we did not include other job characteristics. For example, it is expected that job autonomy and self-leadership both will be specifically worthwhile in the condition of high job demands (Lovelace et al., 2007). In other words, employees are less prone to use self-leadership as they might be less challenged to achieve their work related goals. Future research should include job demands such as workload as moderators to the association

between job autonomy and self-leadership to further understand the conditions under which self-leadership will mediate the associations between job autonomy and employee outcomes.

Fourth, the response rate was with resp. 30% and 31% rather low, presumably caused by the survey participation being voluntary which might have led to non-response bias (Groves & Peytcheva, 2008). Smith (2009) was able to test this assumption with a double sample among nurses, and found that, except for some demographic characteristics (sex, race, and national origin), there were no significant differences in the evaluations concerning their job satisfaction and burnout. Moreover, Rindfuss et al. (2015) found that a low response rate might bias univariate relationships on a basis of differences in demographics, attitudes, and behaviours with the non-respondents, but not multivariate relationships (Rindfuss, Choe, Tsuya et al., 2015). Therefore, we assume that the potential bias caused by a low response rate in our sample will be insignificant.

And lastly, the present research was focused on self-leadership, and specifically on self-leadership behaviour, cognitive and behavioural self-leadership strategies and the natural rewards strategies. Although these are theorized to be the basic constructs for self-leadership (Neck & Houghton, 2006) it is recognized that also other self-regulation strategies might be relevant to include in self-leadership research (Manz, 2015). For instance, Weigl et al., (2014) investigated the mediating role of the action self-regulation strategies as theorized by the Selection Optimization Compensation Model (SOC, Moghimi, Zacher, Scheibe & Van Yperen, 2017). It was confirmed that the relation between job autonomy and work engagement is mediated by the SOC strategies (Weigl, Müller, Hornung et al., 2014). This might be explained by the autonomous character of the goal selection. Furthermore, both within SDT and self-leadership theory the role of mindfulness is considered as a worthwhile cognitive strategy (e.g., Weinstein & Ryan, 2011; Sampl, Maran & Furtner, 2017). Weinstein and Ryan (2011) assume that mindfulness encourages the autonomous motivation and facilitates stress resilience. Therefore, we suggest to extend the research focus on other self-regulating strategies, in which we recommend to specifically consider the role of autonomous motivation in the self-regulating process.

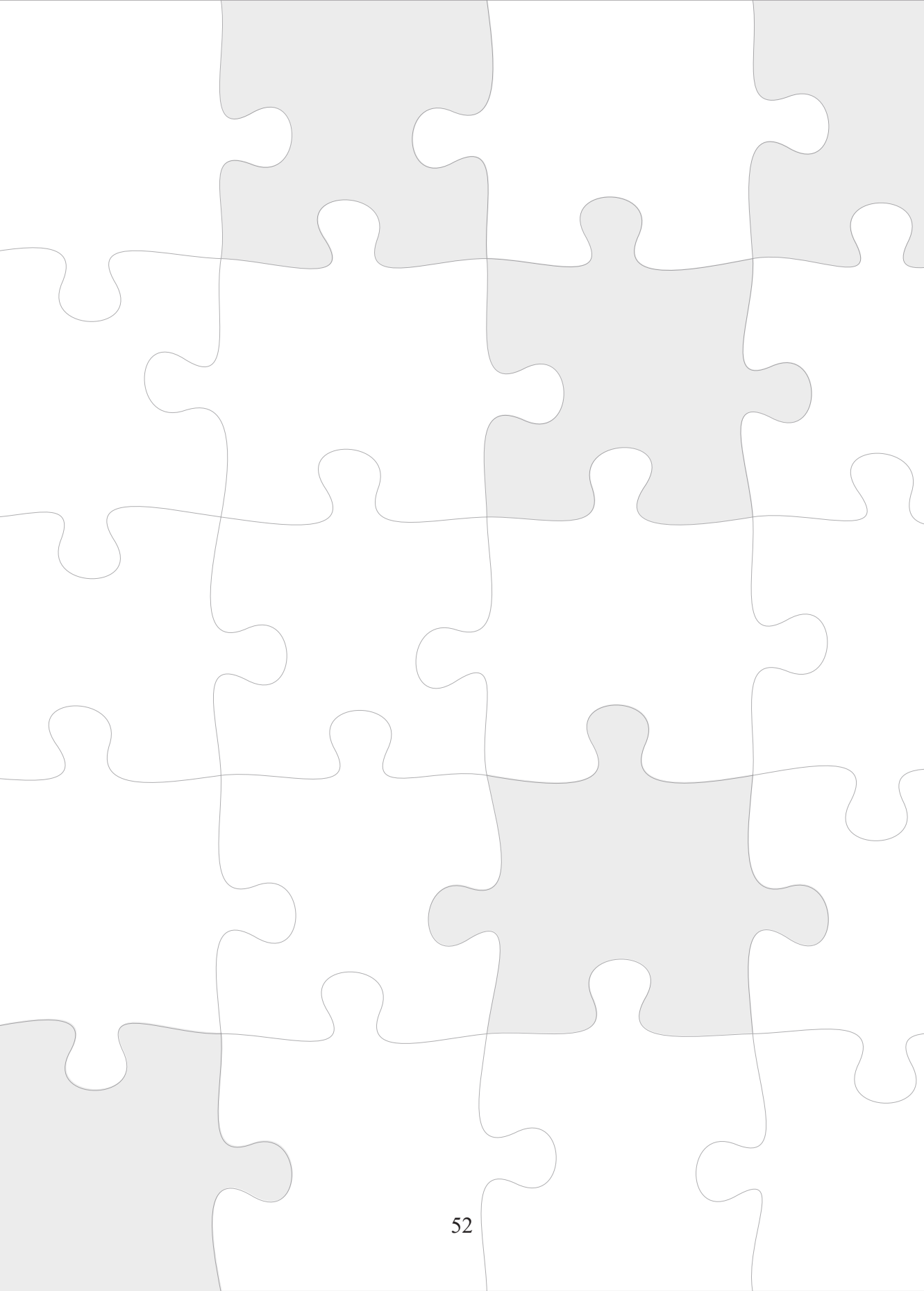
Implications for practice

The workload in the healthcare sector is high and this leads to high rates of absenteeism, unfulfilled vacancies and voluntary turnover with the effect of

a further increasing workload. This has put the healthcare sector in a vicious circle of problems. Only when healthcare institutions manage to keep the back door closed and retain their staff for healthcare can the vicious circle be broken. Current research showed that there is a way for healthcare institutions to close the back door and keep their staff happy and healthy. This study found that when employees experience job autonomy and use naturally rewarding self-leadership strategies, they increase their work engagement and health. In the end, the patients will benefit from effective self-leading healthcare professionals. Engaged and healthy employees will do all they can to deliver the best possible service to their clients. Kayral and Dülger (2019) already found that if healthcare professionals are capable to take the lead, this is associated with positive outcomes related to organizational goals, such as patient safety and efficiency. Besides, healthcare workers who are able to take the lead might inspire their clients to take the lead in their health as well. Recent research already showed that patients, such as those recovering from cancer surgery, benefit from self-leadership skills for continuing their rehabilitation exercises (Lee, Park & Choi, 2020).

We therefore advise healthcare organizations to give more job autonomy to their employees and to encourage employees to work in an autonomous and self-responsible way and use natural rewards strategies. Natural rewards strategies stand for the strategy to surround yourself with objects and people that uncover your own desirable behaviours. It is specifically this ability for natural rewards strategies that will help healthcare workers to self-influence both their work engagement and health.

Employers can learn from the results of our study that both job design measures, initiated by the employer, and self-influencing strategies of the employees, can improve health and work engagement. Although, practicing self-leadership is a specifically personal resource to self-influence the motivation and ability to work, employers can help to improve their skills for self-leadership by offering a self-leadership training. It appears that healthcare professionals can develop in self-leadership and that training self-leadership contributes to work engagement and performance (Van Dorssen-Boog, Van Vuuren, De Jong & Veld, 2021) and to proactive stress coping and increasing self-efficacy (Unsworth & Mason, 2012).



Chapter 3

Healthcare workers' autonomy: Testing the reciprocal relationship between job autonomy and self-leadership and moderating role of need for job autonomy

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Chapter 3 - Healthcare workers' autonomy: Testing the reciprocal relationship between job autonomy and self-leadership and moderating role of need for job autonomy

Introduction

For years, healthcare organizations and policy makers are challenged to find ways to improve the job satisfaction and health of healthcare workers (De Lange, Løvseth, Christensen & Teoh, 2020). It is broadly acknowledged that one of the important job design measures would be increasing job autonomy (Ciccolini, Comparcini & Simonetti, 2014; Laschinger, Finegan, Shamian, & Wilk, 2004; Broetje, Jenny & Bauer, 2020). Job autonomy generally refers to the degree to which the job provides substantial freedom, independence and discretion to the individual in how to carry out one's job (Hackman & Oldman, 1976). Research supports the idea that job autonomy contributes to the well-being of healthcare workers (Cicolini et al., 2014; Widerszal-Bazyl, Radkiewicz, Hasselhorn & Conway, 2003; Toode, Routasalo & Suominen, 2011). Therefore, contemporary healthcare organizations increasingly seek to improve the level of job autonomy for their healthcare workers (e.g., Larsen, Kristensen & Søgaard, 2018). However, scholars also suggests that not just the job autonomy as characteristic of the job design, but also individual characteristics related to self-determination and autonomous functioning need to be taken into account (Laschinger et al., 2004; Wagner et al., 2010). Lovelace, Manz & Alves (2007) proposed that the "control" in the Job Demand Control model of Karasek (1978) may be explained as the utilization of one's competences for self-leadership. According to self-leadership theory employees are not just passive responders of their work context, as they can proactively take responsibility for their own motivation and performance (Manz, 1986). Employees can motivate and direct themselves, they can observe their own functioning, and make their own decisions concerning their work related problems during the day (Neck & Houghton, 2006; Manz, 1986; 2015).

While originally self-leadership is introduced as a substitute for external leadership (Manz & Sims, 1980; Manz, 1986), self-leadership scholars assume that specifically higher levels of job autonomy will provoke self-leadership (Alves

et al., 2006; Stewart, Courtright & Manz, 2011). Job autonomy will stimulate employees to motivate and direct themselves as a way to actually achieve their working goals (Müller & Niessen, 2019; Alves et al., 2006). Therefore, we argue that increasing the job autonomy of healthcare workers will positively affect their self-leadership, and subsequent outcomes related to well-being and performance. Indeed, there is some evidence that the effects of job autonomy on the work engagement and health of healthcare workers can be explained by their self-leadership (Van Dorssen-Boog, De Jong, Veld & Van Vuuren, 2020).

However, the Person Environment fit theory (PE fit theory) (Kristof-Brown, Zimmerman, & Johnson, 2005; Caplan, 1987) points out that presumed relationships between job design, attitudes and behaviour are mostly more complex. Employees are not just reactively responding to their work context, as they can be active designers of their job (Frese & Fay, 2001; Wrzesniewski & Dutton, 2001). Since, job autonomy is theorized to be a desirable job resource for improving their well-being (Bakker & Demerouti, 2007), people may attempt to increase their job autonomy (Tims, Bakker & Derks, 2013). Therefore, the first aim of this study is to test this reciprocal relationship between job autonomy and self-leadership.

Additionally, Self-Determination Theory explains that although people have a need for autonomy, it is not the amount of autonomy, but the satisfaction of ones need for autonomy that leads to intrinsic motivation and health (Van den Broeck, Vansteenkiste, De Witte & Lens, 2008). Due to multiple reasons such as formal professional responsibility (Iliopoulou & While, 2010), learning experiences concerning autonomous functioning in childhood (Schüler, Sheldon, Prentice & Halusic, 2016) or individuals' need for structure (Roberts & Foti, 1998), people can differ in their need for job autonomy. Hence, the effects of job autonomy on one's self-leadership may be moderated by the degree to which one actually has a need for job autonomy. And vice versa, we propose that also the effects of self-leadership on one's job autonomy is influenced by individuals' need for job autonomy. Therefore the second aim of this article is to investigate the moderating role of need for job autonomy on the causal and reverse relationship between job autonomy and self-leadership.

The contributions of this article to the existing self-leadership and healthcare literature are at least threefold. First, in contrast to prior studies which only assume a causal relationship between job autonomy and self-leadership (e.g., Van Dorssen-Boog et al., 2020; Ho & Nesbit, 2014; Müller & Niessen,

2019) we hypothesize and test the reciprocity between these by applying a cross-lagged research design. Moreover, the study includes the moderating role of need for job autonomy, as this may influence the reciprocal relationship between job autonomy and self-leadership. Second, in contrast to prior self-leadership studies, this study includes both the measurement of self-leadership strategies and self-leadership behaviour. It is theorized that both give insight in self-leadership, though from different perspectives. Self-leadership strategies refer to normative self-influencing strategies which explain how one should ideally influence own thoughts and behaviour. Self-leadership behaviour represents the actual self-responsible behaviour at work, including taking initiative and solving problems autonomously. If research focuses on either strategies or behaviour, this may lead to misinterpretation of study results, as the first is a prescriptive and the second a descriptive research approach (Elqayam & Evans, 2011; Van Dorssen-Boog et al., 2020). Hence, in the present study, both perspectives are included in order to enrich our understanding of self-leadership on basis of idealism and realism. Third, this study contributes to the debate in the healthcare literature that healthcare workers need job autonomy in their jobs for optimal functioning. By drawing on PE fit theory (Kristof-Brown, Zimmerman, & Johnson, 2005; Caplan, 1987), the present study theorizes that not every healthcare worker will equally benefit from job autonomy, as they may differ in their self-leadership competences as well as in their need for job autonomy. Moreover, we propose that healthcare workers may also be able to self-influence the level of their job autonomy. As such the present study investigates three different perspectives on the autonomy of healthcare workers: job autonomy as perception of the job design, self-leadership as referring to one's competence for autonomous functioning, and need for job autonomy as one's actual need for autonomy in one's job. Results will contribute to the knowledge and insights for building healthy healthcare organizations in which people are willing and able to work.

Theoretical background

Job autonomy

Job autonomy generally refers to a characteristic of the job design, which is based on top down decisions within an organization concerning the formal decision latitude of employees. Job autonomy refers to the opportunity to autonomously

plan job tasks (work scheduling autonomy), to freely decide on how to carry out given job tasks (work method autonomy), as well as the opportunity to freely choose which goals and which tasks within a job are important to do (criteria autonomy) (Breaugh, 1999). According to the job design literature, jobs need to be enriched with autonomy as the self-responsibility which comes along with the job autonomy is assumed to contribute to the motivation to perform well (Hackman & Oldman, 1976). Research suggests that job autonomy stimulates personal initiative at work (Frese, Garst & Fay, 2007). The increased responsibility which comes along with job autonomy, is assumed to be motivational for proactive work behaviour in order to achieve work goals (Bakker & Demerouti, 2007). Moreover, job autonomy is assumed to enable employees to deal with high work load (Karasek, 1979; Bakker & Demerouti, 2007). Through job autonomy people can organize their work in such a way that it suits to their own preferences, and therefore buffers the potential negative impact of high work load on health (Petrou, Demerouti, Peeters, Schaufeli & Hetland, 2012; Van Yperen, Wörtler & Jonge, 2016). Furthermore, job autonomy is assumed to be one of the basic nutriments for intrinsic work motivation as people have a basic need for autonomy which they want to have satisfied (Van den Broeck et al., 2008). The perception of job autonomy will facilitate the process of self-determination and intrinsic motivation (Van den Broeck et al., 2008; Gagné & Deci, 2005). In contrast, if people perceive external control instead of autonomy in their work context, motivation will be more based on what one must do, instead of willing to do, which can easily cause strain and health impairment (Van den Broeck et al., 2008).

Self-leadership

Whereas job autonomy refers to characteristics of the job design, self-leadership refers to individuals ability to autonomously motivate and direct oneself to optimal functioning (Neck & Houghton, 2006; Manz, 2015; 1986). Self-leadership theory proposes that employees' performance is not merely a result of the external directions and motivational pep talks by managers or colleagues, as people have the potential to motivate and direct themselves (Manz, 1986; Stewart et al., 2011). For this, self-leadership theory prescribes a broad set of cognitive and behavioural self-influencing strategies, which are based on insights from classical motivation and self-regulation theories such as Self-Determination theory (Deci & Ryan, 2000), self-regulation theory and self-efficacy theory (Carver & Scheier, 1981; Bandura, 1977), and goal-setting theory (Latham &

Locke, 1991). Behavioural focused strategies are especially helpful, when a job task is boring, difficult or otherwise challenging, though still needs to be done. These type of strategies include self-observation, self-goal setting, self-cueing, and self-reward. Constructive thought pattern strategies aim to manage functional patterns of habitual thinking concerning own performance. Through positive self-talk, evaluation of thoughts and assumptions and mental imagery, people can self-influence their thoughts such that these give an optimistic perspective on their ability to achieve successful performance, even in difficult, challenging situations (Neck & Manz, 1996). Natural reward strategies aim to increase intrinsic motivation for a job (Manz, 1986). One can increase natural rewards by actively creating more attractive job tasks or job conditions. Natural reward strategies also refer to changing the mental focus from unpleasant to pleasant aspects of the job. It is assumed that natural reward strategies play an important role in the process to optimal performance (Neck & Houghton, 2006; Manz, 1986).

Despite the practical applicability of self-leadership theory, which prescribes how people should ideally lead themselves, this normative character may have its blind spots which may lead to a false interpretation of results (Van Dorssen-Boog et al., 2020). Normative theories are focused on idealized behaviour, thus how one "should" behave, whereas descriptive research is focused on how the construct actually functions in practice (Elqayam & Evans, 2011). With descriptive science the researcher "simply defines, delineates and documents its findings, leaving them free of value judgement" (Linley, Joseph, Harrington, & Wood, 2006; p. 13).

If people take the lead in their job, they may take responsibility for their own job tasks, take initiative in daily problem solving, and function perfectly well in an autonomous way, while not using the full range of self-leadership strategies. They may lead themselves on basis of less conscious self-influencing strategies. For instance, Self-Determination Theory assumes that people are inherently intrinsic motivated and proactive, under the condition that their basic psychological needs for autonomy, relatedness and competence are satisfied (Deci & Ryan, 2000). Therefore, if employees feel facilitated in their autonomy, feel competent for their job tasks, and experience meaningful social relationships within their jobs, they are assumed to be autonomously motivated and to act proactively in their jobs (Deci, Olafsen & Ryan, 2017). Furthermore, social-learning theory brings another perspective on the development of autonomous functioning, as it assumes that people develop self-efficacy and self-control also

in their social environment by observing and modeling others, and by getting feedback from others on own behaviour (Bandura, 1997). These social learning processes may be conscious and based on agency, but they are also assumed to take place in a more unconscious, natural way, which can be exemplified by how children develop their behaviour through social learning processes (Bandura, 1986). On basis of SDT and social learning theory we therefore assume that self-leadership is not only reflected by the conscious self-leadership strategies per se, but also by other influences such as social learning experiences and naturally developed thought and behaviour processes. Therefore we assume that for getting insight in self-leadership we also need to focus on the actual autonomous behaviour of employees. We may find that people act autonomously, while not using self-leadership strategies.

In the early scale-development for measuring self-leadership, Cox (1993) proposed a subscale with a meta-dimension of self-leadership, based on self-responsibility, initiative and autonomous problem solving behaviour. Presumably for the practical advantages of a short self-leadership scale, a few researchers used this subscale in their studies as a way to get an indication of self-leadership (Yun, Cox & Sims, 2006; Breevaart, Bakker, Demerouti & Derks, 2016). We agree that this scale represents self-leadership, since self-leaders are assumed to act highly self-responsible in their own jobs, and also tend to determine their own way of working, and take initiative to achieve their goals (Stewart et al., 2011; Manz, 2015). However, we also propose that for better understanding of the construct of self-leadership, it is necessary to include both prescribed self-leadership strategies and actual self-leadership behaviour in research. Therefore in the present study, we focus on both the use of self-leadership strategies, and on the actual self-leadership behaviour, as this will give better insight in the self-leadership process as it actually functions in practice (Van Dorssen-Boog et al., 2020).

Job autonomy as predictor for self-leadership in healthcare

If people experience job autonomy in their jobs, meaning that they experience freedom, independence and discretion in how to carry out one's job (Hackman & Oldham, 1976), they are assumed to show more self-leadership (Stewart et al., 2011; Alves et al., 2006; Müller & Niessen, 2019). Due to the increased job autonomy, employees are assumed to make more use of self-motivation and self-direction strategies in order to actually achieve their working goals (Alves et al., 2006; Stewart et al., 2011). Moreover, it will encourage

employees to be highly reflective concerning their own functioning and to take responsibility for the quality of their work (Stewart et al., 2011). Besides, job autonomy will give employees the opportunity to make their job more natural rewarding, by organizing their job tasks in such a way that they better suit to personal preferences (Stewart et al., 2011; Neck & Houghton, 2006).

Indeed, in a study among healthcare workers, Van Dorssen-Boog et al. (2020) found that, job autonomy is associated with the broad range of self-leadership strategies as well as self-leadership behaviour. And Hornung and Rousseau (2007) investigated the effects of increased job autonomy on personal initiative within a private hospital. This hospital had changed the management structure from a centralized to decentralized organization, where shared leadership was the new way of working. They surveyed 18 months and 36 months after this organization change and found that increased job autonomy had long term effects on personal initiative of hospital workers. And lastly, in a study among teleworkers working in a diversity of industries, it was found that on days that employees worked from home, an increased use of self-leadership strategies, such as goal-setting and self-rewards, was reported, which was explained by increased perceived job autonomy (Müller & Niessen, 2019).

Based on these arguments we hypothesize that:

> **Hypothesis 1a:** Job autonomy (time 1) has a positive effect on self-leadership strategies (time 2)
>
> **Hypothesis 1b:** Job autonomy (time 1) has a positive effect on self-leadership behaviour (time 2)

Job autonomy as an outcome of self-leadership

Person Environment fit theory (PE fit theory) (Kristof-Brown et al., 2005) explains that relationships between job design and outcomes are mostly more complex. Employees differ in their competences, needs, and preferences, resulting in different dynamics between job design and employees' motivation and behaviour (Kristof-Brown et al., 2005; Caplan, 1987). While job autonomy is argued to stimulate individuals' self-leadership, it seems likely that self-leaders are also willing and able to increase their job autonomy. Self-leadership will contribute to the ability to self-organize the work load and to achieve working goals, which subsequently may contribute to their feelings of being in control

of their job (Alves et al., 2006; Stewart et al., 2011; Bakker & Demerouti, 2007). And since people have a basic need for self-organizing their behaviour and experiences (Deci & Ryan, 2000), they will be inclined to organize more autonomy for themselves. Moreover, if people have developed their autonomous functioning, for instance due to social learning processes and exercising their job tasks, they may find out that they are better able to control their job tasks and to influence important decisions concerning one's work (Bandura, 1997). By taking responsibility and by using cognitive and behavioural self-influencing strategies one will take control in one's job (Lovelace et al., 2007) which may lead to more control experiences (Bandura, 1997).

Therefore, we hypothesize that self-leading healthcare workers will be able to increase their job autonomy:

Hypothesis 2a: Self-leadership strategies (time 1) have a positive effect on job autonomy (time 2).

Hypothesis 2b: Self-leadership behaviour (time 1) has a positive effect on job autonomy (time 2).

The moderating role of need for job autonomy

According to Self-Determination Theory (SDT, Deci & Ryan, 2000; Gagné & Deci, 2005) people have a basic psychological need for autonomy, which is defined as "the need to self-organize experience and behaviour, and to have activity be concordant with one's integrated sense of self" (Deci & Ryan, 2000, p. 231). Furthermore, SDT explains that while people have this need for autonomy, people can differ in the amount of autonomy they prefer (Van den Broeck et al., 2008). Scholars assume that there is room for moderation effects of need strength concerning the effects of need satisfaction (Schüler et al., 2016; Van Assche, Van der Kaap-Deeder, Audenaert, De Schryver & Vansteenkiste, 2018). Thus, although it is broadly recognized that employees will benefit from job autonomy as they have a basic need for autonomy which they want to have satisfied, they may differ in the amount of job autonomy they prefer. A reason may be that within the work context the job autonomy comes along with professional responsibility, and for this, people need to feel competent for their job as well. If people feel insecure in their profession, for instance due to a lack of professional experience, they may prefer modeling behaviour and external directions above job autonomy in order

to build their self-efficacy (Bandura, 1997). On the other hand, within healthcare literature it is theorized that professionals such as critical care nurses have a need for more professional autonomy. They feel too much medical control by physicians, and experience a mismatch between their high level of professional training and the low level of responsibility which is afforded to them (Bucknall & Thomas, 1997; Iliopoulou & While, 2010). Moreover, the strength of the need for autonomy is assumed to be developed through learning experiences in childhood (Schüler et al., 2016). If people were raised in a family and/or school in which their autonomy was highly encouraged and facilitated, they may have developed higher needs for autonomy in their later jobs. Thus, although autonomy is assumed to be a general nutriment necessary for human thriving, people may develop specific preferences concerning this need, which reflects "wanting autonomy" as a motivational disposition (Schüler et al., 2016).

Indeed, Yun et al. (2006) found that the need for job autonomy positively moderates the relationship between empowering leadership and self-leadership behaviour, while it negatively moderates the relationship between directive leadership and self-leadership behaviour. Similarly, Rietzschel, Slijkhuis & Van Yperen (2013) demonstrated that close external monitoring of job tasks only resulted in intrinsic work motivation and job satisfaction for people high in need for structure, which was explained by the role clarity which they experienced in their job. In contrast, people with low needs for structure, had negative effects of close monitoring of their work, related to intrinsic work motivation and job satisfaction. This was explained by the reduced perceived job autonomy. Van Yperen et al. (2016) found that it were not the high job demands in itself, though the combination of high job demands, with a high individual need for autonomy and a lack of job autonomy which predicted the intrinsic motivation. Therefore, not every employee may equally benefit from job autonomy as not every employee has the same need for autonomy in one's job (Yun et al., 2006; Roberts & Foti, 1998; Van Yperen et al., 2016).

In line with the arguments above, we propose that healthcare workers' need for job autonomy will influence the relationship between job autonomy and self-leadership.

> **Hypothesis 3a:** Need for job autonomy (time 1) moderates the effect of job autonomy (time 1) on self-leadership strategies (time 2); the effect is stronger for high levels of need for job autonomy.

Hypothesis 3b: Need for job autonomy (time 1) moderates the effect of job autonomy (time 1) on self-leadership behaviour (time 2); the effect is stronger for high levels of need for job autonomy.

Similarly, the reverse relationship between self-leadership and job autonomy will be influenced by need for job autonomy. People with higher needs for job autonomy will use their self-leadership skills to actually increase their job autonomy. In addition to the above mentioned arguments, related to personality characteristics, need for job autonomy may also be rooted in deficit experiences. Sheldon and Gunz (2009) argued that need for autonomy may be higher, if people feel frustrated due to a lack of control. We assume that the effects of self-leadership on job autonomy will be higher for those with higher needs for job autonomy. These people will be motivated to use their self-leadership skills for improving their job autonomy.

Therefore we hypothesize that:

Hypothesis 4a: Need for job autonomy (time 1) moderates the effect of self-leadership strategies (time 1) on job autonomy (time 2); the effect is stronger for high levels of need for job autonomy.

Hypothesis 4b: Need for job autonomy (time 1) moderates the effect of self-leadership behaviour (time 1) on job autonomy (time 2); the effect is stronger for high levels of need for job autonomy.

Methods

Sample and procedure

Six Dutch healthcare organizations (2 nursing homes, 2 organizations for disabled people, 1 general hospital and 1 military hospital) participated in this study in the year 2015. Healthcare professionals and social workers working within these organizations were invited to join, on a voluntary base, a self-leadership training in order to improve their vitality. Respondents were informed, prior to their registration, that participation in this training was part of scientific research. For the present study we only used the data of the waiting list control group. We excluded the experiment group for this study as they are supposed to improve

their self-leadership skills on the basis of the course, which would bias the supposed relationship between job autonomy and self-leadership without training intervention. A group of 123 participants was invited to fill in the questionnaires two times within 3 months, and 95 of these persons (77%) responded twice. The average age of this sample at time 1 was 43.2 years (*SD* = 10.6) and 97% was female. Furthermore, 10.5 % had completed primary/secondary school, 59 % completed vocational training and 30.5% completed a college degree. This is representative for Dutch healthcare organizations, except for gender, which exceeds the percentage of female employees within Dutch healthcare (78%) (CBS StatLine, 2017). 56% worked within care for disabled people, 29% worked within a nursing home, and 15% worked within a hospital. Respondents worked as support worker (40%), assistant support worker (5%), nurse in nursing home (10%), care assistant in nursing home (8%), care coordinator in disability care or nursing home (16%), registered hospital nurse (14%), and 7% had a different healthcare jobs including job coach for clients, activity worker, speech therapist, pharmacy assistant or laboratory assistant.[1]

Measurement instruments

Job autonomy. Job autonomy was measured with the nine-item scale for job autonomy as designed by Morgeson and Humphrey (2006). Items refer to decision making autonomy (3 items; e.g., 'The job allows me to make a lot of decisions on my own'), work scheduling autonomy (3 items; e.g., 'The job allows me to decide on the order in which things are done on the job'), and work method autonomy (3 items; e.g., 'The job allows me to make decisions about what methods I use to complete my work').

Self-leadership behaviour. For measuring self-leadership behaviour, we used the six-item self-leadership scale as used by Yun et al. (2006), which is based on the preliminary work by Cox (1993). Example items of this scale are 'I solve problems when they pop up, without always getting my supervisor's stamp of approval', 'I take initiatives on my own', and 'I assume responsibilities on my own'.

Self-leadership strategies. For measuring self-leadership strategies we selected seven full subscales of the Revised Self-leadership Questionnaire (Houghton & Neck, 2002). For measuring behaviour-focused strategies we used the subscales 'Goal setting' (5 items; e.g., 'I establish specific goals for my own performance'), 'Self-observation' (4 items; e.g., 'I make a point to keep track

[1] *With ANOVA's we controlled whether professions and organizations led to differences with respect to job autonomy, need for job autonomy, and self-leadership (strategies and behaviour). No group differences were found.*

on how well I am doing at work'), 'Self-rewards' (3 items; e.g., 'When I have successfully completed a task, I often reward myself with something I like') and 'Self-cueing' (2 items; e.g., 'I use written notes to remind myself of what I need to accomplish'). For measuring constructive thought pattern strategies we took the subscale for 'Evaluation of thoughts and assumptions' (4 items; 'I try to mentally evaluate the accuracy of my own beliefs about situations I am having problems with') and Self-talk (3 items; 'Sometimes I talk to myself (out loud or in my head) to work through difficult situations'). For measuring natural rewards strategies we used the natural rewards strategies scale (5 items; e.g., 'I focus my thinking on the pleasant rather than the unpleasant aspects of my job activities').

Need for job autonomy. Need for job autonomy was assessed using a five-item-measure that was developed for the current study, which was inspired by the job autonomy scale by Morgeson and Humphrey (2006). The following 5 items were included: 'I have the need to decide independently on the order in which things are done on the job', 'I have the need to make my own decisions about how to schedule my work', 'I have the need to be able to make decisions about my work on my own', 'I have the need to independently solve work-related problems', 'I have the need to independently determine how I do my work'.

All scales were measured on a 5-point Likert scale ranging from strongly disagree (1) to strongly agree (5).

For all the scales we checked the factor structure with CFAs in AMOS. Due to the small sample size we checked CFAs with inclusion of the experiment group at time 1 ($N = 185$). We took normed $\chi 2 < 2$ as a good model fit and < 3 as an acceptable model fit. For RMSEA the norm is $< .05$ for a good model fit and $< .08$ for an acceptable model fit, and for CFI the norm is $> .95$ for a good model fit and values between .90 and .95 for an acceptable model fit. SRMR needs to stay below .10 (Schweizer, 2010). In line with theory we found a good model fit for job autonomy on the basis of three sub-dimensions ($\chi 2(df= 24) = 26.73$; normed $\chi 2 = 1.114$; RMSEA = .03; CFI = 1.00; SRMR = .03). Self-leadership behaviour also had a satisfactory model fit on the basis of one factor ($\chi 2 = 20.43$; normed $\chi 2 = 2.27$; RMSEA = .08; CFI = .97; SRMR = .05). Need for job autonomy needed a two-factor structure, leading to an acceptable model fit, except for RMSEA ($\chi 2(df=4) = 20.35$; normed $\chi 2 = 5.1$; RMSEA = .15; CFI = .96; SRMR = .07). Kurtosis and skewness showed up with normal scores, and no relevant modification indices were given. Therefore, RMSEA might have exceeded the norm due to the combination of a small sample size with small

degrees of freedom (*df* = 4) (Kenny et al., 2015). On the basis of other fit indices we accepted the model fit. For self-leadership we found low estimates for the latent factor self-talk on self-leadership (second order factor), leading to an unacceptable model fit. Self-talk might have been too specific for respondents, and therefore not fitting to other self-leadership strategies. We decided to delete self-talk from the self-leadership scale, which led to an acceptable model fit with 6 latent variables ($\chi 2$ = 345.4 (224); normed $\chi 2$ = 1.54; RMSEA = .05; CFI = .92; SRMR = .07).

Analysis strategy

The primary interest in this study is testing our hypotheses at the individual level of analysis, i.e., testing the relationship between perceived job autonomy and individual skills, needs and behaviours. However, since our respondents are employed within different healthcare organizations we controlled for organization as a determinant for our dependent variables. We controlled for organization by regressing five dummy variables on our outcome variables. None of the dummies were found to be significant.[2]

Further, we checked for common methods bias with a set of CFAs at time 1 with inclusion of the experiment group. Given our small sample size, we could not include separate items, and we therefore used the latent variables in these analyses. Specifically, a full-measurement model (in which the latent variables were loaded onto their respective factors), was compared to multiple alternative models, in which different latent factors were combined into one factor (e.g., autonomy was combined with need for autonomy). Our full-measurement model (($\chi 2$= 230,67 (113); RMSEA = .08; CFI = .88; SRMR = .08) was convincingly the best model[3]. We conclude that we do not have an indication of common method variance within our data. Moreover, it was confirmed that self-leadership strategies and self-leadership behaviour are different constructs.

Data were analyzed using SPSS (version 25). We first tested normality, linearity, homoscedasticity, and multicollinearity. We checked the reliability of the scales by checking Cronbach's alpha at each time point and by checking inter-correlations between the same constructs over time. We expect that our constructs will be quite stable, with alphas above .70 and expect stronger correlations (above .50) between the same constructs over time, with only small fluctuations.

Hypotheses were tested by conducting Hierarchical Multiple Regression (HMR) analyses. We controlled in step 1 for the dependent variables at time

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[2] *The regression results are available upon request from the first author.*

[3] *Results of testing for common method bias are available upon request from the first author.*

1 (e.g., in case that job autonomy T2 was the dependent variable we included job autonomy T1 in the first step). In order to prevent multicollinearity in the regression analysis, centered scores were used in the regressions in which interaction effects with need for job autonomy were involved.

Results

Descriptive analysis

Descriptive statistics (Table 3-1) showed that all variables slightly increase in their mean from T1 to T2. Additional T-tests demonstrated that this increase was significant for self-leadership strategies ($p < .01$) and job autonomy ($p = .012$). At T1 we did not find significant cross-sectional relationships between job autonomy and self-leadership (both strategies and behaviour), while at time 2 the cross-sectional relationships between job autonomy and self-leadership were significant for both strategies and behaviour. Need for job autonomy T1 and T2 had small to medium significant cross-sectional relationships with both job autonomy and self-leadership (both strategies and behaviour). Cronbach's alphas were stable and above .72 over time.

Table 3-1: Descriptives: Means, SDs, Skewness, Kurtosis, Correlations, Cronbachs' alpha (diagonal)

Variable	Mean	*SD*	Skewness	Kurtosis	1	2	3	4	5	6	7	8	9
Age	43.17	10.59	−0.20	−1.07									
Job autonomy T1	2.86	0.61	−0.11	−0.86	0.00	*0.90*							
Job autonomy T2	3.02	0.71	−0.24	−0.25	−0.02	0.61**	*0.93*						
SL Behaviour T1	3.59	0.50	−0.26	−0.55	0.14	0.14	0.36**	*0.77*					
SL Behaviour T2	3.67	0.57	−0.56	−0.27	0.01	0.25*	0.59**	0.58**	*0.81*				
SL Strategies T1	3.00	0.44	−0.36	−0.03	−0.23*	0.13	0.18	0.33**	0.37**	*0.84*			
SL Strategies T2	3.12	0.49	−0.10	−0.12	−0.15	0.18	0.40**	0.29**	0.55**	0.73**	*0.72*		
Need for JA T1	3.36	0.59	−0.32	0.59	0.12	0.27**	0.25*	0.35**	0.41**	0.21*	0.26*	*0.79*	
Need for JA T2	3.42	0.59	0.26	0.53	0.01	0.16	0.38**	0.29**	0.54**	0.20	0.36**	0.46**	*0.79*

*Note *p < 0.05, **p < 0.01, *** p < 0.001*

Testing hypothesized models

Four hierarchical multiple regressions were used to test our hypotheses (Table 3-2 and Table 3-3). We controlled for age, but this did not influence our results. Considering the size of the sample we decided to report the most parsimonious model. Our first set of hypotheses tests whether job autonomy has a cross-lagged effect (three months) on self-leadership strategies (H1a) and self-leadership behaviour (H1b). After controlling for baseline levels of the dependent variables, we could not confirm this proposed relationship for self-leadership strategies. However, for self-leadership behaviour we found a small effect ($\beta = .17$; $p < .05$). Hypothesis 1a is rejected and hypothesis 1b is accepted.

In our second set of hypotheses a reverse effect between self-leadership strategies and job autonomy (H2a) and self-leadership behaviour and job autonomy (H2b) was expected. However, we did not find a reversed effect of self-leadership strategies on job autonomy, but we found a small effect for self-leadership behaviour ($\beta = .29$; $p < .001$). Hence, hypothesis 2a is rejected, while hypothesis 2b is accepted.

In our third set of hypotheses we expected an interaction effect of need for job autonomy on the relationship between job autonomy and self-leadership strategies (H3a) and self-leadership behaviour (H3b). For both self-leadership strategies and self-leadership behaviour there was no effect, resulting in a rejection of hypotheses 3a and 3b. However, it became clear that need for job autonomy (T1) influences the self-leadership behaviour of healthcare workers at T2 ($\beta = .21$; $p < .05$). Moreover, in the third step of the hierarchical regression job autonomy was no longer a significant predictor for self-leadership behaviour, which implicates that need for job autonomy (T1) is a stronger predictor for self-leadership behaviour (T2), than job autonomy (T1).

Lastly, the moderating influence of need for job autonomy on the effect of respectively self-leadership strategies (H4a) and self-leadership behaviour (H4b) on job autonomy was tested. Again, the interaction effect was not found and therefore also hypotheses 4a and 4b were rejected.

Table 3-2: Results for hierarchical regression with self-leadership T2 (strategies and behaviour) as dependent variable (n=95)

Self-leadership strategies T2					
Step	**Predictors**	**Adj. R^2**	**β (standardized)**	**R^2 change**	***F* change**
1	***Model 1***	*0.52*		*0.53*	*105.54***
	Self-leadship strategies T1		0.73***		
2	***Model 2***	*0.53*		*0.01*	*1.55*
	Self-leadship strategies T1		0.72***		
	Job automomy T1 (centr)		0.09		
3	***Model 3***	*0.53*		*0.01*	*0.80*
	Self-leadship strategies T1		0.70***		
	Job automomy T1 (centr)		0.07		
	Need for job autonomy T1 (centr)		0.09		
	Job Aut *Need for job aut T1 (centr)		-0.02		
Self-leadership behaviour T2					
Step	**Predictors**	**Adj. R^2**	**β (standardized)**	**R^2 change**	***F* change**
1	***Model 1***	*0.33*		*0.34*	*47.1****
	Self-leadership behaviour T1		0.58***		
2	***Model 2***	*0.35*		*0.03*	*4.1**
	Self-leadership behaviour T1		0.56***		
	Job automomy T1 (centr)		0.17*		
3	***Model 3***	*0.37*		*0.03*	*2.5*
	Self-leadership behaviour T1		0.49***		
	Job automomy T1 (centr)		0.12		
	Need for job autonomy T1 (centr)		0.21*		
	Job Aut *Need for job aut T1 (centr)		0.02		

*Note *p < 0.05, **p < 0.01, *** p < 0.001*

Table 3-3: Results for hierarchical regression with job autonomy T2 as dependent variable (n=95)

Step	Predictors	Adj. R^2	β (standardized)	R^2 change	F change
1	***Model 1***	*0.36*		*0.37*	*53.9****
	Job autonomy T1		0.61***		
2	***Model 2***	*0.36*		*0.01*	*1.38*
	Job automomy T1		0.59***		
	Self-leadership strategies T1 (centr)		0.10		
3	***Model 3***	*0.35*		*0.01*	*0.33*
	Job automomy T1		0.58***		
	Self-leadership strategies T1 (centr)		0.09		
	Need for job autonomy T1 (centr)		0.07		
	SL strat *Need for job aut T1 (centr)		0.01		

Step	Predictors	Adj. R^2	β (standardized)	R^2 change	F change
1	***Model 1***	*0.36*		*0.37*	*53.9****
	Job autonomy T1		0.61***		
2	***Model 2***	*0.43*		*0.08*	*12.6****
	Job automomy T1		0.57***		
	Self-leadership behaviour T1 (centr)		0.28***		
3	***Model 3***	*0.42*		*0.00*	*0.24*
	Job autonomy T1		0.56***		
	Self-leadership behaviour T1 (centr)		0.28***		
	Need for job autonomy T1 (centr)		-0.01		
	SL behav *Need for job aut T1 (centr)		-0.06		

*Note *p < 0.05, **p < 0.01, *** p < 0.001*

Discussion

The present study tested the causal and reverse relationships between job autonomy and self-leadership (strategies and behaviour) among healthcare workers, and also hypothesized that individual's need for job autonomy will positively influence these relationships. Despite our expectations, job autonomy did not predict self-leadership strategies, nor predicted self-leadership strategies

job autonomy. Yet, job autonomy was associated with self-leadership behaviour and vice versa self-leadership behaviour predicted job autonomy. Finally, the hypothesized moderating role of need for job autonomy on both the causal and reverse relationship between job autonomy and self-leadership (strategies and behaviour) was not confirmed as well.

Theoretical implications

While we theorized a causal and reverse relationship between job autonomy and the actual autonomous functioning, we could only partly confirm this, as we found a small reciprocal relationship between job autonomy and self-leadership behaviour, but not between job autonomy and self-leadership strategies. Apparently, within our sample of healthcare workers job autonomy does influence the autonomous behaviour, but it does not encourage the use of self-influencing strategies such as self-observation, goal-setting, evaluation thoughts and assumptions and natural rewards strategies.

We can think of several reasons for these outcomes. First, autonomous working healthcare workers may have less need for using self-leadership strategies as proposed by self-leadership scholars, as their jobs may be clearly defined and practical rather than conceptual (Konradt et al., 2009; Manz, 2015). Ugurluoglu et al. (2015) adds to that as they found that more experienced and older healthcare workers from a hospital reduced the use of self-leadership strategies. They may lead themselves on basis of the many years of experience, and have less need for using self-leadership strategies. According to social learning theory people exercise control on basis of modelling behaviour and vicarious experiences. And the exercise of control subsequently leads to experience of having influence (Bandura, 1997).

Second, there may be others variables which influence both job autonomy and self-leadership strategies, for instance empowering leadership and autonomy support of co-workers. This may explain why prior studies reported cross-sectional relationships between job autonomy and self-leadership strategies (e.g., Van Dorssen-Boog et al., 2020; Ho & Nesbit, 2014). Organizations which support the autonomous functioning of healthcare workers, may not only improve job autonomy but also implement management development programs which help managers to develop an empowering leadership style. Empowering leadership involves power sharing, motivation support and development support, and is intended to positively influence autonomous working. Indeed, Amundsen and

Martinsen (2015) found that empowering leadership contributes to the self-leadership of followers. Furthermore co-workers can also support each other in their autonomous functioning. If people give autonomy support they actively provide opportunities for choice and self-initiation, and consider the perspective of the other person (Baard, Deci & Ryan, 2004). Moreover, being autonomy supportive means that one acknowledges the feelings of the other, use non-controlling language, and offers choices (Jungert et al., 2021). Recently, Fernet et al. (2021) have shown that both supervisors and coworkers can support the autonomy and as such influence nurses' work autonomous motivation.

Thirdly, the relationship between job autonomy and self-leadership strategies may especially be manifest in case of high work load. The healthcare literature assumes by referring to Job Demand Control model (Karasek, 1978) and Job Demands Resources model (Bakker & Demerouti, 2007) that job autonomy can buffer the effects of high work load on outcomes related to well-being (Broetje et al., 2020; Laschinger et al., 2001). Especially in case of high work load, people may use self-leadership strategies in order to gain control in the job (Lovelace et al, 2007). In contrast, if healthcare workers feel comfortable with the work load, job autonomy will lead to autonomous work behaviour, while not using the self-leadership strategies. Thus, there may be a three-way interaction effect in which high work load will interact with self-leadership strategies and job autonomy.

Fourth, self-leadership training may interact with the relationship between job autonomy and self-leadership strategies. Kubicek, Korunka and Tement (2014) found that although job autonomy contributes to the work engagement and mental well-being of healthcare workers in nursing homes, too much autonomy can reduce the work engagement and mental well-being. They proposed that improving the skills of nurses for taking control may help them to effectively deal with the autonomy. This implicates that healthcare workers first need to develop themselves in competences for self-leadership strategies in order to make use of them in highly autonomous jobs.

Interestingly, individual's need for job autonomy did not interact with the relationships between job autonomy and self-leadership. We expected on basis of SDT that if people have higher needs for autonomy this will influence the effects of job autonomy on self-leadership, and also will stimulate self-leaders to gain more job autonomy. Also other research on the moderation effect of need strength on motivation and organization behaviour find minor evidence for this assumption (e.g., Wörtler, Van Yperen & Barelds, 2020). Perhaps, if we included work load

in the research, it would have influenced our results, as Van Yperen et al. (2016) found that the positive effects of job autonomy under condition of high work load, especially count for those with higher needs for job autonomy.

Strengths and limitations

Our two-wave panel research is among one of the first studies examining the cross-lagged relationship between job autonomy and self-leadership. Until now, this presumed relationship was mainly investigated cross-sectional, which can easily lead to misinterpretation of causality. Another strength of this study is that our sample included respondents from six different healthcare organizations, which gives us an indication for the generalizability of our results, especially within the healthcare industry.

However, the current study also has limitations. Since our sample size was small, we might have been unable to find significant effects, since the power of cross-lagged studies with a moderate size (between 75-300) is known to be low (Kenny, 1975). However, as we used not more than five independent variables in our regression, we strictly followed guidelines for multiple regression methods and reduced risk for type 2 error (Tabachnick & Fidell, 2014). Furthermore, our timeframe of three months might not have been accurate for measuring an effect of job autonomy on self-leadership, as related studies found effects over time periods of at least a year (e.g., Frese et al., 2007). Nevertheless, the current study adds to theory building around the proposed relationship between job autonomy and self-leadership, as we specifically focused on the cross-lagged relationship between job autonomy and self-leadership over a time period of three months.

Lastly, for this study self-reports were used, which might have led to socially desirable answers and to common method variance (Podsakoff, MacKenzie, Lee & Podsakoff, 2003). However, observation of self-leadership by other respondents, like supervisors or colleagues, is expected to be inaccurate, as the self-leadership process is mainly an internal process which takes place within persons (Conway & Lance, 2010). In order to reduce risk for common method bias we adjusted a set of procedural strategies. For clarity of the constructs, we created a psychological separation between the measures in the questionnaire. To reduce socially desirable answers, respondents were assured that their responses were used for scientific purposes only, and were not shared with their employer. Moreover, respondents were encouraged to fill in their questionnaire as honestly as possible. Lastly, the temporal separation of three months between cause and

effect reduced the ability of the respondent to recall previous answers on the questionnaire, meaning that the risk of consistency motives are reduced (Spector, 2006). On basis of a series of CFAs at time 1 we concluded that we do not have an indication of common method variance within our data.

Future research

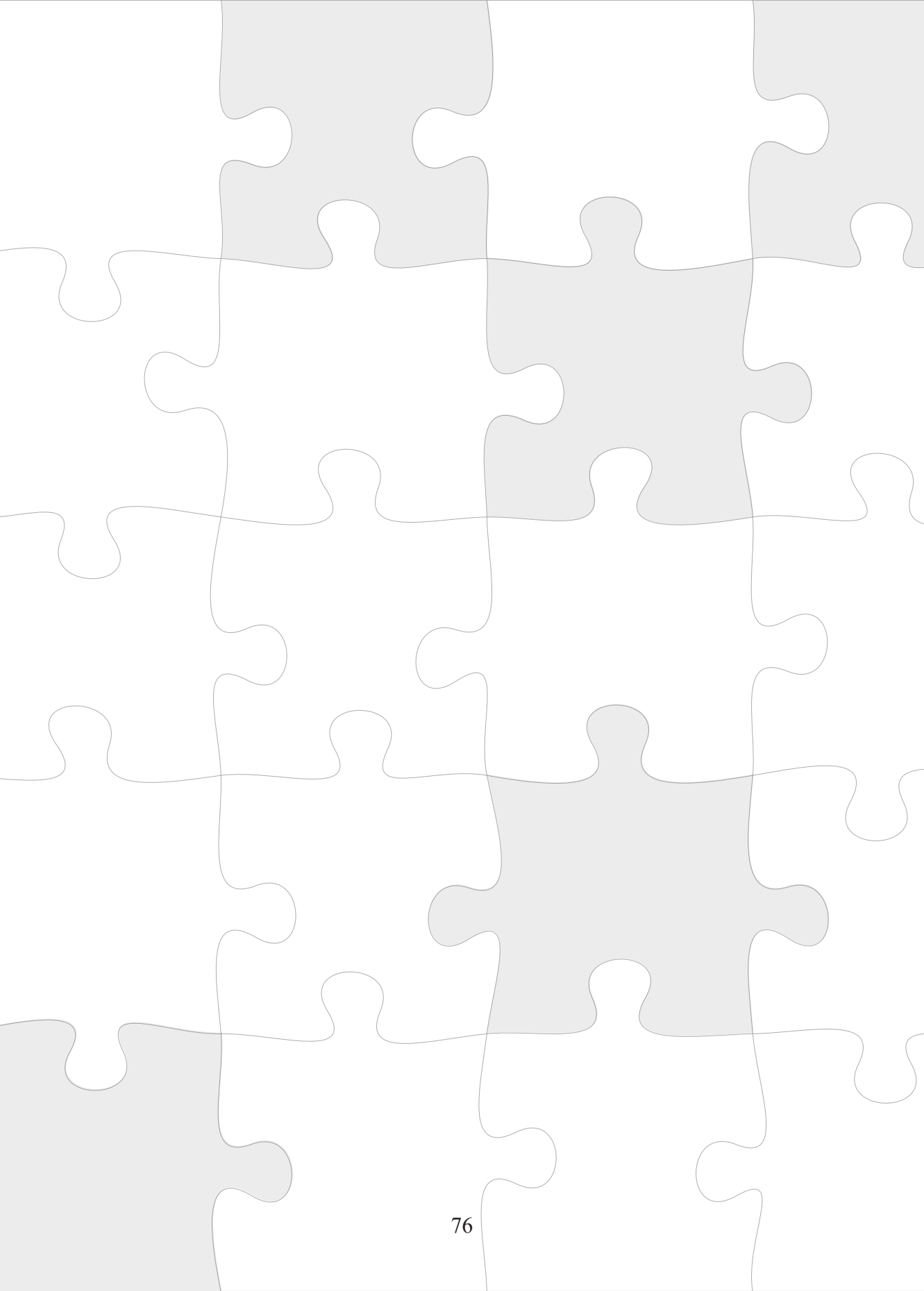
Although the current study shed some light on the cross lagged relationship between job autonomy and self-leadership, Mitchell and James (2001) state that causal relationships might have more complex patterns. They recommend to not only think about the time period that is needed for A to cause B, but also about the duration of A before it causes B, as well as the sustainability of the effect. This implies that more measurements in time are needed in order to be able to include both change, effects and duration of effects. Moreover, different time periods should be included, in order to test how long it takes for A to cause B, and how long the supposed effect sustains. Future research on the relationship between job autonomy, need for job autonomy and self-leadership can build on this insight, by investigating effects over shorter and longer periods, and by including at least three measurements in time, which gives the opportunity to include the effects of change as well as investigating the mediating role of self-leadership behaviour in bringing a fit between individuals' need for job autonomy and perceived job autonomy.

Furthermore, the fact that different results were found for self-leadership strategies and behaviour underpins the relevance of including both measurement instruments in self-leadership research. In the study by Van Dorssen-Boog et al. (2020) it was found that self-leadership behaviour, cognitive and behavioural strategies and natural rewards strategies have different relationships with work engagement and general health of healthcare workers. It is worthwhile to further investigate how self-leadership strategies and self-leadership behaviour are mutually related and how they influence outcomes related to motivation and performance.

Practical implications

The present study showed that although job autonomy and self-leadership behaviour have a reciprocal relationship, this is not the case for job autonomy and self-leadership strategies. However, the development of self-leadership strategies can help healthcare workers to take charge of the work load, while it

can also contribute to their work engagement and health (Lovelace et al., 2007; Van Dorssen-Boog et al., 2020; Van Dorssen-Boog, Van Vuuren, De Jong & Veld, 2021). For this we suggest different avenues for development. First, organizations can prioritize the development of self-leadership by developing an autonomy supportive work environment in which people feel encouraged to develop self-leadership (Van Vuuren, Lub & Marcelissen, 2016). Supervisors can encourage healthcare workers to self-leadership by modelling self-leadership, and by practicing an empowering leadership style. Moreover, healthcare teams including their supervisors may conjointly develop self-leadership, as this will encourage social learning processes (Bandura, 1997) and it will strengthen coworker support for facilitating autonomous functioning (Fernet et al., 2021; Van Dorssen-Boog, Van Vuuren, Yigit, 2019). Lastly, research finds that healthcare workers can develop self-leadership through self-leadership training (Van-Dorssen-Boog et al., 2021; De Lange et al., 2021). To conclude, for developing self-leadership, healthcare organizations need to consider other interventions, as we found that job autonomy only has a reciprocal relationship with self-leadership behaviour.



Chapter 4

Facilitating healthcare workers' self-determination: The impact of a self-leadership intervention on work engagement, health, and performance

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Chapter 4 - Facilitating healthcare workers' self-determination: The impact of a self-leadership intervention on work engagement, health, and performance

The recent COVID-19 crisis has once again demonstrated the critical societal importance of healthcare and healthcare workers. It has put an additional strain on healthcare workers who already perceived their jobs as highly demanding and stressful (Broetje, Jenny & Bauer, 2020; McVicar, 2016). Research has shown that, in recent years, healthcare workers report low mental and physical health, low job satisfaction, and low motivation to continue working within the healthcare sector (Hayes et al., 2012; Garrosa, Moreno-Jiménez, Liang & González, 2008; Shantz, Alfes & Arevshatian, 2018; Gurses, Carayon & Wall, 2009).

To address these issues, a large number of studies have focused on developing and testing organizational and individual interventions to reduce stress and burnout as a way of ensuring job satisfaction and productivity of healthcare workers (McVicar, 2016; Lee, Kuo, Chieen & Wang, 2016). The premise of these studies is that workplace interventions that aim to increase social support, job autonomy, and opportunities for professional skills development will help healthcare workers to better deal with work related stress (McVicar, 2003). Moreover, the literature suggests that, at an individual level, healthcare workers might benefit from developing coping strategies in order to deal with work related stress, in turn leading to better health and reduced job turnover (Garrosa, Moreno-Jiménez, Liang, González, 2006; Ruotsalainen, Verbeek, Mariné & Serra, 2015; McVicar, 2003).

While the focus on stress management has shown some potential for the reduction of burnout and job turnover, the results are inconclusive (Ruotsalainen et al., 2015; McVicar, 2016). It is remarkable that studies that focus on increasing positive motivation and positive behaviours of healthcare workers are rare. Building on the positive psychology movement (Linley, Joseph, Harrington & Wood, 2006; Gable & Haidt, 2005; Seligman & Csikszentmihalyi, 2000), we propose that interventions should not only focus on reducing stress, but also on increasing self-leadership of healthcare workers, as this positively contributes to work engagement, health, and performance (Kayral & Dülger, 2019; Van Dorssen-Boog, De Jong, Veld & Van Vuuren, 2020).

Self-leadership theory states that people are not merely a result of their social context and personality traits, rather they are active agents of their own motivation, well-being, and performance (Manz, 2015; 1986; Manz, Houghton, Neck, Fugate & Pearce, 2016; Neck & Hougthon, 2006). Those who take the lead are assumed to use cognitive and behavioural self-influencing strategies (e.g., positive self-talk, goal-setting, self-observation) and act on a basis of self-determination. They are more intrinsically motivated in their job, while being less dependent on external directions or control systems for optimal functioning (Stewart, Courtright & Manz, 2019; Manz, 2015). Several intervention studies have found evidence of positive effects related to self-efficacy, health, positive affect, and performance as a result of self-leadership training programmes in profit and not for profit industries (e.g., Lucke & Furtner, 2015; Unsworth & Mason, 2012; Neck & Manz, 1996). These studies mainly draw on the principles of Conservation of Resources-theory (HobFoll, 1989) and self-efficacy (Neck & Manz, 1996). In this paper, we propose that work engagement is the key mechanism through which self-leadership interventions impact health and performance of healthcare workers. Work engagement refers to a positive, fulfilling, and work related state of mind that is characterized by vigor, dedication, and absorption (Schaufeli, Bakker & Salanova, 2006; Salanova & Schaufeli, 2008). It is considered to indicate general autonomous work motivation (Van Beek, Hu, Schaufeli, Taris & Schreurs, 2012). Autonomous work motivation refers to the full endorsement of one's own activities, as these are in concordance with personal goals, needs, interests, and values (Deci & Ryan, 2000; Gagné & Deci, 2005; Sheldon & Elliot, 1999). According to Self-Determination Theory (SDT, Deci & Ryan, 2000), autonomous motivation is the most sustainable type of motivation, predicting high quality performance and positive outcomes related to well-being, vitality, and health (Deci, Olafson & Ryan, 2017; Ryan & Deci, 2008). In the present study we are interested in the work engagement of healthcare workers to provide insight in the general development of autonomous motivation. Work engagement represents a more persistent and pervasive affective-cognitive state of autonomous motivation, as engaged workers work because they genuinely *want* to work, meaning that they tend to act on basis of autonomous motivation (Salanova & Schaufeli, 2008; Van Beek et al., 2012).

In this study, we aim to assess the impact of a self-leadership intervention on work engagement, health, and job performance of healthcare workers. We

hypothesize that, based on SDT (Deci et al., 2017), the intervention will both directly and through the mediating role of work engagement, influence health and performance. This research contributes to theory and practice in several ways. First, the self-leadership intervention study is specifically focused on healthcare professionals. Self-leadership training has been studied in other industries and services (Unsworth & Mason, 2012; Lucke & Furtner, 2015; Neck & Manz, 1996), but not among healthcare professionals. It is assumed that jobs aimed to service the needs and goals of others, such as those of healthcare workers, are challenging for self-leadership, because the professional focus on servicing others, can distract them from their own personal needs and goals (Alves et al., 2006). Our sample includes healthcare workers from five different Dutch healthcare organizations in different specialists fields: two nursing homes, two disability care homes and one hospital. To test both short and long-term effects of the self-leadership intervention, while controlling for the organizational influences, we took three measurements. Second, we position the self-leadership training programme as a positive psychology intervention (Van Woerkom, Bakker & Leiter, 2019), which provides a novel perspective for improving motivation, health, and performance of healthcare workers (Jooste & Cairns, 2014; Kayral & Dülger, 2019; Van Dorssen-Boog et al., 2020). Whereas interventions for healthcare workers are often focused on developing coping strategies for dealing with the high job demands (McVicar, 2003; Ruotsalainen et al., 2015; Lee et al., 2016), this intervention is explicitly focused on developing work engagement through a self-leadership training programme. Finally, in contrast to prior intervention studies of self-leadership, the present self-leadership intervention is specifically designed to improve self-determination, meaning that goals and activities are based on autonomous motivation. As discussed, autonomous motivation is a key factor for work engagement (Van Beek et al., 2012), which subsequently predicts health and performance (Deci et al., 2017). Until now, self-leadership intervention studies have mostly assumed that self-leadership training influences health and performance through two mechanisms: motivation to conserve and accumulate resources, and increased self-efficacy (e.g., Unsworth & Mason, 2012; Lucke & Furtner, 2015). In the present study, we add to the literature by proposing a third mechanism; the improved health and performance are a result of the work engagement. Work engagement represents the autonomous motivation, which follows from the training self-leadership.

Self-leadership

Self-leadership refers to 'a comprehensive self-influence perspective that concerns leading oneself toward performance of naturally motivating tasks as well as managing oneself to do work that must be done, but is not naturally motivating' (Manz, 1986, p. 589). Informed by insights from classical self-regulation and motivational theories such as self-regulation and control theory (Carver & Scheier, 1998), social cognitive theory (Bandura, 1991) and cognitive evaluation theory (Deci, 1975), self-leadership proposes that specific a range of cognitive and behavioural self-influencing strategies help people to take charge of their own motivation and performance (Manz, 2015; 1986; Neck & Houghton, 2006). Self-leadership theory makes a distinction between self-management and self-leadership (Stewart, Courtright & Manz, 2011; Manz, 1986). In self-management, goals and standards (what is to be done) and strategy (why it is to be done) are externally determined. The individual influences how to motivate and direct oneself in order to achieve these externally determined goals. In contrast, self-leadership involves consciously reflecting on the what and why of behaviour as well as the question of how to act (Stewart et al., 2011). As a result, self-leadership allows individuals to align activities with their personal goals, values and interests (Manz, 1986; 2015; Stewart et al., 2019).

Self-leadership strategies are divided in three categories: behaviour-focused strategies, constructive thought pattern strategies, and natural rewards strategies. ***Behavioural focused self-leadership strategies*** include self-observation, goalsetting, self-cueing, and self-rewards. Through self-observation one gains information about one's own functioning (Neck & Houghton, 2006), this being an important requirement for actual behaviour change (Mahoney & Arnkoff, 1978). Goalsetting addresses the setting of clear and challenging goals for oneself (Latham & Locke, 1991) and is assumed to encourage action. Self-cueing refers to constructing concrete reminders (e.g., to-do lists, images, or motivational posters) that can help to keep attention focused on important issues and goals (Houghton & Neck, 2002). Self-rewards (tangible rewards or a mental pat on the back) aim to function as powerful motivators during the process of goal achievement, especially when one is not intrinsically motivated to achieve the goal or specific activity (Neck & Houghton, 2006).

Constructive thought pattern strategies aim to take an optimistic and solution focused approach and avoid ruminating on negative and unchangeable things (Neck & Houghton, 2006; Manz, 1986). Constructive thoughts include the evaluation of thoughts and assumptions, positive self-talk, and visualisation of successful performance.

Natural rewards strategies refer to both behavioural (e.g., making a job task more enjoyable) and cognitive strategies (e.g., mentally focusing on the enjoyable aspects of a task, rather than focusing on the negative), with the specific aim to increase the implicit joy, thus intrinsic motivation, for a job task (Manz, 2015). If doing a job task is enjoyable in itself, then the task is naturally rewarding (Ryan & Deci, 2017).

The self-leadership process and its effect on work engagement, health and performance

Several studies were able to confirm that self-leadership is positively associated with employee outcomes, including job satisfaction, career success, performance, and stress/health (for an overview, see Stewart, Courtright, & Manz, 2011). The theoretical mechanism underlying these effects is generally derived from the principles of Conservation-of-Resources theory (CoR, see Hobfoll, 1989, Unsworth & Mason, 2012) and self-efficacy (Neck & Houghton, 2006; Prussia, Anderson & Manz, 1998). CoR theory assumes that stress is a reaction to a loss (or threatened loss) of resources. Resources can be objects, personal characteristics, conditions, or energies, that are valued by the individual or that serve as a means for attainment of other resources (Hobfoll, 1989). Drawing on CoR, self-leadership is thought to generate resources which will lead to stress reduction and positive affect (Unsworth & Mason, 2012; Breevaart et al., 2014). Furthermore, self-efficacy theory helps explain how self-leadership fosters a sense of competence. Through self-leadership people experience more self-efficacy in their performance, leading to improved performance (Neck & Houghton, 2006; Prussia et al., 1998). Moreover, improved self-efficacy as a result of self-leadership helps to reduce the experience of stress (Unsworth & Mason, 2012).

Indeed, several studies have found positive correlations between self-leadership and work engagement (e.g., Amundsen & Martinsen, 2015; Breevaart, Bakker, & Demerouti, 2014; Zeijen, Peeters & Hakanen, 2018), either through increased job resources (Breevaart et al., 2014) or through psychological resources such as psychological empowerment (Amundsen & Martinsen, 2015).

Furthermore, it is assumed that self-leadership contributes to health, both through the ability to cope with stress by increasing job resources and to self-regulate emotions with psychological resources (Houghton, Wu, Godwin, Neck & Manz, 2012; Lovelace et al., 2007). Manz (2015) suggests that self-leadership can also be helpful in the self-motivation and self-direction for physical fitness, which is assumed to contribute to health. Also, several studies on self-leadership training confirmed that self-leadership is helpful in the reduction of strain, and is positively associated with physical and mental health (Unsworth & Mason, 2012; Lucke & Furtner, 2015; Sampl et al., 2017).

Furthermore, self-leadership is found to increase the ability to self-influence performance (e.g., Furtner, Rauthmann & Sachse, 2015; Marques-Quinteiro, Vargas, Eifler & Curral, 2019; Lucke & Furtner, 2015; Sample et al., 2017). The main theoretical grounding for this is that self-leadership positively impacts self-efficacy which influences the actual performance (Prussia et al., 1998; Konradt, Andressen & Ellwart, 2009).

Based on these theoretical arguments as well as extensive research on how self-leadership and self-leadership interventions impact our three dependent variables, we hypothesize the following:

> **Hypothesis 1:** Compared to the control group, participants in a self-leadership training will experience increased a) work engagement, b) general performance and c) general health one week and eight weeks after the training

The mediating role of work engagement

In addition to the two theoretical mechanisms described above, this paper draws on Self-Determination Theory (SDT, Deci et al., 2017) to describe a third mechanism explaining the impact of self-leadership interventions through autonomous motivation.

Self-leadership theory assumes that true self-leadership is based on self-determination and intrinsic motivation (Stewart et al., 2011; Manz, 1986). Self-leading individuals reflect on the what and why of their behaviour as a way to assess whether they can truly endorse their own activities (Stewart et al., 2011). They use self-influencing strategies for the achievement of personal goals and proactively bring their activities in alignment with own values and interests, as

such they are intrinsically motivated in their activities (Manz, 1986; 2015; Stewart et al., 2019). This implies that, at its core, self-leaders strive to act on the basis of autonomous motivation.

Autonomous motivation refers to the full endorsement of one's own activities at the highest level of reflection and is a powerful driver for actual behaviour (Gagné & Deci, 2005; Dworkin, 1988). If goals and activities are based on autonomous motivation, they are experienced as enjoyable and/or meaningful resulting in high levels of energy and motivation for the actual behaviour (Manz, 1986; Ryan & Deci, 2000). There is evidence that autonomous motivation is an important predictor for the quality of actual performance (Judge, Bono, Erez & Locke, 2005; Sheldon, 2014; Deci et al., 2017). Moreover, research suggests that autonomous motivation can be vitalizing such that it also positively affects mental and physical health (Ryan & Deci, 2008; Weinstein & Ryan, 2011). In contrast, controlled motivation is focused on external rewards or the avoidance of punishment, thus based on an urge, which can deplete the energy which is available to the self (Van den Broeck et al., 2011; Ryan & Deci, 2008). As a result, controlled motivation can easily lead to increased stress levels and impairment of health (Gagné & Deci, 2005). Long term controlled motivation can have detrimental effects on performance and health (Deci et al., 2017). It is based on what one *must* do, whereas autonomous motivation is based on what one *wants* to do. Therefore, autonomous motivation is the most sustainable type of motivation (Gillet, Lafrenière, Vallerand, Huart & Fouquereau, 2014; Ryan & Deci, 2008; Deci et al., 2017).

When autonomously motivated at work, this translates to high levels of work engagement (Salanova & Schaufeli, 2008; Van Beek et al., 2012). Engaged workers work because they genuinely want to work; they experience the activities of the job as enjoyable, interesting and valuable (Bakker, Demerouti & Sanz-Vergel, 2014; Salanova & Schaufeli, 2008). As we are interested in the general development of autonomous motivation for a job, the present study will focus on work engagement of healthcare workers. Work engagement represents a more persistent and pervasive affective-cognitive state, as compared to autonomous motivation which refers to a momentary state of behaviour intention (Salanova & Schaufeli, 2008). Engaged workers tend to perform better as they are highly interested in their job and experience positive emotions while at work (Bakker et al., 2014). They solve their daily issues proactively and think of new ideas for improving the quality of their work. They are motivated to 'go the extra mile' if

necessary and show extra-role performance (Bakker et al., 2014). Christian, Garza and Slaugher (2011) explain this positive association on the basis of the extent to which individuals invest their "full selves" in the execution of their work.

Moreover, work engagement is assumed to vitalize people, such that it impacts health. As engaged people are genuinely autonomously motivated by their activities, they experience lots of energy from daily activities, which leads to the experience of greater well-being and physical health in the long run (Ryan & Deci, 2008; Weinstein & Ryan, 2011; Reis, Hoppe & Schröder, 2015).

In line with this, we expect work engagement to positively impact general performance and general health (Deci et al., 2017; Ryan & Deci, 2008; Bakker et al., 2014). More specifically, drawing on the integration of self-leadership and SDT, we hypothesize that work engagement will mediate the effects of the self-leadership training program on the performance and health of healthcare workers.

Therefore, we state that:

> **Hypothesis 2:** Work engagement at T2 mediates the effect of the self-leadership intervention on a) performance and b) health two months after the intervention (T3).

Methods

Research procedure & participants

To test our hypotheses, a longitudinal field experiment with three measurement waves was conducted. The variables were measured two weeks before the intervention started in January and February (T1), approximately one week after the intervention in March and April (T2) and finally, eight to ten weeks following the intervention in May, June, or July (T3). All measurements were taken before the waiting-list control group started its self-leadership training in the autumn. We could not increase this measurement interval due to the training dates of the experimental group (January – April) and control group (autumn).

Six different healthcare organizations in the Netherlands with varied backgrounds and specializations were invited to join the project by an employers' association. In order to control for the influence of organization-related factors including regional labour market shortages or reorganizations we sampled multiple organizations. Five of these organizations were willing to participate,

including two nursing homes for elderly people, two disability care homes, and one general hospital.

The healthcare workers in these organizations were approached to participate through multiple channels such as flyers, email and through managers. Approval from a manager was not required to participate. However, only professionals working in the primary care process were allowed to participate (e.g., nurses and social workers) to ensure a homogeneous sample. Workshops were during working time, while the online training was undertaken during free time. It was clearly communicated that the training was part of scientific research.

Each participating organization was asked to contribute at least 40 participants in order to create four groups per organization; two experimental groups and two waiting list control groups. Two organizations were unable to meet this requirement due to budgetary restrictions and workload. They each contributed 20 participants, and thus, one experiment and one control group. Two organizations for disability care were able to contribute more than 50 employees each. Table 4-1 provides an overview of the participants per organization and measurement wave. Participants were randomly assigned to the experiment or waiting list control group and were not informed which group they were allocated to. A maximum of two members from the same team participated to minimize contamination between the control and experimental group. The HR managers checked whether the groups were diverse in terms of age and working team. The experiment group would train in the first four months of the year, whereas the waiting list control group was told that they would train in the autumn of the same year (i.e. starting after data collection).

Table 4-1: Sample distribution intervention/control group per organization at T1, T2, T3

	T1	**T2**	**T1**	**T2**	**T2**	**T3**	**T3**
	Total	**Intervention**	**Control**	**Intervention**	**Control**	**Intervention**	**Control**
Hospital care	20	10	10	6	9	3	9
Disability care 1	68	31	37	28	34	24	28
Disability care 2	46	22	24	20	19	16	15
Elderly care 1	43	22	21	20	21	19	18
Elderly care 2	18	9	9	6	7	4	7
N total	195	94	101	80	90	66	77

At Time 1 the sample consisted of 195 respondents (i.e., N intervention = 94 , N control = 101). From Time 1 to Time 2, 25 respondents dropped out, and at Time 3 another 27 respondents dropped. In total the original sample reduced by 27% (30% of the experiment group and 24% of the control group). Additional analyses (*t*-tests) showed that not completing all measurements within the control group was random, while in the experiment group it was negatively associated with age (at Time 3) and educational level (at Time 2). Work engagement at time 1 was also negatively related to non-completion at time 2 within the experiment group. Furthermore, two organizations had relatively higher dropout rates among the experiment groups. The trainers observed that participants in these groups found it more difficult to prioritise themselves and the training, as they reported work related stress. Low education, youth and high levels of psychological distress have been reported to predict attrition in longitudinal studies (Gustavsen, Von Soest, Karevold, & Røysamb, 2012). Based on the observations regarding dropout, we decided to control for age and educational level in all the analyses. Due to the dropout the sample predominantly consisted of respondents from three organizations (2x disability care homes and 1x nursing home) (Table 4-1). This sample of 170 respondents was mainly female (96%) with an average age of 43,7 (*SD* = 11,3). Furthermore, 7% completed primary/secondary school, 67% completed vocational training and 26% completed a college degree.

Self-leadership intervention

The training programme had a blended learning approach consisting of two group workshops (week 1 and week 8) and eight weekly e-learning modules available on an online learning platform. The content of the self-leadership training programme was based on exercises from the practical guide for mastering self-leadership by Neck & Manz (2013), positive thinking (Seligman, 2012), strength based coaching (Linley & Harrington, 2006), and proactive problem solving (Covey, 1989). In addition, the facilitation of autonomy was the specific starting point for the training programme design, in order to stimulate the self-determination process (Deci & Ryan, 2000; Ryan & Deci, 2017). Autonomous motivation to develop self-leadership through this training, was prompted by making participation fully voluntary. Equally, the online training exercises were not mandatory, but based on free choice. This means that participants were free to decide for themselves whether or not to make use of the exercises for developing self-leadership and achieving their self-set goal. Furthermore, in the content of

every exercise it was checked whether the autonomous motivation was facilitated. Prior to the training a pilot study was conducted with two small training groups (resp. 6 hospital nurses and 3 homecare nurses), in order to make the workshops and the e-learnings applicable and relatable to the target audience. Three expert trainers with a background within occupational psychology and occupational health psychology were responsible for facilitating the training.[1]

The training started with an introduction workshop. During this workshop participants were supported to observe their own effectiveness in self-leadership skills as well as observe their own vitality. By reflecting on whether activities and situations are energizing or depleting, people are assumed to become more aware of their vitality as well as the differences between controlled and autonomous motivation for activities in their lives. Subsequently, people were encouraged to mentally focus on the things they can influence, and also *want* to influence. Thereafter, participants were asked to determine their own goals for developing their vitality, thus based on autonomous motivation.

Following the introduction workshop, participants could exercise self-leadership throughout the eight e-learning modules. Based on the pilot it was expected that the weekly module would take approximately one hour.

Module 1 focused on the use of challenging goal-setting with the aim to increase energy in a short time, namely 1 week. The rationale was that setting challenging though energizing and achievable short term goals would increase both self-efficacy (belief that one is able to achieve the goal) and autonomous motivation (willingness to actually achieve the goals). As the goal is a challenging one, it is assumed people still may experience difficulties in achieving the goal. Therefore, participants were encouraged to use reminders and self-rewards to support goal-achievement (Neck & Manz, 2013).

In module 2 participants reflected on the natural rewards within their job and on the opportunity to actually change aspects within the job such that it becomes more intrinsic motivating (Neck & Manz, 2013). By doing so participants are supported in reflecting on their opportunities for self-influencing own work engagement.

In module 3, 4, 5 and 6 the specific focus was on training constructive thought patterns, based on strengths and opportunities for self-influence, rather than weaknesses and threats. In module 3 participants reflected on their strengths which they perceive as energizing and to specifically use the energizing strengths (Linley & Harrington, 2006). Module 4 encouraged participants to mentally focus

[1] *In order to check the overall satisfaction with the training a short survey with two open ended questions was conducted among the intervention group after finishing the training as a way to get insight in the perceptions and experiences of the training itself. The results are available upon request.*

on the positive or natural rewarding aspects during a day, rather than the negative ones, and reflected on how they have influenced these (Seligman, 2012). Module 5 facilitated participants to evaluate negative thoughts in specific situations within their daily life and subsequently transform these into positive thoughts (Neck & Manz, 2013). Module 6 concerned the implementation of self-leadership strategies in concrete difficult or challenging situations in daily life. Participants were encouraged to reflect on their own thoughts and behaviours within this situation as well as on the opportunities and their willingness to actually change the situation (Neck & Manz, 2013; Covey, 1989). Based on this reflection the participant was able to draw his/her own conclusion for actual change behaviour.

In module 7 participants were invited to reflect on their aspirations for career development based on the insights from the previous modules: the insights in desired natural rewards within the job (module 2) and in personal strengths which are inherent energizing (module 3). Module 8 was a summary of the course.

At the end of these eight weeks the training closed with a second group workshop. During this workshop participants evaluated their own results with regards to their personal goal for the development of their vitality. Moreover, participants were challenged to mentally focus on their strengths and positive achievements rather than negative aspects of their personal functioning. Finally, the workshop gave participants the opportunity to discuss questions concerning the implementation of self-leadership within their daily lives.

Measures

Work engagement

For measuring work engagement we took the 6 items from the Utrecht Work Engagement scale specifically referring to vitality and dedication (Schaufeli, Bakker & Salanova, 2006), since this indicates autonomous motivation at work. A sample item referring to vitality at work is "At my work, I feel bursting with energy". A sample item for dedication was "I am enthusiastic about my job". Participants responded on a 7-point response scale ranging from never (1) to always (7). Cronbach's alpha's were stable over time (T1 = .91; T2 = .94; T3 = .93).

General performance

General performance was measured with the single item indicator for general performance (Kessler et al., 2003) in which respondents are asked to rate their

overall work performance during the last four weeks on a scale ranging from 0 to 10.

General health

General health was measured with a single item "How would you rate your general health at this moment (Hooftman et al., 2017). Respondents answer on a 6-point Likert scale ranging from very well to very bad.

Self-leadership

For measuring self-leadership strategies 8 subscales from the Revised Self-leadership questionnaire (Houghton & Neck, 2002) were selected: self-observation (4 items, e.g., "I usually am aware of how well I'm doing as I perform an activity"), self-goalsetting (5 items, e.g., "I establish specific goals for my own performance"), self-cueing (2 items, e.g., "I use written notes to remind myself of what I need to accomplish"), self-reward (3 items, e.g., "When I do an assignment especially well, I like to treat myself to some thing or activity I especially enjoy"), self-punishment (4 items, e.g., "I tend to get down on myself in my mind when I have performed poorly"), evaluation thoughts and assumptions (4 items, e.g., "I think about my own beliefs and assumptions whenever I encounter a difficult situation"), self-talk (3 items, e.g., "Sometimes I find I'm talking to myself (out loud or in my head) to help me deal with difficult problems I face"), and natural rewards (5 items, e.g., "I seek out activities in my work that I enjoy doing" and "I focus my thinking on the pleasant rather than the unpleasant aspects of my job activities"). Furthermore we used the scale for self-leadership behaviour (Yun, Cox, Sims, 2006) (6 items, e.g., "I solve problems when they pop up without always getting my supervisor's stamp of approval"). Cronbach's alpha's were stable over time (T1 = .81; T2 = .87; T3 = .88).

Control variables

We controlled for organization (by creating four dummy-variables), age and educational level, since these variables were related to the dropout within the experiment group throughout the intervention. We also controlled for job autonomy at T1, since job autonomy is seen as an important resource for work engagement, health and performance of healthcare workers (Keyko, Cummings, Yonge & Wong, 2016), while it is also an antecedent for self-leadership (Stewart et al., 2011). Job autonomy was measured with the 9-item job autonomy scale by Morgeson and Humphrey (2006). Employees responded on a 5-point response

scale ranging from strongly disagree (1) to strongly agree (5), and the scale showed sufficient reliability (α = .91).

Analyses

Multi-level modelling was used to test the hypotheses. We used a two-level model as the measurement occasions were nested within person. Level-one variables were group-mean centered and all random effects were fixed. We followed the procedure used by LeBlanc, Hox and Schaufeli (2007) to test Hypothesis 1. LeBlanc and colleagues propose to conduct a level-1 moderation analysis which includes two dummy variables representing measurement time (i.e. pre-intervention was coded as 0 and post-intervention at T2 and post-intervention at T3 as 1), group membership (i.e. experimental or control group), two interaction terms representing the products of these three dummy variables, and effects of these variables on the three dependent variables work engagement, job performance, and health. A significant interaction term indicates that the level of change in the experimental group is significantly different from that of the control group.

To test Hypothesis 2, which proposes that work engagement at T2 mediates the effect of the intervention on job performance and health at T3, we followed the procedure for testing multilevel mediation recommended by Preacher, Zyphur, and Zhang (2010). This involved testing the significance of the within- and between-level indirect effect ab using bootstrapping to obtain bias corrected 95% confidence intervals for the indirect effects (Bauer, Preacher & Gil, 2006). In the model, Path a is the path from the interaction terms to the mediator work engagement and Path b is the path from work engagement to the dependent variables job performance and health. Also included in the model were paths from the interaction term to the dependent variables. Because we are interested in the mediating role of work engagement at T2 on the dependent variables at T3 we used the between-level indirect effect to test hypothesis 2.

To test for non-random sampling effects due to participant attrition, we followed Goodman and Blum's procedure (1996). They propose to conduct a logistic regression in which the dependent variable was a dichotomous variable representing those present at Time 1, 2, and 3 and those who responded at Time 1 and dropped out at Time 2 and/or Time 3 (i.e. dropouts). All the main study variables at Time 1 and Time 2 were entered as independent variables. A significant effect of one of the independent variables indicates that participant

attrition might bias the results. The results show that none of the study variables at Time 1 and Time 2 significantly predicted the attrition dummy variable.

Results

Manipulation checks

Table 4-2 presents the means and standard deviations for both the experiment and control group, and includes group differences at the three measurement points. We first tested whether the self-leadership intervention indeed significantly improved self-leadership within the intervention in contrast to the control group. In line with other studies on self-leadership training (Unsworth & Mason, 2012; Lucke & Furtner, 2015), we tested whether the use of self-leadership strategies significantly increased among the intervention group as compared to the control group (Table 4-2). A series of *T*-tests revealed that there were no differences between experiment and waiting list control groups in the pre-test condition at Time 1 (3.03 vs 3.01, t = -.35(168), p = ns). On Time 2 (3.25 vs 3.11, t = 2.28(168), p < .01) and Time 3 (3.31 vs 3.14, t = 2.43(141), p < .01), the results show that self-leadership is higher in the experimental group compared to the control group, which shows the effect of the manipulation.

Table 4-2: Means and SDs of experimental and control group, including T-values at the three measurement occasions

	Experimental		Control		T2	T2	T3	T3
	Mean	*SD*	Mean	*SD*	*t*	df	*p*	Diff
Self-leadership T1	3.03	0.35	3.01	0.36	0.35	168	0.73	0.02
Self-leadership T2	3.25	0.40	3.11	0.40	2.28	168	0.02	0.14
Self-leadership T3	3.31	0.43	3.14	0.40	2.43	141	0.02	0.17
Work engagement T1	5.11	1.00	4.99	1.03	0.79	168	0.43	0.12
Work engagement T2	5.36	1.06	4.99	1.10	2.23	168	0.03	0.37
Work engagement T3	5.45	0.90	5.11	1.13	2.01	141	0.05	0.35
Job performance T1	7.33	1.12	7.37	1.12	−0.24	168	0.81	−0.04
Job performance T2	7.86	1.00	7.47	0.94	2.66	168	0.01	0.40
Job performance T3	7.97	0.89	7.56	0.92	2.69	141	0.01	0.41
Health T1	3.95	1.02	3.68	1.09	1.68	168	0.10	0.27
Health T2	4.08	0.73	3.82	1.00	1.87	168	0.06	0.25
Health T3	4.21	0.87	3.95	1.05	1.62	141	0.11	0.26

Table 4-3: Means, SDs and correlations of the study variables

Variable	Mean	*SD*	1	2	3	4	5	6	7	8	9	10	11	12
Intervention[1]	–	–	–											
Educational level	7.00	1.17	0.10	–										
Age	43.71	11.29	0.04	−0.19*	–									
Job autonomy	2.84	0.61	0.06	0.01	−0.01	–								
Health T1	3.81	1.06	0.13	−0.02	−0.01	0.09	–							
Health T2	3.94	0.89	0.14	0.03	0.01	0.05	0.72**	–						
Health T3	4.07	0.98	0.14	0.01	−0.03	0.19*	0.67**	0.71**	–					
Performance T1	7.35	1.12	−0.02	−0.03	0.13	0.27**	0.25**	0.20**	0.18*	–				
Performance T2	7.65	0.99	0.20**	−0.02	0.22**	0.05	0.27**	0.32**	0.34**	0.51**	–			
Performance T3	7.75	0.93	0.22**	0.06	0.16	−0.01	0.18*	0.29**	0.38**	0.51**	0.51**	–		
Work engagement T1	5.05	1.01	0.06	−0.06	0.16*	0.29**	0.43**	0.41**	0.48**	0.55**	0.51**	0.37**	–	
Work engagement T2	5.17	1.10	0.17*	−0.03	0.15	0.19*	0.40**	0.45**	0.56**	0.57**	0.55**	0.41**	0.80**	–
Work engagement T3	5.27	1.04	0.17*	0.03	0.09	0.24**	0.36**	0.41**	0.54**	0.20**	0.57**	0.53**	0.77**	0.81**

*[1] 0 = waiting list control group, 1 = intervention group; * = Correlation is significant at the 0.05 level (two-tailed), ** = Correlations is significant at the 0.01 level (two-tailed)*

Table 4-4: Results of multilevel analysis

	Work engagement	Job performance	Health	Job performance T3	Health T3
Intercept	5.11 (0.12)***	7.32 (0.13)***	3.95 (0.11)***	5.03 (0.24)***	2.27 (0.24)***
Work engagement T2				0.44 (0.04)***	0.32 (0.04)***
Time and intervention					
Experimental group[1]	0.12 (0.16)	−0.04 (0.17)	0.27 (0.15)†	−0.09 (0.16)	0.23 (0.14)
Time 2	0.25 (0.07)**	0.54 (0.13)***	0.12 (0.08)	0.42 (0.13)**	0.04 (0.09)
Time 3	0.32 (0.08)***	0.61 (0.14)***	0.30 (0.10)**	0.47 (0.14)**	0.19 (0.09)†
Experimental group x Time 2	0.24 (0.10)*	0.43 (0.18)*	−0.02 (0.12)	0.32 (0.18)†	−0.10 (0.12)
Experimental group x Time 3	0.20 (0.11)†	0.43 (0.19)*	0.05 (0.14)	0.33 (0.18)†	−0.01 (0.13)

*[1]0 = waiting list control group, 1 = intervention group; † = Parameter is significant at the 0.10 level (two-tailed), * = Parameter is significant at the 0.05 level (two-tailed), ** = Parameter is significant at the 0.01 level (two-tailed), *** = Parameter is significant at the 0.001 level (two-tailed)*

Hypothesis tests

Table 4-3 presents the means, standard deviations, correlations, and reliabilities between all study variables over time. Table 4-4 shows the results of the multilevel analyses used to test the hypotheses. We also conducted additional ANOVA's to compare the means of the five organizations. No differences between the five organizations with respect to the core variables of the study were found. We also conducted the multilevel analyses with all control variables (age, educational level, job autonomy, and the four organization-dummies) again; the results were not different from the results reported in Table 4-4. Considering the size of the sample we therefore decided to report the most parsimonious model.

Hypothesis 1 proposes that compared to the control group, participants in a self-leadership training will experience an increased a) work engagement, b) general health and c) general performance one week and eight weeks after the training. For work engagement, the results show a significant intervention effect at Time 2 ($\gamma = .24(.10)$, $p < .05$), and a small intervention effect at Time 3 ($\gamma = .20(.11)$, $p < .10$). Closer inspection of the means at the three measurement points shows that work engagement increased from Time 1 to Time 2 in the experimental group (5.11 to 5.36), but not in the control group (4.99 to 4.99). From Time 1 to Time 3, work engagement slightly improved in both the

experimental group (5.11 to 5.45) and control group (4.99 to 5.11). This partly supports Hypothesis 1a.

For job performance, the results show a significant intervention effect at Time 2 (γ = .43(.18), p < .05), and at Time 3 (γ = .43(.19), p < .05). Closer inspection of the means at the three measurement points shows that job performance increased from Time 1 to Time 2 in the experimental group (7.33 to 7.86) to a larger extent compared to the control group (7.37 to 7.47). From Time 1 to Time 3, job performance also improved more strongly in the experimental group (7.33 to 7.97) compared to the control group (7.37 to 7.56). This result supports Hypothesis 1b.

Finally, for general health, the results show that the intervention effects at time 2 (γ = -.02(.12), p = ns) and at Time 3 (γ = .05(.14), p = ns) are not significant. Closer inspection of the means at the three measurement points show that general health increased from Time 1 to Time 2 in the experimental group (3.95 to 4.08) but also in the control group (3.68 to 3.82). From Time 1 to Time 3, general health also improved in the experimental group (3.95 to 4.21) as well as in the control group (3.68 to 3.95). This result rejects Hypothesis 1c.

Hypothesis 2 concerned the indirect effect of the intervention on a) performance and b) general health two months after the intervention, mediated by work engagement directly after the intervention. Table 4-4 shows that work engagement at T2 is significantly associated with both job performance T3 (γ = .44(.04), p < .001) and general health T3 (γ = .32(.04), p < .001). Moreover, the indirect path from the intervention to job performance at Time 3 through changes in work engagement at Time 2 was significant (γ = .41(.22), p < .05, CI 95% = .86;.01). We find a similar result for general health, work engagement at Time 2 mediates the intervention effect on general health at Time 3 (γ = .43(.20), p < .05, CI 95% = .83;.03). These findings provide full support for hypothesis 2.

Discussion

In this study, we aimed to test the impact of a self-leadership intervention on work engagement, health, and job performance of healthcare workers, and the mediating role of work engagement on this effect for health and job performance. By integrating Self-Determination Theory and self-leadership theory, the present study showed that a voluntary based self-leadership training programme positively

impacts work engagement and performance of healthcare workers. Moreover, improved work engagement also mediates the effects of the training programme on health and performance two months later.

Theoretical implications

These findings have several implications for theory. Working within a healthcare setting is considered highly demanding, both physically and emotionally (Broetje et al., 2020; Garrosa et al., 2008). The current corona virus pandemic (COVID-19) is challenging healthcare workers' ability to cope with stress and to proactively look after their own health even more than before (Vagni, Tiziana, Giostra & Pajardi, 2020; Pearman, Hughes, Smith & Neupert, 2020). This is in sharp contrast to the critical need for healthy and productive healthcare workers. In the past, acknowledgement of the highly demanding work context of healthcare workers has led to a large number of intervention studies with the aim to reduce stress (e.g., Ruotsalainen et al., 2015). However, this main focus on the negative work context might have resulted in a blind spot for the potential benefits of enhancing positive motivational processes.

According to SDT, stress is associated with controlled motivation (Deci et al., 2017; Van den Broeck et al., 2011). If interventions for healthcare workers continue to focus on dealing with demands, the focus remains too much on problems instead of strengthening positive mechanisms in motivation and performance. Self-Determination Theory asserts that it is autonomous motivation that predicts vitality, health, personal growth, as well as high quality and sustainable performance (Deci et al., 2017). If people are able to function autonomously, they tend to be more engaged in their job, they are more likely to thrive, as well as be more resilient to work related stressors. The present study shows that developing self-leadership indeed contributes to work engagement and performance, and moreover, that work engagement predicts health and performance two months later. This underpins the importance of changing the focus from dealing with negative external factors to taking the lead and acting on basis of self-determination for the individual development of healthcare workers.

Our findings are also in line with recommendations by several healthcare scholars about the development of psychological empowerment (Wagner, Cummings, Smith et al., 2010) and hardiness (Guglieli, Gallì, Simbula & Mazzetti, 2019; Garrossa, Moreno-Jiménez, Liang, González, 2008) of healthcare workers. Psychological empowerment is characterized by self-determination,

competence to control things, and the perception of having impactful and meaningful work (Thomas & Velthouse, 1990). People with a hardy personality tend to proactively control work and life, search for solutions to the challenges and difficulties which they meet, whilst being committed to both their work and to themselves (Garrossa et al., 2008). Research shows that healthcare workers with a hardy personality have a positive and reciprocal relationship with work engagement and have fewer symptoms of burnout (Guglieli et al., 2019; Garrossa et al., 2008). A self-leadership training programme can be an effective way of giving healthcare workers the opportunity to develop more psychological empowerment, hardiness, and better health. Through developing their self-leadership, healthcare workers might experience that they are more in control of their work, as well as enjoying their job for the implicit or natural rewards which reside within their job.

The present study also contributes to self-leadership theory by addressing autonomous motivation as a mechanism to explain the positive and sustainable effects of self-leadership interventions. Other studies have shown that self-leadership interventions contribute to self-efficacy and the conservation of resources, which subsequently explain the positive outcomes related to well-being and performance (e.g., Unsworth & Mason, 2012; Lucke & Furtner, 2015). However, Ryan and Deci (2006) argued that self-efficacy is not a guarantee for autonomous motivation. If a performance goal is externally regulated and still achieved, the self-efficacy concerning that goal-achievement might increase, and also short term performance, while autonomous motivation is still lacking (Ryan & Deci, 2006). Therefore, both self-efficacy and autonomous motivation are important considerations in the self-leadership process, and should be tested together in future research to examine its combined effects.

While we assume that practicing self-leadership on the basis of autonomous motivation have contributed to the research outcomes, we need to consider the potential effects on need satisfaction through training as well (Deci et al., 2017). SDT theorizes that the satisfaction of the basic psychological need for autonomy, for competence and for social relatedness facilitate the intrinsic motivating process. Therefore, SDT based interventions often specifically focus on facilitating the need satisfaction as it is assumed that need satisfaction will in itself function as nutrient for the intrinsic motivational process (Ryan & Deci, 2017). Although we did not measure need satisfaction we expect that our intervention may have satisfied all three needs. First our intervention satisfied

the need for autonomy, because participation in the intervention was fully voluntary during the whole process. The development goals were encouraged to be autonomy-based. Second, training of self-leadership might have satisfied the need for competence, since self-leadership scholars have repeatedly found evidence for the increase in self-efficacy after training self-leadership (e.g., Unsworth & Mason, 2012; Lucke & Furtner, 2015). And third, the training of self-leadership was designed within a group setting (maximum 10 participants). People were encouraged to cooperate with each other during the workshops as well as during the online training. Equally, the trainer facilitated the learning process by positively rewarding participants for their reflections and behaviour. These encouragements by colleagues and the trainer may have satisfied the need for social relatedness, which in itself might have contributed to the work engagement. Future research should include measures of need satisfaction in order to establish its contribution to work engagement, performance, and health as a result of a self-leadership training programme.

Practical implications

When healthcare organizations offer their employees a self-leadership training programme, they can expect better work engagement, health and performance from their employees due to their improved ability to take the lead. However, facilitating self-leadership development requires some consideration. The voluntary basis of the training programme challenges HRM and managers to attract employees to actually participate in the training programme. The employer can of course facilitate the development of self-leadership, but cannot dictate it, as this would lead to controlled motivation instead of autonomous motivation for participation (Van Vuuren, Lub & Marcelissen, 2016; Van Dorssen-Boog, Van Vuuren, Yigit, 2019). In order to encourage employees to participate, healthcare organizations need to build a communication strategy around self-leadership and the development opportunities. Using multiple communication lines such as direct emails and verbal information by managers and HR professionals are recommended. Furthermore, it is important that employees experience a culture in which they are allowed to take the lead in their own performance and well-being (Van Vuuren et al., 2016). Developing empowering leadership can be helpful for building such a culture, as it is this type of leadership that positively influences self-leadership of employees (Yun, Cox & Sims, 2006).

Limitations and implications for further research

Although the experimental design is an important strength of our study, there are also several limitations. The present study was set within the healthcare sector, which is a strength for understanding this specific female sector, but a limitation for generalizing to the general labour market. Replication of this study within other sectors is therefore needed.

Second, all our data are based on self-report questionnaires, which are prone to common method bias. Yet, we specifically chose this design because we were interested in how engaged our participants were. Work engagement is a private experience which is difficult to assess by another person (e.g., supervisor or colleague). To support our choice, Spector (2006) has shown that common method bias is hardly ever strong enough to bias results. We followed the recommendations by Podsakoff, MacKenzie, Lee, and Podsakoff (2003) to minimize the risk of common method bias. First, we guaranteed anonymity of respondents, thereby reducing the possibility of social desirable answers. Second, we created a psychological separation between the measures in the questionnaire. However, we encourage research using more objective measures for health and performance.

Self-report questionnaires are often lengthy, which may result in a substantial burden to participants and stimulate drop-out. To avoid this, we used two single-item measures for general health and general performance. Although single-items measures could be a challenge for reliability and validity, research shows that our self-reported single-items for general health and general performance have been used with satisfactory levels of validity and reliability (Bowling, 2005).

While the present study assessed the sustainability of the training effects two months after finishing the training, and theorized that this will predict the impact of the training on work engagement, performance and health, we were not able to test the effects over longer time periods. We suggest for future studies to design the research in such way that effects can be measured over longer time periods. Moreover, further research could include a third group that follows a placebo intervention in order to test for potential placebo-effects (Foroughi, Monfort, Paczynski, McKnight, & Greenwoord, 2016).

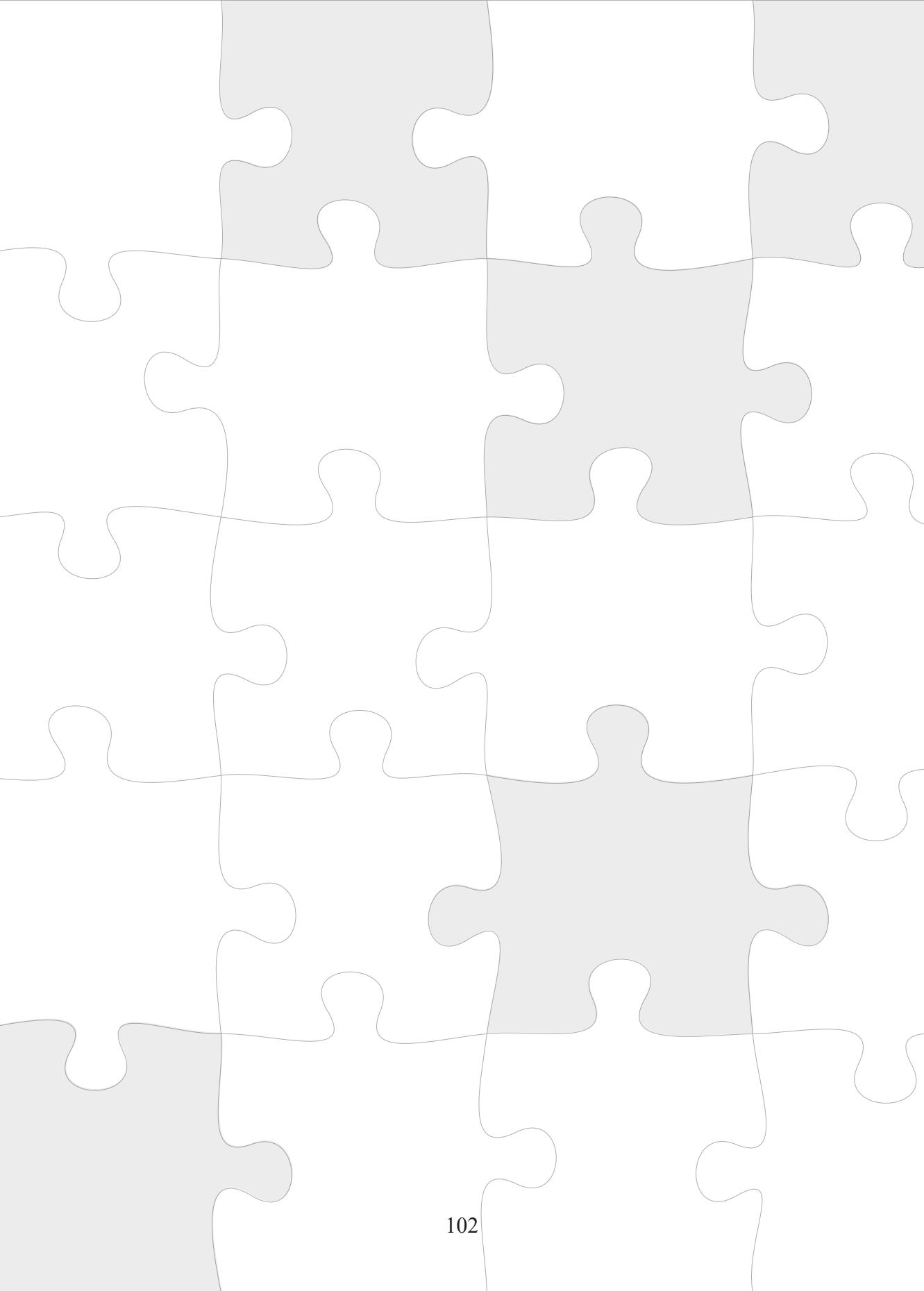
The self-leadership literature suggests that self-leadership might not suit every individual, nor is it a panacea for all the problems related to the work

environment or labour market (Manz, 2015). Within our dropout analysis it was found that people who has less education, were younger or reported lower work engagement, had higher attrition rates in the experiment group. It remains unclear whether these participants did or did not benefit from the training of self-leadership. We suggest a more elaborate investigation of the preconditions (both personal, private, and contextual aspects) which positively or negatively influence training effects. For example, the improvement of self-leadership might affect both working and private life, leading to positive gain spirals of resources in both at work and at home.

Finally, the present study did not control for individual characteristics such as personality or core self-evaluation, since autonomous motivation to participate in the training programme was an important precondition for the study. The study also did not control for the effect of hierarchical leaders. However, individual characteristics (Williams, 1997) as well as hierarchical leaders (Marshall, Kiffin-Petersen, & Soutar, 2012) may have had an impact on the effectiveness of self-leadership development. For instance, Assen and Bekker (2009) have suggested that women, who formed the biggest part of our sample, often find it difficult to stay aware of their autonomous goals and needs, as they tend to be highly sensitive to other's needs (Assen & Bekker, 2009). Inclusion of personality and leadership characteristics can provide insight into the influence of these factors on the effectiveness of a self-leadership training programme.

Conclusion

The present study has shown the relevance of facilitating healthcare workers with a voluntary based self-leadership training programme. Considering the critical role of the healthcare sector in society, gaining more knowledge on developing healthy and productive healthcare workers is of vital importance. By developing self-leadership, with specific attention for self-determination, our study finds that healthcare workers are more engaged with their job, which in turn leads to more health and performance.



Chapter 5

Investing in the development of strong leadership of healthcare professionals and healthcare teams - a move towards sustainable employability

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Chapter 5 - Investing in the development of strong leadership of healthcare professionals and healthcare teams - a move towards sustainable employability

Introduction

Working in healthcare can give a lot of joy and energy, as healthcare professionals usually enjoy providing care. They are intrinsically motivated for their job and are often prepared to make an effort to provide (even) better care. As a result, they want to continue working in this sector during their working lives. However, working in healthcare can absorb a lot of energy. During the year 2019, working in healthcare is an important cause of dropout and turnover. Absenteeism has gradually increased over the past five years from 4.9% in 2014 to 6.2% in 2018 (Vernet, 2019). One in five employees leaves their employer and of these, 8.1% even leave the healthcare sector. The number of open vacancies within the healthcare industry reached its highest point in twenty years in 2018. With a turnover rate of 20% and absenteeism of more than 6%, organizations not only have a workforce problem, but also a continuity problem. Healthcare organizations are in a vicious circle of problems and HR managers face a major challenge. For this reason, at the end of December 2018, the "Working in Care" committee advised the The Second Chamber to focus on staff retention (Terpstra, Driel, Ten Hoonte, Rullmann & Schouten, 2018).

We recently completed an ESF project for sustainable employability in the healthcare sector with interventions aimed at strengthening the leadership of employees and teams. The aim of our interventions was to empower employees and teams such that they experience more joy, flourish, provide better care, and are retained for the healthcare sector. In our opinion, these interventions provide tools which will disrupt the negative spiral in the healthcare sector and create positive pathways. Of course, our interventions cannot solve all the problems, but they can contribute to getting a better grip on the situation.

In this article, we discuss the design of these interventions as well as the qualitative evaluation of the results and implementation process. We first explain the theoretical background for the intervention design. We also reflect on the trend in recent years within healthcare, whereby employees and teams have been given

more responsibility and autonomy in their jobs. We address what this requires of the self-leadership of employees and shared leadership of teams, and also which role the traditional manager can play in this transition. Based on this, we have formulated six basic principles for intervention design.

Unfortunately, a quantitative analysis on the effects of the intervention was not possible, due to the low response rate on the questionnaire. However, the qualitative effect and process evaluation of this project has provided valuable insights which are shared in this article. We conclude with practical recommendations for managers, HR advisors, and consultants, as they may use these type of positive interventions for improving work engagement and sustainable employability within the healthcare industry or beyond.

Developing sustainable employability - Focus on ability and willingness to work

Work engagement and work ability are two important indicators of sustainable employability. They refer to the willingness and ability to work during a working life (Van Vuuren, 2012). Employees are sustainably employable if they are not only able and willing to meet the demands of the job today, but also remain capable and motivated to be productive throughout their working lives. To increase sustainable employability and break the negative spiral of dropout and turnover, it seems a good idea to pay attention to increasing work engagement (willing) and work ability (being able) of healthcare workers. If people experience their job as interesting, challenging, or simply enjoyable, this will be revealed by their intrinsic work motivation (Gagné & Deci, 2005). As a result, they experience more vitality, more perseverance, more health and personal growth (Ryan & Deci, 2008). However, if people do their job tasks primarily because they have to, while the activity in itself is not experienced as fun or meaningful, this will cause strain. For instance, if someone works to meet the demands of someone else, such as the manager or the Health and Safety Executive, one works for getting approval or avoiding negative feedback instead of for the implicit intrinsic rewards of the activity. As a result, doing one's job often becomes more strenuous, since one works because he or she "has to" work, rather than is "willing to" work.

Conditions for being able and willing to work

According to the Self-Determination Theory, intrinsic motivation is enhanced if three basic psychological needs are met: the need for autonomy, the need for

social relatedness, and the need for competence (Van den Broeck, Vansteenkiste, De Witte, Lens & Andriessen, 2009). If people experience autonomy, meaning that they experience freedom to make their own choices, this provides opportunities to choose goals and activities which match with own interests and values. The experience of social relatedness gives people the pleasant feeling that they are not alone. People usually experience pleasure in being together and working with others. In addition, the support of others can contribute to meeting challenges at work. And lastly, people want to feel competent. They want to experience that they have valuable skills for their job. The Strengths approach (Van Woerkom, 2018) assumes that each individual has unique competences and qualities, which are valuable and also energizing to use. Research shows that people who know their strengths and also use them, feel more authentic and engaged. Moreover, they appear to perform better (Van Woerkom, 2018).

The Job Demands Resources model (JDR model, Bakker & Demerouti, 2007) recognizes these three sources of motivation. The JDR model assumes that positive outcomes such as work engagement and job performance, are fuelled by energy sources in the work context, such as experiencing job autonomy, social support from colleagues and from leaders, and the opportunity to develop and utilise competences. However, the JDR model also recognizes that the demands of the job can equally lead to negative outcomes related to stress and burnout. Job demands involve aspects of the job which require effort and energy (energy drains). For instance, in the healthcare sector this includes work load and time pressure, administrative regulatory pressure, but also intimidation from clients and disturbances in social relations with colleagues (Ruotsalainen, Verbeek, Mariné & Serra, 2015). In order to deal with the job demands, job resources (energy sources) can be helpful. For example, the experience of job autonomy may help employees to self-influence how and when they do their job tasks, which allows them to better distribute the workload throughout the day. By experiencing social relatedness, healthcare workers feel social safety within their team, which makes it easier to ask for help in daily job demands. And by developing competences, employees develop more confidence in dealing with difficult challenges in their job.

Strengthening as a starting point for development

Traditionally, organizations tend to pay particular attention to what is going wrong, and therefore need to be resolved in organizational functioning. A

problem-oriented approach in which a lot of attention is paid to reducing job demands and work stressors (curation and prevention), while relatively little attention is paid to amplification or strengthening resources (Van Vuuren, 2012). However, if the development focus shifts from problem-oriented to strength-oriented, attention is paid to what is going well, and what has the potential to grow further. It is precisely the positive influence of work-related resources which seems to be an effective way for realizing a positive impact at all fronts. If employees and teams become stronger in effectively using the resources of autonomy, social support, as well as their own and others' strengths, we expect a positive spiral to occur towards more motivation, vitality, health, and productivity. In addition, we expect fewer negative outcomes such as burnout, absenteeism, employee turnover and outflow.

The development towards more self-management teams in healthcare organizations

In recent years, many Dutch healthcare organizations have developed their management strategy such that teams and individual employees are encouraged to function more autonomously (InVoorZorg, 2017). Employees and teams are given more responsibility to organize their work, while the manager functions more at a distance. Stewart and colleagues (2011) explain that the movement from traditional leadership to more self-management moves along a continuum (Stewart, Courtright & Manz, 2011). In traditional leadership, the goals and strategy (what and why), as well as the process (how) are determined externally by managers and by externally determined rules (e.g., legislation). If teams and employees get more decision latitude with respect to work processes, while organizational goals and strategy are primarily determined by managers and/or externally determined rules and procedures, self-management is the case. Employees and teams function on the basis of self-leadership if they get the freedom and responsibility to determine their own goals, strategy, and work processes (Stewart et al., 2011) (Figure 5-1). Self-Determination Theory explains that if employees can determine what they do and why they do things, they will experience more intrinsic motivation for their behaviour, meaning that they will feel inclined to put effort in achieving their goals (Van den Broeck et al., 2009). This is in contrast to external motivation where employees act because it should be done, regardless of whether they find the activity valuable or meaningful.

Figure 5-1: Continuum of self-leadership (Stewart, Courtright & Manz, 2011)

Externally managed	Self-management	Self-leadership
No influence over What, How, and Why of work	Influence over How of work	Influence over What, How, and Why of work
Dependent only on extrinsic incentives	Mainly dependent on extrinsic incentives	Dependent on intrinsic and extrinsic incentives

Autonomy – a resource and a challenge

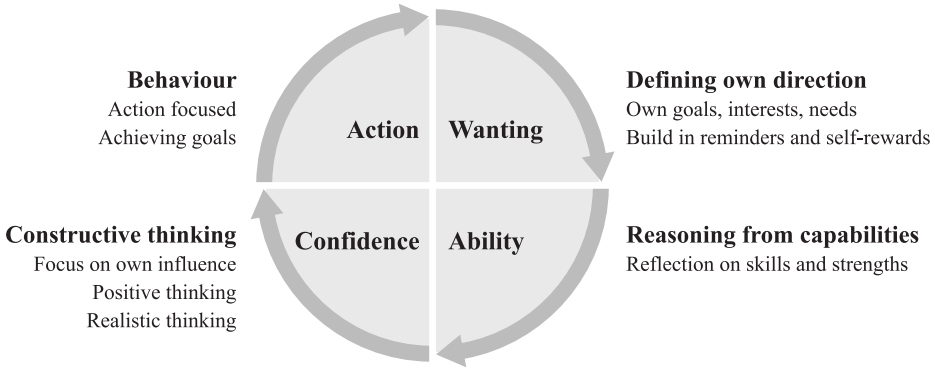
The movement towards more self-management teams withing the Dutch healthcare industry appears to be a good measure to increase work engagement and work ability. The expectation is that self-management will satisfy the need for autonomy and as such will contribute to the work engagement of healthcare professionals. Moreover, job autonomy gives employees the opportunity to find a balance between workload and individuals' capacities (Bakker & Demerouti, 2007). However, prior research showed that if healthcare workers have too much job autonomy, the positive effects turn into increased levels of stress and reduced job satisfaction (Kubicek, Korunka & Tement, 2014). The self-responsibility, including the autonomous decision making, may be too challenging for them. Offereins and Ten Have (2016) described an intervention study at Brabantzorg in which the goal was to create more job autonomy and to stimulate initiative from healthcare workers for quality improvement, via a bottom-up intervention approach. The idea was that by having more job autonomy and thus less bureaucracy, employees would be better able to implement their own ideas concerning quality improvement related to their healthcare services. It turned out that while the teams indeed benefitted from the freedom to improve the healthcare services themselves, they also appreciated the tight project management and coaching by the professional supervisors. These findings are consistent with Corporaal (2014) who concluded in his thesis on job preferences of young job seekers, that although these people have a need of autonomy in their job which

they want to have satisfied, they also have a need for clarity and structure. Moreover, it was found that the need for job autonomy was related to one's own confidence concerning the ability to actually function autonomously. Possibly, there is an optimum for autonomy; too little job autonomy is detrimental for health and work engagement, but too much job autonomy can also have that effect. We assume that an increase in job autonomy also requires skills in the actual autonomous functioning. Therefore, we argue that the transition towards more job autonomy for healthcare workers and teams, also appeals for the development of self-leadership (individual level) and shared leadership (team level). Furthermore, we expect that traditional leadership is still necessary, as leaders can coach and facilitate employees and teams in their autonomous functioning.

Self-leadership – leading oneself to more employability

Self-leadership refers to the self-influencing process of self-motivation and self-direction in order to optimize performance. Self-leaders take responsibility for their own functioning, are highly reflective and solve their daily work related problems in an autonomous way (Van Dorssen, Den Boer, Van Vuuren, 2015; Neck & Houghton, 2006; Manz, 2015). Just as a leader tries to direct and motivate team members to optimal functioning, employees can motivate and direct themselves. As such, self-leaders will try to make their job more enjoyable, interesting, or challenging as a way to motivate themselves. And an important basis of self-leadership is also that one especially focuses on goals and activities which one can influence (Figure 5-2).

Figure 5-2: Self-leadership cyclus



Although self-leadership has a positive and intrinsically motivating focus, the theory recognizes that there are always tasks which are less motivating, but still need to be done. These tasks can be boring or in fact be very difficult and challenging. To still get started, additional strategies can be employed to achieve these type of goals. For example, one can use reminders as a way to stay focused on the goals. A reminder can be a to-do list or a motivational poster on the wall. However, a reminder can also be disruptive to goal achievement (private messages on phone), which makes it important to remove this reminder (e.g., put away the phone when another task needs concentration and attention). Another self-leadership strategy is to promise yourself a reward. A gift to yourself when you have accomplished something. This can be a fun activity, or giving yourself some rest as a reward for the effort and results you have achieved. Furthermore, effective self-leadership behaviour is easier if one has positive and constructive thoughts about one's own effectiveness for that behaviour. Self-leaders reflect on a regular basis on their own thoughts and, if necessary, try to formulate more helpful thoughts to achieve results. Positive thoughts will help to increase confidence for the intended actions.

While not every healthcare worker is a natural self-leader, it appears that healthcare workers can develop their self-leadership through training, which subsequently contributes to their work engagement and work ability (De Lange, 2018; Van Dorssen-Boog, Pak, Van Vuuren, De Lange, 2019).

Shared leadership

In addition to self-leadership, also shared leadership can contribute to the effectiveness of the autonomous functioning within the team. Shared leadership refers to leadership in which team members share responsibility for leadership activities and thereby influence each other (Coun, Gelderman & Pérez-Arendsen, 2015). In doing so, the influence of team members is flexible and often reciprocal. Team members pick up the tasks and roles which are best suited to them and/or for which they are most motivated. Shared leadership can exist alongside traditional leadership, especially if the formal leader operates more at a distance, as this requires more self-management from the team. Through shared leadership, the organization of the work is entrusted to several people within the team rather than exclusively to a formal leader. In teams with effective shared leadership, clear working agreements have been made within the group; there is clarity about the goals, methods, tasks, and roles. Tasks and roles match the strengths

of employees, and enable them to flourish. Mutual relationships are clear and the atmosphere of cooperation is good. Moreover, team members demonstrate behaviours in which they take responsibility for their own functioning and work together in order to achieve their jointly formulated goals and missions (Yigit, Oostendorp, van Vuuren & van Dorssen, 2017). If a team has developed effective shared leadership, this is expected to result in work engagement and a conjoint ability to achieve the working goals.

Traditional leadership – Coaching and facilitating

Traditional leadership involves formal and hierarchical top-down leadership of external team leaders (Hoch, 2013). If leaders function well, they function as a resource for their employees and as such they can positively contribute to employees' performance (Breevaart, 2015). Leaders can inspire employees to do tasks and to take on challenges which match their personal characteristics, subsequently leading to more work engagement among employees (Breevaart, 2015). Besides, leaders can be supportive if they help employees to reduce work related stressors. For example, by dedicating a team- or bilateral meeting to a discussion on how to conjointly solve work related problems. In this way, the manager not only acts as a source of energy, but also as a 'buffer' and 'protective jacket' against the stressors at work.

The facilitating role of the organization in encouraging self-management

To provide insight into the conditions that contribute to a person taking charge of their own employability, Van Vuuren, Lub, and Marcelissen (2016) developed a theoretical model on self-directed employability (i.e. Eigen regie model). In this model both employees and organizations have a task in optimizing the self-direction of employees. Employees need to be able and willing, as well as need to have the confidence to direct themselves. On the other hand, the organization needs to facilitate employees in the development of self-direction. Moreover, they need to clearly communicate what the developmental opportunities for improving self-direction are within the organization. And the organization needs to have a culture in which people feel allowed to direct themselves. For this, the organization can also pursue an explicit policy which supports autonomy. A policy which enables employees to make their own choices and to take control. And which supports and encourages employees to contribute new ideas and to learn new things without being judged for strange ideas or mistakes in new

behaviour (Van Vuuren, Lub & Marcelissen, 2016).

Basic principles for intervention design - aimed at empowering employees and teams

If employees, teams, and managers learn how they can lead themselves towards greater work engagement, while the basic psychological needs for autonomy, social relatedness and competence are met, there is a chance of a positive development of work engagement and work ability. In contrast, the lack of effective self-leadership, shared leadership, and traditional leadership combined with excessive work pressure can lead to a vicious circle of problems. To create a positive spiral towards more work engagement and sustainable employability, the development of leadership at all three levels (employee, team, manager) is important. Self-leadership, shared leadership, and traditional leadership seem to be promising keys for a development towards more work engagement and better performance, provided that teams and team members are optimally facilitated in strengthening these. Based on the theoretical framework, we have formulated six basic principles which we believe are important for designing interventions with the aim to strengthen employees and teams:

Principle 1: Self-leadership as a starting point for development

For this project we took self-leadership of employees and teams as starting point. If employees and teams become aware of their own ability to change the things they want to change, we expect that their work engagement and work ability will positively develop. Firstly, because they will become more aware of their autonomy, which will subsequently satisfy their basic need for autonomy and as such contribute to intrinsic work motivation. In addition, self-leadership will provide the opportunity to actually influence the things that one wants to change. Core question for reflection in the sessions for both individuals and teams are therefore: Do we want to influence these? And are we able to influence these? In this way participants will become aware of the role they can play in improving their work engagement, which fuels the motivation to act. The result of these reflections can also be that the answer on one or both questions is “no”. Then the follow-up question is “Can I or can we let this idea or problem go, both mentally and in our behaviour, as we are not able and/or willing to influence it?” This is an important step. If a problem or ideal is beyond one’s control, it is better to focus energy on things that one is willing and able to influence.

Principle 2: Boost energy sources and reduce energy drains

The focus of self-leadership is on increasing energy sources and reducing energy drains. The project assumes that if participants are able to take control of their own resources and stressors, they will be able to self-influence their work engagement and vitality. It is expected that this will have an effect on sustainable employability, as well as on the quality of the services to clients. We assume that work engagement increases, if employees mainly do work which they find enjoyable, meaningful and/or challenging, and if they notice that they are good at what they do. We also assume that stress decreases if employees can self-influence the job demands which cost energy. Individual and collective reflection on energy sources and energy consumers within the team is therefore part of our intervention. In the intervention, there was first the opportunity to freely reflect about energy sources and energy consumers. Both on an individual level and on a team level. Later, participants could also reflect in a more structured manner, using the Job Demands Resources model (Bakker & Demerouti, 2007). In this way, participants learn to take initiative for organizing their work optimally, and thus influence their own work engagement and performance.

Principle 3: Building self-confidence through strengths approach

In order to be able to take initiative and to function autonomously, it is important that employees and teams have sufficient confidence in their own competences. Therefore, specific attention is paid to creating awareness of an individuals' strengths . First, in the training for individual team members, participants can reflect on their own strengths, which makes them aware of their ability and willingness to use these strengths. And second, team members are encouraged to reflect on the strengths which they observe within the team. Team members are coached to give each other feedback on the strengths which they recognize in each other. In this way each participant gains insight into their own qualities as well as in qualities which exist within the team. Through this intervention, team members may be better able to consciously use their strengths in everyday work. We also encourage participants to make more use of each other's strengths.

Principle 4: Action - working with small steps in development

Although it can be tempting to work with large goals and missions, this project encourages participants to use short term goals which need small steps in development. A small step can still feel challenging, though achievable. Furthermore, we use a number of self-leadership strategies, as these are aimed

to encourage action. For instance, we ask participants to speak out loud what their behaviour intention is for the coming weeks, as this will increase their commitment, which makes it more likely that they will actually take action in the intended way. At the team meetings the behavioural intentions are written on flipchart sheets, which can be hung up in a visible place at the team department or worked out in other creative ways.

Principle 5: Cooperating for development – creates a bond within the team
As social relatedness is an important condition for work engagement, the project also aims to strengthen the bond between colleagues. The team meetings are an important key in increasing the mutual bond among team members. During these meetings, participants are stimulated to work together in alternating subgroups, as well as with the entire group, in order to conjointly develop greater work engagement and more effective collaboration. The reflection exercise with regard to the strengths approach will have the important side effect that the mutual trust among team members can increase, leading to more safety within the group. Besides, each team will be suggested to pay attention to organizing a nice team activity after work, as a reward for the team efforts and to strengthen the mutual bond. As a result of the bonding, the team is better able to work together on challenging team goals.

Principle 6: Team leader – Coach and facilitator
The team leader is given an explicit role in the development process. As a first step, the team leader is trained in the psychological theories and principles that form the basis of the intervention. In this way they are better able to coach and facilitate individual employees as well as the teams, to determine goals, make a strategy, and take the lead in actual goal achievement. The team leader is supported by the involved HR advisor, other staff services and the involved management director. In this way the facilitating organization can make structural adjustments in procedures if necessary, while also give social support to the team, including individual team members.

Project description "Empowered teams and empowered employees"-Kennemerhart

The knowledge from the theories mentioned above and the basic principles for intervention design were starting points for the actual design of the project

"Empowered teams and empowered employees" which was carried out at Kennemerhart - a healthcare organization with nursing homes and home care. Kennemerhart was created on January 1, 2018, from a merger between SHDH and Amie Elderly care. Over 2000 employees and 750 volunteers provide care and services to over 2500 elderly people in Kennemerland. Kennemerhart includes 10 nursing homes, several rehabilitation departments and multiple day centers.

Argumentation for Kennemerhart to participate

Kennemerhart had several reasons for their participation in this ESF subsidized intervention project which was aimed to improve sustainable employability. Firstly, Kennemerhart had to deal with the increasing shortages in the labour market, which made it important to ensure that the current staff remained able and willing to continue working within the organization. Moreover, the recent merger also had its impact on teams and employees, which made it extra important to positively invest in developmental opportunities for them. Besides, Kennemerhart was in a shift in which they aimed to facilitate their clients such that they could function as autonomously as possible in their daily life. In a similar vein, the Human Resource Management department of Kennemerhart had the ambition to facilitate and improve the autonomous functioning of healthcare workers.
The following goals were formulated for the project:

- Clients, teams, and healthcare professionals are given autonomy and direct themselves
- Empowered teams
- Empowered healthcare workers
- Effective facilitating organization

In former years, one of the merger partners had made bad experiences with the implementation of self-management teams. Therefore, it was explicitly not the aim to develop the teams into self-management teams. The focus was to work on the empowerment of the employees and teams. This meant that participants learned to act more on a basis of autonomy, as this would contribute to an effective work organization with pleasant cooperation within the teams and more work engagement among the team members. It was expected that the achievement of the above mentioned goals would result in an improvement of sustainable employability.

Integral intervention approach

In order to coach employees and teams, including their team leaders, management directors, and HR advisors, the interventions were implemented at multiple levels. It started with a training course for the involved team leaders, management directors, and HR advisors. Next, self-leadership training was offered to individual team members, with mixed training groups meaning that groups were composed of employees from various teams. The team trainings started only after all participants had started with their individual course. In the last phase of implementation, after the fourth team meeting, on-the-job team coaching was offered as well. The six basic principles for developing empowered teams and empowered employees were applied integrally in all interventions.

Training course for team leaders, management directors, and HR advisors

The training course was intended to strengthen team leaders, involved managers, HR advisors, and the team coaches such that during the project they were able to coach teams and employees in development. To this end, the underlying theoretical frameworks and basic principles with regard to increasing work engagement and strengthening employees and teams were discussed. Besides, during this course participants could reflect on how they could influence own work engagement and vitality, what their strengths are and how they can use these in their job. The course consisted of four meetings over a period of five months. Later, a fifth meeting was planned which gave participants the opportunity to evaluate the project.

Self-leadership training for employees

The goal of the self-leadership training was to strengthen employees' ability to take charge of their own well-being and to change what they were willing to change. Participants also reflected on their strengths, in order to feel encouraged to make more use of them in their job. Besides, they were taught to mentally focus on opportunities, possibilities and positive aspects rather than focussing on negative things which are beyond their control. The training consisted of three meetings over a period of two months. The first meeting started a few weeks before the team meetings would start.

Team training for teams

The aim of the team training was for the team to conjointly learn how to take charge in improving work engagement by changing things which they were able

and willing to influence. In addition, the team members learned about their own and others' strengths and together they reflected on how they could make more use of these. The participants also learned that small steps forward could make a difference. Because a month was scheduled between each meeting, team members had the time to actually change things. There were four meetings in total over a time period of seven months.

Team coaching on demand and on the job

The goal of the team coaching was to support employees and teams in difficult situations and issues from daily practice. The approach was demand-oriented, meaning that the team and the team leader needed to proactively ask the team coach for coaching them. The professional team coaches also participated in the course for management and staff, and were involved as extra team coach in the team training sessions. This made them well informed about the theoretical background of the interventions, as well as the goals as set by the teams. Coaching on demand for the teams could be applied from several months after the start of the project, until several months after finishing the team training.

Qualitative project evaluation

Due to a low response rate to the quantitative questionnaire at the post-measurement, it was unfortunately not possible to do a quantitative effect measurement of the interventions on the indicators for sustainable employability. However, the project did offer the opportunity to do a qualitative evaluation with managers and HR advisors, as well as with a number of employees from the teams. Hereby, both the effects of the intervention and the implementation process were evaluated, focusing on the following questions:

1) What did the project deliver for teams and individual participants?
2) Which interventions worked well and which less well?
3) What circumstances influenced whether or not the interventions were successful?

Methods of the interventions

Participation in project 'Empowered teams & empowered employees

The project 'Empowered teams & empowered employees' took place at five care teams of healthcare organization Kennemerhart: two teams in intramural care and three teams in homecare. Through this small-scale approach with a limited group of employees, managers and HR consultants, Kennemerhart wanted to gain knowledge and experience about empowering employees and teams, so that in the future interventions based on these insights could also be used more broadly within the organization. In total, 5 team leaders, 2 managers, 4 HR officers, 2 team coaches and 96 employees participated in the project. The project ran from February to October 2018.

Data Collection

At the end of October 2018, a qualitative impact and process evaluation took place with the participants of the training course (HR officers, managers, team coaches) supplemented by trainers, researchers, and project leader from the VBZ KAM. In addition, six interviews were conducted halfway through the project with employees from the different teams about their experiences with the self-leadership training, the team training and team coaching. The teams also evaluated the project with the trainer during their last team meeting. Our results are based on these evaluations.

Results

Below, we first discuss the outcomes of the project in terms of the project objectives (question 1). Then we evaluate participants' experiences with the different interventions (question 2) and we evaluate the implementation process (question 3).

1. What did the project deliver?

Teams intramural care: Empowered teams with empowered employees

Both participating teams in intramural care have made a big leap in development. Team leaders report an increase in work engagement, more solidarity among team members, more calmness in the work organization and more attention for specific client issues.

One team has particularly worked on creating more structure in the work organization, which has led to more peace in the department. Employees experienced that they can have impact on the organization of their work if they focus on what they could influence on their own. In this way, the daily care for clients and the accompanying quality measures became better organized, which created space and energy for organizing new activities for clients. The positive team development also turned out to be related to a downward trend in sickness absence within the team.

The other team had the experience too, that team members function better in the team, if they more collectively search for solutions to daily problems. Whereas previously, people would often grumble in the corridors about what went wrong, the team members now learned to openly discuss matters and conjointly solve them. As a result, the openness towards each other increased and the trust between the team leader and the team improved as well, which made the team leader and the team less opponents but rather a single unit.

In both teams employees became more self-confident, partly due to the awareness of their own strengths. As a result, individual team members also started to use new or unused strengths within the team.

Homecare teams: a difficult start though still effective

Positive results were also achieved within the home care teams, although the start-up phase was more unstable. The homecare teams were unexpectedly confronted in the initial phase with a change in leadership due to turnover of a team leader and homecare management director, while there was also long-term absence due to illness of another team leader. To resolve this, an interim management director and an interim team leader for home care were recruited. Above this, a few months later it was decided by the management, that it was necessary to merge two of the three participating home care teams with two other Kennemerhart homecare teams. Therefore, team development goals had to be redefined with the newly formed teams. Some team members from these two merged teams found it difficult to stay motivated for the interventions and to keep faith in the good outcome. However, because the project also offered the possibility of additional team coaching, these teams together with their new interim team leader decided to make use of the team coach. They managed to make valuable steps in their development in the months following the merger.

New cooperation with open communication

The merger teams worked particularly on obtaining a uniform working method and creating calmness in the work organization. The insight into each other's strengths contributed to recognizing each other's qualities in the mutual distribution of tasks and roles. In addition, attention was also paid to the question of how to take responsibility for improving matters over which you have influence. The interim team leader evaluated that the team development eventually bore fruit for both teams. The work became more structured, the employees were more relaxed, and their work engagement increased.

Self-aware, responsible, and empowered homecare team

The third homecare team did miss its team leader during the project due to illness, but did not have to deal with major organizational changes. The team members remained motivated for the development program and worked effectively to improve open communication. They also began to better utilize each other's strengths within the team. The team evaluated afterwards that they are proud of their team and of the quality of care they consistently deliver to their clients. The effective collaboration also had a positive effect on the team's financial results. During the summer period, the team had primarily resolved open shifts themselves, saving costs for temporary workers.

From complaint to strength

The project appears to have been a booster for the entire organization as it helped to actively and collectively work on the improvement of the organization. The participants have learned to discuss with each other what is going well, what could be better and what they find important. This has raised the level of dialogue among employees according to the HR manager: "You take what is going well as a starting point and you focus on the things you can influence. Instead of grumbling, colleagues now ask themselves: how can we do our work better and what must we change in order to do so? In this way, team members have more control. That way you not only get stronger teams and stronger employees, but also better care for the client."

2. Which interventions worked well and which less well?

Course

The course was very well received by the participating managers, team leaders, HR advisors and team coaches. Team leaders indicated that it was nice to be

prepared for the team training, which makes it easier to take on your role as coach and facilitator during the team training and in your day-to-day work. The knowledge they gained was experienced as valuable. In addition, the reflection on personal and collective effectiveness was also experienced as very valuable. This created a collective awareness of what is already going well, what strengths are present within the group, and what opportunities for development there were. There was also a collective energy to successfully guide the intervention as leaders and HR staff which also worked through in the everyday cooperation with each other.

Team leader:

> 'It's good to be prepared as a team leader, as it allows you to enter the team training differently. As a team leader, you have a different role than the other team members'.

Self-leadership training

The self-leadership training was received differently. Many participants were surprised by the fact that they were quite suddenly going to participate in a training in which they could work on strengthening themselves and increasing their job satisfaction. They had the idea that they were obliged to work on their personal development and that did not always go down well.

Nevertheless, a good number of them managed to positively turn their motivation in order to be able to develop themselves during the workshops. They noticed that they could actually influence their own work engagement and vitality. They learned to use their influence, and on the other hand to let go of what they could not influence. One employee put it as follows:

Employee:

> 'From the individual trainings I get that I have to learn to let go. When I come home from work it's done and it was good.'

The individual reflection on strengths helped participants build on their self-confidence before they started reflecting on each other's strengths with colleagues in the team. For others, the combination of individual reflection with the team reflection on strengths felt duplicative. They felt the reflection within the team was sufficient.

The self-leadership training was initially mandatory for all participants,

but during the process the obligatory character appeared to lead to too much resistance. As a result, the obligatory character was changed to voluntary participation and the training groups became smaller due to the absence of less motivated people. This change also created more motivation and effectiveness in the training groups with the remaining participants. The employees who did complete the self-leadership training found it valuable for their personal development.

Team training

The majority of the participants experienced the team training sessions as highly valuable. The positive, development-oriented, and empowering approach of the meetings made people motivated to work actively on the team development. The strengths-based approach contributed to the mutual trust and created room for the development of talents within the team. The practical solution-oriented approach was also appreciated, as the team took the initiative to conjointly solve work related problems.

Employees experienced a more collective self-confidence:

> 'Together we are stronger and we also feel more heard and seen within the organization.'

> 'The great thing about this project is that we take the time to listen to each other and time for being with each other. I like the attention we pay to each other, and taking each other seriously - no matter what level of education you have.'

The team leaders noticed that the team training integrated them better into the team:

> 'We are seen less as the opponent of the team.'

The team leaders are also more aware of the qualities and challenges of the team, which helps them to better suit their coaching on the job to the specific needs of employees.

Team coaching on the job

The purpose of the team coaching on the job was to secure the development of the teams. In practice it turned out that the teams needed time to learn how to formulate a coaching question for the team coach. Nevertheless, various questions

appeared to come from the teams. Often linked to concrete issues from practice.

Nurse assistant:

> 'I talked about the difficulties I experienced in the contact with family of Mrs. X. It turned out that I was not the only one in my team who had this problem. This made me feel supported as I felt that the problem was recognized by others. After the training together with the team coach, we made an appointment with the family of Mrs. X to discuss expectations and make agreements. At first, this was a little difficult, but ultimately it was a pleasant conversation which cleared up a lot'.

Especially for the two merged homecare teams, the team coaching on the job proved to be highly valuable. After completing the team training, many questions remained unanswered. Therefore, the newly formed teams and their interim team leader, developed their new cooperation step by step. The guidance of the team coach helped them to give room for everyone's input. Practical issues concerning the care were addressed, as well as taking the initiative and responsibility for one's own work engagement.

3. What circumstances influenced the outcome?

The effectiveness of interventions is also influenced by the circumstances under which the implementation took place. The evaluation found that a number of circumstances either positively or negatively affected the effectiveness of the interventions.

Preparation and communication

Due to the time frame of the ESF grant, it was necessary to start the project soon after the formal decision for project participation. As a result, there was little time to properly inform employees of the five teams about the project. Some employees had barely heard what was going to happen before they started the self-leadership training. Team leaders and employees evaluated afterwards that more time would have been needed to properly communicate about the project and discuss any resistance within the team. As an example, employees found it annoying, that other mandatory in-company trainings took place in the same period, which increased the pressure in the workplace even more.

Voluntary participation in the development process

The team members experienced at the start that the project was imposed on them from above and outside. In the self-leadership training they learned that they were free to change what they wanted, but in the project they noticed that they were not free to choose to participate in the training themselves. The self-leadership training proved to be particularly effective for participants who were intrinsically motivated to work on their personal development in this training.

The team training also led to resistance among some team members due to the mandatory character of training participation. However, they noticed that from the start they were given control in the development process. Because of the positive and solution-oriented approach of the meetings, participants became enthusiastic about making an effort.

Stable teams as a basis

Three of the five teams have made great steps in the empowerment of the teams and employees. The two nursing home teams were able to work together with their own team leader to the maximum extent during the course of the project, which clearly led to sustainable development in the organization of work. The homecare team that entered the trajectory without their manager was also able to go through a positive development with each other. They had enough stability together to be able to work on specific team goals. The two homecare teams that ended up in a merger during the trajectory had too many organizational changes to go through the basic trajectory effectively with the team. For them, additional team coaching in the phase after the basic process was necessary to create peace, structure and work engagement.

Conclusions

Positive spiral towards sustainable employability

This intervention approach seems to be a promising approach to reverse the negative spiral towards dropout and staff turnover towards a sustainable deployment of healthcare workers. The work pressure in the healthcare sector is high and this leads to higher dropout rates and outflow of employees which subsequently leads to further increasement of the work pressure. This has led the healthcare sector into a vicious circle of problems. Only if healthcare organizations manage to keep the back door closed and retain their employees for

healthcare can the vicious circle be broken.

In order to turn this negative development into a positive direction, the 'Empowered teams and empowered employees' project opted for an intervention design with six basic principles for increasing work engagement and work ability – a strength-oriented and positive approach for development. Team members strengthened their self-leadership skills at both the individual and team levels. In doing so, space was created for developing (even) more social relatedness in the team. On the one hand, the development of competences was aimed at strengthening self-leadership with respect to increasing work engagement and reducing stressors at work. On the other hand, people also became aware of strengths which they already possess, as well as strengths which have the potential to be developed further. The team also learned to actually take action, whereby small steps forward already lead to beautiful results. In contrast to the development towards more self-managing or self-organizing teams, in the current project the manager explicitly had a coaching and facilitating role. Also the involvement of the HR advisor proved to be a valuable addition in facilitating the development process. The integration of the basic principles in the various interventions actually led to a positive spiral of change.

Practical implications

The results and insights from the process evaluation have led to a number of recommendations for organizations who want to get started with developing sustainable employability within the healthcare sector and beyond.

Take time for communication

Sometimes the subsidy requirements are such that a project needs to be completed within a tight time schedule, and therefore the project needs to start up quickly. However, in the present project it turned out that the interventions were started too quickly. To create support and to be able to discuss possible resistance, or to inform everyone about what is going to happen, it is necessary to take sufficient time in the preparation phase in order to communicate the project properly.

Training self-leadership on a voluntary basis

Training self-leadership can be very rewarding for individuals. For example, another project showed that training self-leadership among healthcare professionals leads to lasting effects for the participants' work ability and work engagement (De Lange, 2018; Van Dorssen-Boog et al., 2019). However, the

condition is that participants participate in the course on a voluntary basis. Thus, they are motivated to make an effort for personal development in this training. As soon as the training is made mandatory, the results will decline due to demotivation of a part of the training group. To create support for training self-leadership, it could help to involve employees already in the design phase of the intervention, so they can choose for themselves whether, and if so how, self-leadership training will be part of their development path.

Team development preferably in a stable team

To start a team development, it has proven to be important that the team is organizationally stable. This means that, in principle, team members have a sustainable cooperation with each other. Setting goals and working on development with teams that will merge or reorganize during the development period is not advisable. However, after a new team has been formed, team development can still be started so that the team can become effective in working together more quickly.

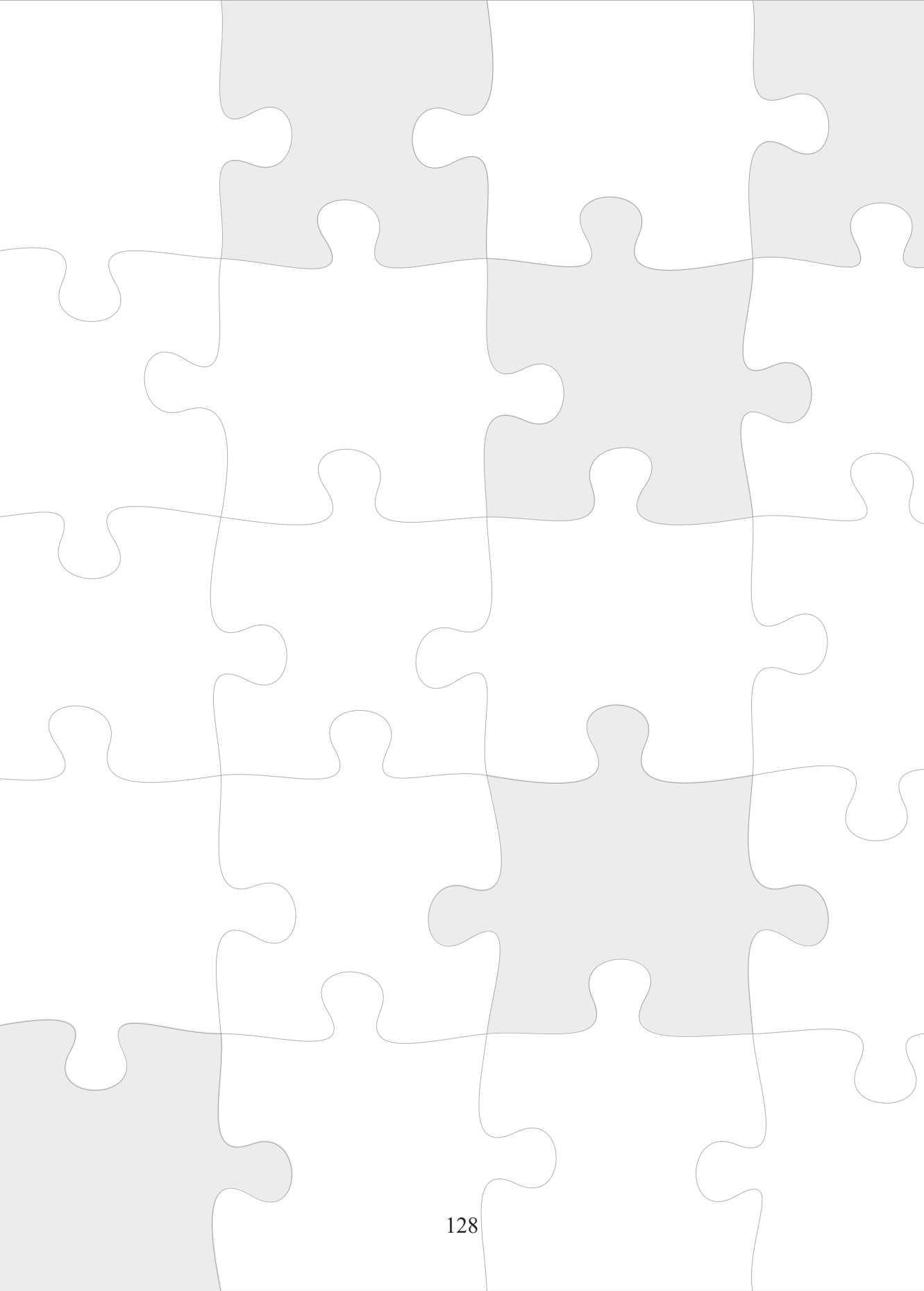
Leadership remains necessary

Our advice from the project is to invest not only in the development of the autonomous functioning of employees and teams, but also to invest in 'traditional' leadership on the work floor. Managers, if they do it well, can strengthen employees in their autonomous functioning. Moreover, they can act as a buffer against the work stressors their employees face.

Change the role of HR advisor from 'taking care of employees' to 'facilitating employees'

The coaching and facilitating role of the HR advisor in the development process has been a support to employees, teams and the manager alike. In the framework of the project the HR advisors were expected to make a change from 'taking care of employees' to 'facilitating employees'; to increase the problem-solving capacity of the manager and employees by coaching them, instead of solving the problems themselves. In this way, the manager's and employees' own direction was concretely stimulated. In addition, because the HR advisor was involved closer to the primary process, they were able to play a facilitating role. During the team meetings it often became clear what facilities were needed or what questions there were. Sometimes simply giving information about facilities was enough for the team to be able to proceed with their development. Because the

HR advisor was present at the team meetings, the HR advisor could better respond to the needs of the team, of employees and of the manager and make their own contribution to the development.



Chapter 6

Conclusion and discussion

Chapter 6 - Conclusion and discussion

The present thesis aimed to explore how healthcare workers can benefit from self-leadership in terms of their work engagement, health, and performance. Self-leadership refers to the process of self-influence to achieve optimal self-motivation and self-direction necessary to perform (Neck & Houghton, 2006; Manz, 1986). Although there is broad evidence for the positive effects on self-leadership for well-being and performance (Knotts et al., 2021; Neck & Houghton, 2006), self-leadership has rarely been investigated within healthcare, even though for years healthcare professionals, such as nurses and social workers, have been reporting that their work can be stressful and dissatisfying (Broetje et al., 2020; McVicar, 2016). The healthcare literature has repeatedly suggested that healthcare jobs need to be enriched with job autonomy, as a way to improve the well-being of healthcare workers (e.g., Cicolini, Comparcini, Simonetti, 2014; Laschinger et al., 2001). But drawing on insights from self-leadership theory (Neck & Houghton, 2006; Stewart, Courtright & Manz, 2011) and Self-Determination theory (SDT, Deci, Olafsen & Ryan, 2017), the present thesis proposed that besides job autonomy as a job design measure, individuals' competences for self-leadership also need to be accounted for. It is explained that autonomy is not just a characteristic of the job design, as it also refers to individuals' actual autonomous motivation and autonomous functioning. Self-leaders take responsibility for their own functioning, and use self-leadership strategies in order to optimize their functioning (Neck & Houghton, 2006; Manz, 1986; 2015).

The thesis specifically took the positive psychology perspective on the development of work engagement, health and performance, via self-leadership. The healthcare literature tends to focus on research about how organizations and individuals may reduce high work load and stress (McVicar, 2016; Ruotsalainen, Verbeek, Mariné & Serra, 2015), but this may limit our understanding on what is needed for these organizations and employees to thrive (Bakker & Schaufeli, 2008; Van Woerkom, Bakker & Leiter, 2019). The present thesis used SDT and self-leadership theory to apply a positive psychology perspective on the development of motivation, health, and performance of healthcare workers.

The central research question of this thesis was:

> *How can healthcare workers benefit from self-leadership in terms of their work engagement, health, and performance?*

For answering this central question four sub-research questions were formulated, which were addressed in four separate studies: (1) Does self-leadership mediate between job autonomy and respectively work engagement and health; (2) How are job autonomy, self-leadership, and need for job autonomy related?; (3) How can healthcare workers benefit from self-leadership training in terms of work engagement, health, and performance?; (4) How can self-leadership be developed within the setting of a healthcare team?

Main findings

1. Does self-leadership mediate between job autonomy and respectively work engagement and health?

In the first study we hypothesized that the presumed positive effects of job autonomy for the work engagement and health of healthcare workers can be explained by self-leadership. This study was based on cross-sectional data which was collected in two different healthcare organizations (n = 224 and n = 113). The first organization (organization for disability and psychiatric care) was recognized by a management strategy which was based on self-management teams. The teams have higher levels of shared responsibility, while the manager functions more at a distance, while having responsibility for multiple teams. The second organization used a more traditional management style in which every team had their own team manager. Self-leadership was measured by three categories: self-leadership behaviour, cognitive and behaviourial focused strategies, and natural rewards strategies.

Results showed that self-leadership strategies fully mediated the relationship between job autonomy and respectively work engagement and general health. For this, especially the natural rewards strategies were accountable. The mediation effect of "cognitive and behaviour focused strategies" was mildly significant. These strategies were positively associated with work engagement, but negatively with general health. Lastly, self-leadership behaviour did not mediate the relationship between job autonomy and respectively work engagement

and general health. In fact, self-leadership behaviour was only associated with job autonomy, but not with work engagement and health. Remarkably, the organizational differences in management style did not influence the mediation effect, as these differences were only correlated with the experienced job autonomy and self-leadership behaviour.

We concluded that while self-leadership behaviour indeed is associated with job autonomy, it did not explain the effects of job autonomy on work engagement and health. In order to benefit from job autonomy in terms of work engagement and health, healthcare workers need to utilize self-leadership strategies. To be specific, natural rewards strategies explain the relationship between job autonomy and respectively work engagement and general health. Natural rewards strategies are aimed to self-influence intrinsic motivation by actively changing activities and tasks in such a way that these become more natural, or intrinsically rewarding. Besides, natural rewards strategies help to mentally focus on positive, naturally rewarding aspects of the activity rather than the negative. Interestingly, the cognitive and behavioural strategies only had a marginal positive mediation effect on the work engagement, while it also had a marginal negative influence on health. Zeijen, Peeters and Hakanen (2018) found a similar type of results, as they found that the strategies of goal setting and self-punishment thoughts are associated with workaholism, while goal-setting and self-observation were positively associated with work engagement.

The fact that natural rewards strategies are convincingly influencing work engagement and health, whereas the cognitive and behavioural focused strategies were less important, and even tended to a negative association with health, may be explained by SDT's motivational continuum (Gagné & Deci, 2005; Ryan & Deci, 2000). Especially the behaviour focused strategies are designed for tasks and situations in which people are motivated on a basis of control or not at all motivated. The self-determination continuum explains that controlled motivation comes along with stress, and health impairment (Gagné & Deci, 2005; Van Beek, Hu, Schaufeli, Taris & Schreurs, 2012). On the other hand, Lovelace et al. (2007) assumed that the exercise of control through using self-leadership strategies, will lead to self-efficacy and flow experiences, and therefore contribute to work engagement. Thus, cognitive and behavioural self-leadership strategies seem to have ambivalent effects on the well-being of healthcare workers. In contrast, the natural rewards strategies are aimed to make tasks more intrinsically motivating. Natural rewards may help the individual to change motivation from controlled to

autonomous motivation. According to SDT autonomous motivation is associated with vitality and health (Ryan & Deci, 2008).

2. How are job autonomy, self-leadership, and need for job autonomy related?

The second study investigated the direction of the relationship between job autonomy and self-leadership. The study also tested the moderation effect of individuals' need for job autonomy on the reciprocal relationship between job autonomy and self-leadership.

The hypotheses were tested with two-wave panel data over a time period of three months. Healthcare workers (mainly social workers, assistant social workers, nurses, assistant nurses and care coordinators) participated in the study ($n = 95$). They were employed in 6 different healthcare organizations (disability care, nursing homes, hospitals). The data were analyzed using Hierarchical Multiple Regression (HMR).

We found that job autonomy had a small effect on self-leadership behaviour and vice versa, self-leadership behaviour had a small effect on job autonomy. Thus, the experience of autonomy in one's job stimulates healthcare workers to proactively take responsibility in their job. And vice versa, people who tend to act highly self-responsible are able to self-influence the degree of their job autonomy. Despite our expectations, we were not able to find evidence for the reciprocal relationship between job autonomy and self-leadership strategies. Moreover, need for job autonomy did not moderate the reciprocal relationship between job autonomy and self-leadership (strategies and behaviour). We also controlled whether organization and job profession may have influenced our study variables, but this was not the case.

In conclusion, where self-leadership literature presumes a relationship between job autonomy and the prescriptive self-leadership strategies (Stewart et al., 2011; Alves et al., 2006), this was not confirmed within our research. We only found a small significant reciprocal relationship between job autonomy and self-leadership behaviour. We proposed that other variables, such as autonomy support from coworkers and supervisors (Fernet et al., 2021), empowering leadership (Amundsen & Martinsen, 2015), or the facilitation of training self-leadership may influence both self-leadership and job autonomy. Moreover, we proposed that high work load might stimulate the use of self-leadership in order to improve control, especially if the work environment provides autonomy (Lovelace et al., 2007).

3. How can healthcare workers benefit from self-leadership training in terms of work engagement, health, and performance?

The third study explored the effectiveness of a voluntary based self-leadership training for the work engagement, health, and performance of healthcare workers. To test the hypotheses, a longitudinal field experiment with three measurement waves was conducted (pre-intervention, immediately after the intervention, and two months after the intervention). Healthcare professionals (n = 195) from 5 different organizations participated on voluntary basis and were randomly assigned to the intervention or waiting list control group. The self-leadership training programme had a blended-learning approach, which includes two group workshops (week 1 and week 8) and in between the workshops 8 weekly e-learning modules which participants could find on an online platform. Participation was fully voluntary in order to facilitate the autonomous motivation for developing self-leadership through training.

The manipulation check with t-tests showed that training participants significantly improved their self-leadership as compared to the waiting list control group. To test the direct training effect on work engagement, health, and performance, multilevel analysis were applied. Results showed that the effect of the training was significant for job performance, both at T2 and T3. For work engagement the effects were only significant at T2. Despite our expectations, we did not find an effect on general health at T2 and T3. Thus, the hypothesized direct effects on general health were not confirmed. However, the results did find evidence for the mediation effect of work engagement (T2) on health (T3) as well as performance (T3). The multilevel analyses were also conducted with all control variables (age, educational level, job autonomy, and the four organization-dummies), but these did not influence the study results.

We concluded that if healthcare workers are facilitated with a voluntary based self-leadership training, this will contribute to their work engagement and performance afterwards. Moreover, work engagement explains the longitudinal effects of the training on general health and performance. This confirms our argument that if the focus of the training stimulates reflections on autonomous behaviour, and encourages the actual behaviour by utilizing self-leadership strategies, this will result in more work engagement, and subsequently to outcomes related to health and performance. Research broadly finds evidence for the fact that autonomous motivation results in vitality, health, and high quality performance (Deci et al., 2017; Ryan & Deci, 2008). Our study contributed to

that literature by showing that the training of self-leadership can help healthcare workers to focus on and act in alignment with their autonomous motivation.

4. How can self-leadership be developed within the setting of a healthcare team

The fourth study was a qualitative evaluation study which was aimed to design and evaluate an integrated intervention program for healthcare workers working in teams. In contrast to the voluntary based training in self-leadership, this study was aimed to include all workers from selected teams. The reason for this was the fact that healthcare organizations are faced with a negative spiral leading to dissatisfaction, absenteeism, and premature exit of this labour market (Vernet, 2019; Terpstra et al., 2018). All professionals (nurses, assistant nurses, supervisors, management directors, and HR advisors) are challenged by the same question on how healthcare workers are willing and able to continue working in this industry. The integrated intervention program may enable healthcare workers to conjointly create a positive gain spiral of motivation, health and team effectiveness. We focused on leadership development at three levels: individual level (self-leadership), team level (shared leadership), management/HR staff level (coaching and facilitating leadership).

We applied a positive psychology perspective on the intervention design as the aim was to create a positive spiral of engagement and effectiveness. We integrated insights from self-leadership theory (Neck & Houghton, 2006; Stewart et al., 2011), Self-Determination Theory (Deci et al., 2017), Job Demands Resources model (Bakker & Demerouti, 2007), and strength based coaching approach (Van Woerkom, 2018), which led to six principles for intervention design. These principles are: 1) Self-leadership as a starting point for development, 2) Focus on enhancing work related energy resources and reducing work related energy drains, 3) Building self-esteem through a strength-based intervention approach, 4) Transforming ideas for improvements into concrete small steps for development, 5) Conjointly developing the team effectiveness – strengthening the social relatedness within the team, and 6) The team manager has a coaching and facilitating role.

The study was done within a Dutch healthcare organization for nursing homes and homecare. Two nursing home teams, and three homecare teams participated in the project. The team managers, and the managing directors and HR advisors who were involved with these teams, were engaged in the

intervention program. Four interventions were designed. 1) Individual healthcare workers were trained in self-leadership; 2) The group of managers and HR advisors had a course in which theory was explained and practiced, and 3) teams got a team training for the conjoint development of motivation and team effectiveness. The content of all trainings were based on the six principles for intervention design. And 4) the teams could request a team coach if they had an additional question in their development after finishing the project.

It was concluded that this approach is helpful for individuals, teams, their managers, and HR advisors. It contributed to the motivation and positive energy in the teams, and the effectiveness of the team performance. Moreover, in one team the intervention was assumed to have contributed to the reduction of absenteeism. And a homecare team reported that team members were more willing to fill in the gaps in the summer schedule, which led to a reduction of hiring flex workers. However, the participants also had some recommendations for improving the project. 1) It was recommended that sufficient time is needed in order to organize and communicate the project with the participants; 2) The self-leadership training was communicated as being mandatory instead of voluntary, which led to resistance against self-leadership development; 3) During the project two homecare teams had to merge with another team from outside the project, while at the same time their team manager switched her job during the project, leading to a new team manager halfway through the project for these teams. The many changes in staff and organizations disturbed the development process of the team.

Theoretical implications and contributions

The benefits of self-leadership for healthcare workers

The self-leadership literature was somewhat ambiguous about the potential benefits of self-leadership for healthcare workers. First, because their jobs may not be very complex (Konradt et al., 2009; Manz, 2015), and also not focused on individual performance achievements (Alves et al., 2006). Indeed, we found in study 1 that the behaviour focused and constructive thought pattern strategies only had marginal positive influence on work engagement, and marginally negative on health. The natural rewards strategies seemed to have the greatest benefits for healthcare workers. However, both intervention studies showed that

self-leadership strategies can be beneficial for healthcare workers, but indeed with some adjustments. In the self-leadership training, the behavioural focused and cognitive self-leadership strategies were applied in such a way that they encouraged participants to act upon their autonomously formulated development goals (study 3). And in the integrated program it was recognized that healthcare workers are not working solely for their own benefits, as they are conjointly responsible for delivering high quality care to their clients around the clock. The self-leadership strategies were therefore applied for both individual self-leadership development and shared leadership development within the team. Thus, we concluded that self-leadership strategies are helpful for the development of the well-being of healthcare workers, while we also acknowledged that self-leadership strategies may need further development in order to better suit to the needs of healthcare workers.

Second, self-leadership scholars also pointed out that employees who work in a feminine industry may regulate their motivation differently (Alves et al., 2006). The mainly female healthcare workers may emphasize caring for others, social relationships, and quality of life, more than personal performance goals. Indeed, study 1 showed that the natural rewards strategies had the highest impact on work engagement and health. Natural rewards strategies focus on the intrinsic rather than extrinsic value of an activity (Ryan & Deci, 2017). Furthermore, according to Assen and Bekker (2009), women are challenged in their autonomous functioning as they tend to be highly sensitive to opinions, wishes, and needs of other people. This thesis showed that self-leadership development helps the mainly female participants to improve their well-being. Through exercising self-leadership, healthcare workers train themselves to stay aware of their own needs, values, and goals, and to bring their activities in alignment with these.

The role of job autonomy in self-leadership processes

The job design literature (e.g., Bakker & Demerouti, 2007; Hackman & Oldham, 1976), including the healthcare literature (e.g., Broetje et al., 2020), assumes that job autonomy is an important job design measure for improving the motivation and well-being of employees. It enables the self-regulation of one's job tasks, which will help employees to regulate their work load, while it will also contribute to one's work engagement. Also, self-leadership scholars have argued that job autonomy encourages self-leadership of employees (e.g., Stewart et al., 2011; Ho & Nesbit, 2014). But surprisingly, the results of this thesis were not able

to convincingly confirm these assumptions. Study 1 showed that job autonomy is cross-sectionally associated with self-leadership behaviour and self-leadership strategies. But in study 2 it was found that only job autonomy and self-leadership behaviour have small longitudinal relationships, to be specific, they have causal and reverse relationships. In study 3 we also controlled for the potential influence of job autonomy for the outcomes of self-leadership training, but we found no significant influence of job autonomy on self-leadership development. We also checked in every study for the influence of organization type on the outcomes, since Dutch healthcare organizations are increasingly searching for ways to improve the job autonomy of healthcare workers (InVoorZorg, 2017). But again, the type of organization did not influence our study results in study 1, 2 and 3.

We conclude that although research finds that both job autonomy and self-leadership are important considerations for the well-being of healthcare workers, further research is needed to better understand how they may be related. For instance, within SDT it is argued that the social work context can actively support the autonomous functioning, for example by using non-controlling language, and by offering choices (Baard, Deci, Ryan, 2004; Jungert, Schattke, Proulx, Taylor & Koestner, 2020; Fernet, Gillet, Austin, et al., 2021). Fernet et al. (2021) showed that autonomy-support by supervisors (i.e. transformational leadership) and co-workers contributes to nurses' autonomous motivation. This may implicate that it is not the job autonomy per se, but the social support by supervisors and co-workers which help to develop autonomous functioning.

Moreover, social learning theory (Bandura, 1977) assumes that people learn from each other. People need some inspiration to develop themselves. In fact, the intervention studies in chapter 4 and 5 showed examples of training self-leadership within a social learning environment. By conjointly exercising self-leadership people will stimulate each other to take the lead, and will also experience that they actually have more influence in their job than priorly thought. And the self-leadership literature already showed that empowering leadership and transformational leadership positively contribute to self-leadership (Amundsen & Martinsen, 2015; Yun, Cox & Sims, 2006). We encourage researchers to further explore how the development of an autonomy supportive work environment can influence the development of self-leadership and subsequent outcomes related to work engagement, health, and performance.

Autonomous motivation as alternative pathway for explaining self-leadership effects

Until now, self-leadership theory has theorized that self-efficacy is the most important mechanism for explaining the effects of self-leadership on performance (Neck & Hougthon, 2006; Prussia et al., 1998; Unsworth & Mason, 2012). By referring to social cognitive theory (Bandura, 1977;1991) self-leadership scholars assume that through exercising control, people will experience more self-efficacy. This will subsequently lead to actual behaviour and achievement of performance goals, while it also contributes to stress reduction (Prussia et al., 1998; Unsworth & Mason, 2012). However, self-leadership also assumes that intrinsic motivation plays an important role in the self-leadership process (Stewart et al., 2011; Manz, 1986; 2015). Yet, according to Ryan and Deci (2006) self-efficacy is not a guarantee for intrinsic motivation, as the activities for which self-efficacy is developed may be not based on autonomous motivation (Ryan & Deci, 2006). But according to SDT specifically autonomous motivation predicts positive outcomes related to vitality, health, personal growth and high quality performance (Ryan & Deci, 2008; Deci et al., 2017). This may explain why the recent meta-analysis by Knotts et al. (2021) found that self-efficacy only partially explains the effects on work engagement, job satisfaction, performance, and creativity. We hypothesized and tested in study 3 that autonomous work motivation, represented by work engagement, explains the positive effects on general health and performance. We argued that self-leadership training can help participants to actively switch their motivation from controlled to autonomous motivation.

In order to further develop our understanding of how self-leadership may positively affect outcomes related to motivation, well-being and performance we propose to integrate insights from SDT in theory building on the self-leadership process. SDT theorizes that people have a basic psychological need for autonomy, competence, and social relatedness which they want to have satisfied (Deci & Ryan, 2000). Satisfaction of these needs will contribute to the thriving of people (Deci et al., 2017). By practicing self-leadership, people may be able to self-influence their need satisfaction. First, because self-leadership will contribute to self-efficacy, which may satisfy the basic psychological need for competence (Ryan & Deci, 2006). Second, because self-leadership will also contribute to the development of autonomous motivation, as self-leaders determine their own activities, and self-leaders can actively influence their cognitions about activities, and as such become more autonomously motivated. And third, self-leaders may

proactively improve their social relationships at work in such way that it suits their personal need for having worthwhile relationships at work. For instance, people can search cooperation with people who are inspirational to them in order to learn new things. Or people can reflect conjointly with co-workers on how to improve the quality of the services for clients. Then the self-leader teams up with co-workers, but is still in charge of goal-achievement.

Self-leadership strategies and self-leadership behaviour

While self-leadership theory is positioned as a normative theory which prescribes how employees should ideally lead themselves to optimal functioning, we argued that this perspective may have its blind spots. In line with the development of the leadership research in the past decades, we proposed that self-leadership needs to be investigated also with a more descriptive perspective on the actual self-leadership behaviour. When people determine their own way of working and act highly self-responsible, we might find them to be very effective and happy self-leaders, while not making use of prescribed self-leadership strategies. According to SDT people become highly active if they determine their own activities, as this will feed their intrinsic motivation for the activities. Therefore, autonomously functioning people may even have less need for self-motivating strategies as they are already intrinsically motivated.

In this thesis we used an existing scale for self-leadership behaviour (Yun et al., 2006) which researchers have also used with the aim to measure self-leadership strategies (Breevaart et al., 2016; Yun et al., 2006). But study 1 and 2 showed that self-leadership behaviour and self-leadership strategies have different relationships with antecedents and outcomes. In contrast to our expectations self-leadership behaviour was not associated with work engagement and health (study 1). But on the other hand, in study 2 we found out that it was not the strategies, but the behaviour which related with job autonomy. Moreover, in our conference presentation which was based on the data of study 1, we also included self-perceived employability as dependent variable. It was found that only self-leadership behaviour was related to employability, while self-leadership strategies were not related (Van Dorssen-Boog, Veld, Van Vuuren, 2015). We assume that for the development of self-leadership theory, it is worthwhile to also include research designs which more deliberately investigate how people actually regulate their motivation and behaviour, based on realism instead of idealism. This will enrich our understanding of how the self-leadership process actually functions in

practice and whether these self-influencing processes are more or less effective for outcomes related to motivation, well-being, and performance.

Limitations and avenues for future research

While we have already discussed the limitations of each particular study in previous chapters, here we outline some more general limitations and make, next to the aforementioned idees, suggestions for future research.

First, due to the positive psychology focus of the research we did not include negative outcomes related to well-being such as measures for burn-out or workaholism. However, prior research has shown that these are not merely the opposite of work engagement (Bakker, Demerouti, Sanz-Vergel, 2014; Van Beek et al., 2012). They have different relationships with job demands, job resources, and personal resources (Bakker et al., 2014). Zeijen et al. (2018) already found some evidence that self-leadership can have negative effects on workaholism while at the same time contributing to work engagement. Since working in the healthcare industry is assumed to potentially cause stress and burnout (McVicar, 2016), we recommend future research to also investigate how self-leadership is related to burnout and illness. In line with this, we also neglected the potential influence of high work load on self-leadership and job autonomy and subsequent outcomes related to motivation and health. However, Lovelace et al. (2007) suggested by referring to Karasek (1978) that self-leadership will help employees to better control and regulate the workload which subsequently can lead to stress reduction. While we have some insight in the effects of self-leadership on health and work engagement, we do not know whether this specifically counts for those in highly active, and thus demanding jobs.

Second, since our general focus was on work engagement as an indicator for general autonomous motivation, we did not check the influence of self-efficacy on our outcome variables. Since Knotts et al (2021) found that self-leadership can be explained by both self-efficacy and work engagement, while also directly contributing to creativity more research is necessary to understand the mechanisms which explain self-leadership. We propose to use Self-Determination theory for understanding the self-leadership process including its effectiveness. For this, we suggest to also include the satisfaction of the basic psychological needs for autonomy, competence, and social relatedness, as these may have played an important role in the self-leadership process.

Third, by focusing on the prescribed self-leadership strategies as theorized by self-leadership theory, we may have missed other self-influencing strategies that healthcare workers use for optimizing their own functioning, including their well-being. For this, it might have been worthwhile to have started with an explorative study which freely investigates which self-influencing strategies are used by healthcare workers in order to improve their well-being at work. This may have led to adjustments in the existing self-leadership scales, or even to a different questionnaire. However, the fact that this study used the more conventional self-leadership questionnaire, helps to elaborate on self-leadership theory as it gives insight in what the effects of the prescribed self-leadership strategies are for healthcare workers.

Finally, if we measure self-leadership strategies multiple times in order to get insight in their development processes, this may inspire respondents to actually implement these strategies in their daily life. Since self-observation, as self-leadership strategy, helps to reflect on personal behaviour and functioning, and increases self-awareness (Mahoney & Arnkoff, 1978), filling in the self-leadership questionnaire as well as questions about one's well-being may have functioned as an intervention (Campbell & Stanley, 1963). Especially if people are willing to train themselves in self-leadership and for that reason participate in the study. This may explain why we found that both the experiment and the control group increased in self-leadership over time (study 3). Future research designs may benefit from other research methods, such as the critical incident technique (Bott & Tourish, 2016). Respondents can be asked to reflect in retrospective on how they reacted in that situation. This will help to get insight in how people actually lead themselves at specific challenging moments (positive or negative).

Practical implications for healthcare

For healthcare workers

The present study has shown that healthcare workers can benefit from the development of self-leadership. Especially, if they use natural rewards strategies, they will experience better health and more engagement in their work. The effects of the cognitive and behaviour focused strategies seem to be ambivalent, and need to be cautiously implemented. Building on Self-Determination Theory, self-leadership strategies are assumed to have positive effects, if they are applied for

improving individuals' own vitality. The exercise of self-leadership is assumed to contribute to the autonomous motivation for activities in work and life, and therefore more generally, to vitality, health and personal growth.
The development of self-leadership is at first an individual choice. And here I repeat the citation of Florence Nightingale (1860; p. 7): 'I do not pretend to teach her how, I ask her to teach herself, and for this purpose I venture to give her some hints'.
Developing self-leadership is an on-going process which can be exercised every day.

For this it is especially beneficial to:

- regularly reflect on your own well-being and whether there are points for improvement
- focus on activities which you are willing and able to influence
- work with goals which you fully endorse, as these are meaningful, valuable, or enjoyable to you
- actively adjust your job tasks and job environment in such a way that your day becomes more energizing
- use your strengths, especially if these are energizing for yourself
- build in reminders in order to stay focused on what is important for your own vitality
- reward yourself along the road with nice activities or tangible rewards which you really enjoy.

Besides, it is beneficial to reflect on:

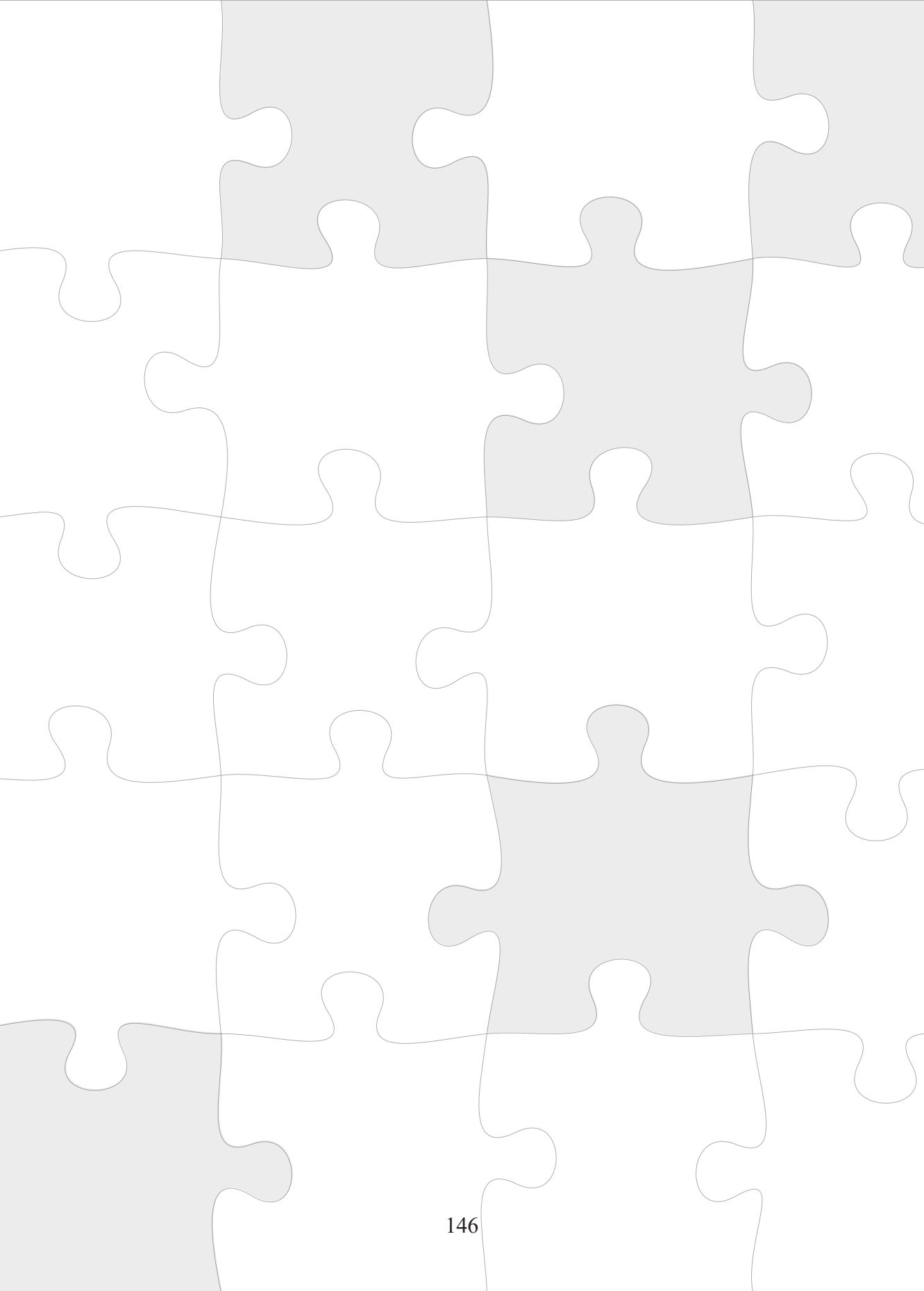
- which positive things have happened to you during the day, and how you have influenced these; this will help you in building your self-esteem concerning your self-leadership
- what the positive aspects are of a difficult, boring, or otherwise challenging task or situation, and how you may benefit from these
- negative thoughts and whether these are true; for this it is worthwhile to reflect with someone else, as other people can help you in transforming negative into positive thoughts.

For employers

The present thesis showed that it is beneficial to invest in the development of self-leadership, both at the individual level and at the team level.

Healthcare organizations can facilitate employees in their self-leadership development by offering training programs which have the self-leadership approach. The goals of these programs can be diverse such as developing vitality, lifestyle, and career opportunities. It is worthwhile to ask employees to express their personal needs for development, in order to make a good fit between the needs and program offering. Furthermore, due to the voluntary basis of the training programs, it is important to develop a communication strategy such that every employee is informed about the development opportunities.

Besides, for implementing self-leadership within teams it is worthwhile to not only focus on the teams and individual healthcare workers, but also on their team managers, management directors, and HR advisors. If all involved participants engage in the development of self-leadership, they will inspire and support each other in creating a vitalizing workplace.



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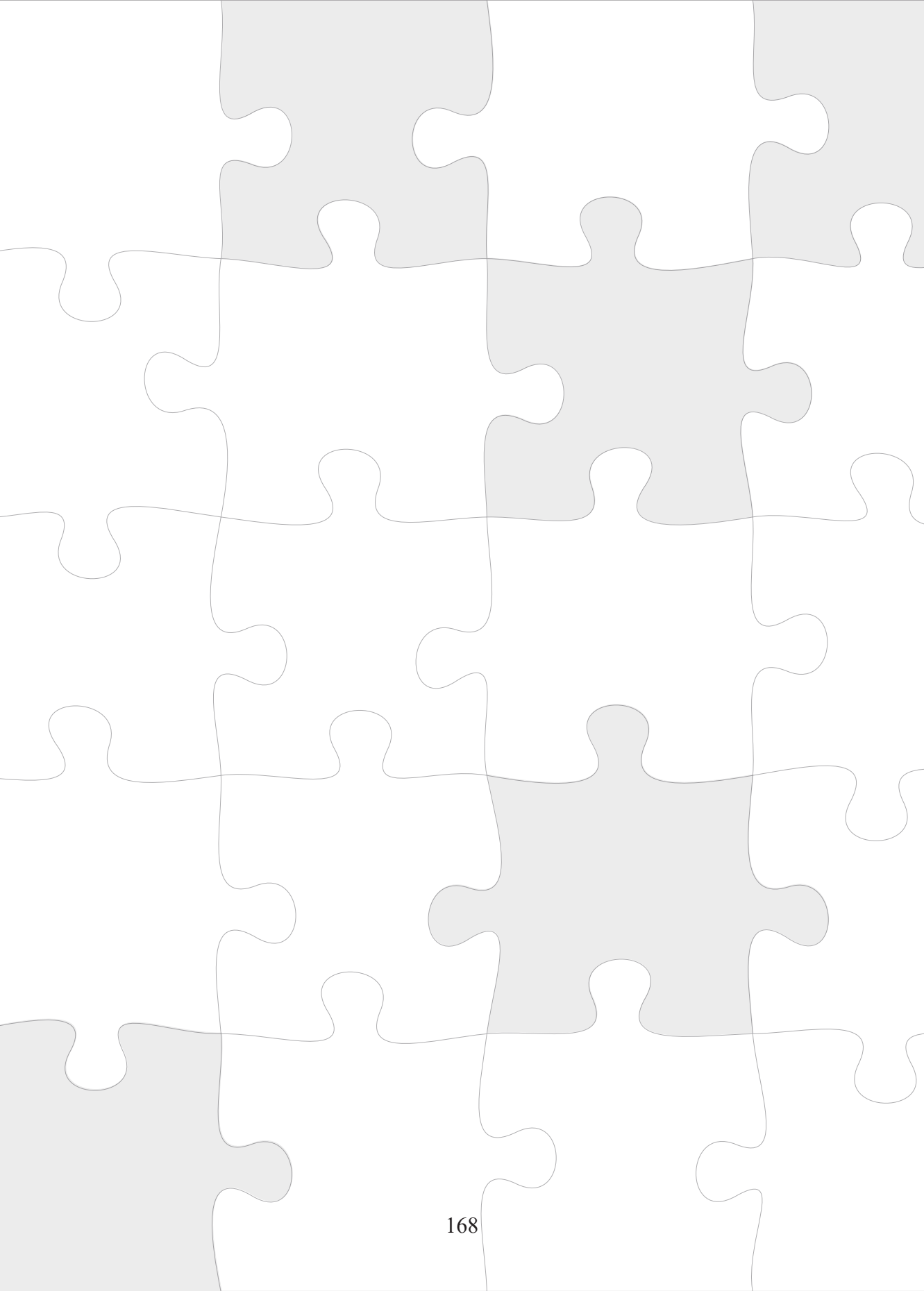


Summary

Summary

Working in healthcare is often experienced as enjoyable and meaningful, but research has also shown that healthcare workers can experience their job as demanding and stressful. In order to optimize working conditions, scholars and policy makers have assumed that healthcare workers should be facilitated with more job autonomy. Job autonomy allows them to organize job tasks in such a way that stress is reduced. Moreover, it is assumed that job autonomy satisfies the basic psychological need for autonomy. Therefore, the experience of more job autonomy will lead to more work engagement and better health for healthcare workers. However, in this thesis, I hypothesized that more job autonomy also requires from healthcare workers to have competences for *self-leadership*.

Self-leadership refers to the self-influencing process of self-motivation and self-direction in order to optimize own functioning and well-being (Manz, 1986; 2015; Neck & Houghton, 2006). Self-leadership theory describes specific cognitive and behavioural strategies which are assumed to be helpful in this self-influencing process. Behavioural focused strategies (e.g., self-observation, goal-setting, self-rewards, self-cueing) are aimed to motivate oneself to do tasks that need to be done, even if they are boring, unattractive or otherwise difficult. Cognitive strategies (e.g., evaluation of assumptions and beliefs, positive pep talks) help to construct helpful thought patterns even if a task or situation is difficult or unappealing. Natural reward strategies represent both behavioural and cognitive strategies, and specifically focus on increasing intrinsic motivation (natural rewards). People can improve natural reward strategies by actively changing a task or situation such that it becomes more fun or challenging to do. Besides people can mentally focus on the positive, intrinsically motivating aspects of work rather than the negative aspects. In addition to the above mentioned strategies, self-leadership also refers to actual autonomous behaviour. Self-leaders show initiative in their job and independently seek solutions for their daily work related problems and challenges. In fact, self-leaders take responsibility for own functioning.

Previous research has shown that self-leadership can contribute to performance and well-being of employees. Despite this, self-leadership has hardly been studied among healthcare workers. Scholars debate whether self-leadership can actually be applied within healthcare jobs. Healthcare workers mostly have

practical jobs, while it is assumed that self-leadership is especially relevant in more complex jobs. Moreover, the professional focus of healthcare workers is mainly on caring for others, and less performance-oriented. Nevertheless, in this thesis I have hypothesized that healthcare workers can benefit from self-leadership. I have argued that self-leadership helps healthcare workers to align their activities with personal needs, goals, and interests, resulting in greater work engagement and improved health. Also, self-leadership can help them function effectively in everyday work. I also hypothesized that job autonomy will encourage healthcare workers to take the lead, while conversely, self-leadership can also help them to increase their job autonomy. Furthermore, I explained that it is beneficial if healthcare workers develop self-leadership through training, as this will contribute to their work engagement, health, and performance.

The central research question of my thesis is:

> *How can healthcare workers benefit from self-leadership in terms of their work engagement, health, and performance?*

I have formulated four sub-questions which have been investigated in four sub-studies.

1. Does self-leadership mediate between job autonomy and respectively work engagement and health of healthcare workers?

The first study investigated whether self-leadership explains the positive effects of job autonomy on work engagement and health of healthcare workers. The study found that mainly natural rewards explained this relationship. The behavioural and cognitive strategies were found to only marginally explain the relationship; marginally positive on work engagement and marginally negative on health. Self-leadership behaviour had no explanatory role in the relationship between job autonomy and respectively work engagement and health. It was concluded that mainly natural rewards strategies explained the relationship between job autonomy and the effects on work engagement and health.

2. How are job autonomy, self-leadership and need for job autonomy related?

The second study investigated whether job autonomy has a causal relationship with self-leadership. It was also investigated whether this relationship also applies in reverse, i.e. whether self-leadership can lead to more job autonomy. In

addition, the degree of need for job autonomy was included in the study. Since people differ in their need for job autonomy, I hypothesized that the degree of need for job autonomy affects the reciprocal relationship between job autonomy and self-leadership. Self-leadership was examined as self-leadership strategies and self-leadership behaviour. Respondents completed the same questionnaire twice with an intermediate period of about 3 months, in order to be able to test the causal relationships between the variables. In contrast to our expectations, only a small reciprocal relationship was found between job autonomy and self-leadership behaviour, while there was no causal nor a reciprocal relationship between job autonomy and self-leadership strategies. Neither evidence was found for the hypothesized influence of need for job autonomy on the aforementioned relationships. It was concluded that probably other factors play a role, such as type of work, style of leadership, and autonomy support of colleagues. Also, the workload may influence the reciprocal relationship between job autonomy and self-leadership.

3. How can healthcare employees benefit from self-leadership training in terms of work engagement, health, and performance?

To answer the third research question, a longitudinal field experiment was conducted, testing the effectiveness of self-leadership training among healthcare workers from five different healthcare organizations. The training consisted of two group workshops (week 1 and week 8) and eight weekly e-learning reflection modules which participants could do independently at home. Healthcare workers could volunteer for the training and were randomly assigned to the experiment or waiting list control group. Respondents completed questionnaires three times: pre-intervention, directly after the intervention, and 2 months after the intervention. The analysis showed that the self-leadership training contributed to work engagement and performance immediately after the training, but not directly to health. However, it appeared that as a result of the increase in work engagement directly after the training, the respondents experienced better health after two months and also started to perform better. It was concluded that the self-leadership training contributes to work engagement and performance. Moreover, the increase in work engagement explains the long-term effect of the training on health and performance.

4. How can self-leadership be developed within the setting of a healthcare team?

The fourth study focused on the development of self-leadership within the setting of a healthcare team. For this study, an integrated intervention program was designed to strengthen leadership at three levels: individual level (self-leadership), team level (shared leadership) and management/HR staff level (coaching and facilitating leadership). Two nursing home teams and three homecare teams participated in the study. By means of a qualitative evaluation study the effects of this approach were investigated according to the experiences of the participants. It was concluded that this integral approach is valuable for individuals, teams, as well as for their managers and HR advisors, because it contributes to the work engagement of employees and the effectiveness of the teams. Also, within one team, a reduction in absenteeism was observed which was attributed to the intervention approach. Besides these positive outcomes, there were also recommendations for improvement of such an approach. First, there was a need for more preparation time to properly organize the project and to properly carry out communication about the project. Second, the mandatory nature for participation in the self-leadership training was perceived negatively by many participants. This training should only be offered on a voluntary basis. Third, it turned out that the integrated approach only worked in stable teams; that is, in teams with a permanent manager and a permanent team composition. If a team has to merge with another team or if team leaders are replaced during the intervention this has a negative impact on the intended team development.

Overall conclusion and recommendations

Based on the four studies, I conclude that self-leadership is a valuable concept to use within the healthcare industry. In particular, the strategies to increase natural rewards will contribute to work engagement and health. Caution should be taken with the behavioural and cognitive strategies as they show a marginal negative effect on health and only a marginal positive effect on work engagement. However, in Study 3 I also argued that self-leadership strategies can be modified such that they are used to achieve self-determined goals and activities. Self-Determination Theory (Deci & Ryan, 2000; Deci, Olafsen & Ryan, 2017) assumes that if behaviour is based on self-determination the motivation can be seen as autonomous motivation. In autonomous motivation, one is motivated for behaviour because of the inherent value, pleasure, and/or meaningfulness

associated with that behaviour, which subsequently has positive effects on vitality, personal growth, and sustainable job performance. If healthcare workers learn to consciously reflect on what they find interesting or enjoyable, they can set goals based on autonomous motivation and apply self-leadership strategies in order to achieve these goals. As an effect they will experience more work engagement, with a long-term effect on their health and performance.

This thesis did not convincingly find evidence for the hypothesized link between job autonomy and self-leadership. This means that increasing job autonomy, does not have the expected effect on self-leadership of healthcare employees and presumably will not lead to more work engagement and health through self-leadership. Possibly a third variable, such as the encouragement of supervisor or colleagues to make their own choices plays a role in both self-leadership and the degree of job autonomy. Follow-up research is needed to better understand how these variables are related and how they affect work engagement, health, and performance of healthcare workers.

This research also contributes to theory development around self-leadership. First, in Study 3 we showed that outcomes of training self-leadership related to health and performance can be explained by increased work engagement. Work engagement was interpreted in this study as a general indicator of autonomous motivation for one's job. So far, the effects of self-leadership on performance and well-being were mainly explained by the increased self-efficacy. Follow-up research is needed to better understand how self-leadership works and how respectively autonomous motivation and self-efficacy play a role in this process. Second, the analysis of the thesis also showed that self-leadership strategies and self-leadership behaviour are different facets of self-leadership. They have different relationships with predictors and outcome variables of self-leadership. In doing so, we have shown that both are necessary for understanding how self-leadership works, and that they cannot replace each other. For future research, it is useful to include both strategies and behaviour in the study of self-leadership.

Practical implications for healthcare

For healthcare workers

Based on this thesis, I argue that healthcare employees can benefit from the development of self-leadership. Especially, being able to increase natural rewards

in one's job is a valuable competence to develop, as this will contribute to health and engagement. In addition, the use of self-leadership strategies is recommended if they serve the achievement of self-determined goals, i.e., goals based on autonomous motivation.

The following strategies are recommended for regular use:

- Reflect on your own well-being and identify points for improvement
- Focus on activities which you are willing and able to influence
- Work with goals which you fully endorse, because of the implicit meaningfulness, value, or joy
- Actively adjust job tasks and job environment in such a way that this becomes more energizing
- Use your strengths, especially those strengths which you experience as energizing
- Build in reminders in order to stay focused on what is important for your own vitality
- Reward yourself with nice activities or tangible rewards which you really enjoy.

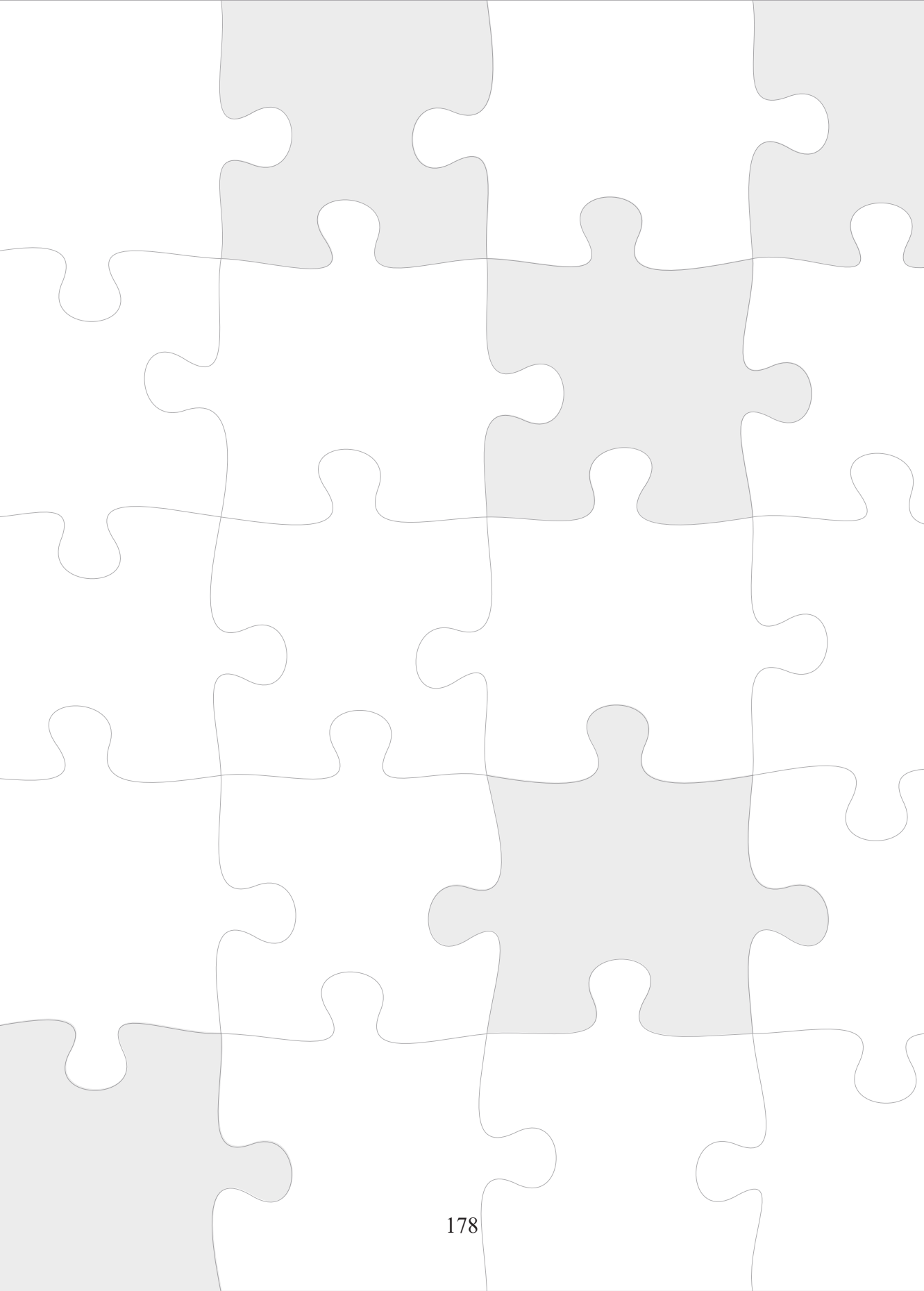
In addition, it is valuable to regularly reflect on:

- Which positive things happened during your day and how did you influence these?
- What are the positive aspects of a difficult, boring, or otherwise challenging task or situation?
- Do your negative thoughts match reality? It is helpful to discuss this question with someone else and together look for ways to turn negative thoughts into helpful ones.

For employers

The results of this thesis have shown that it is beneficial to invest in the development of self-leadership of healthcare workers, both at the individual level and within the setting of a team. Healthcare organizations can facilitate employees in their self-leadership development by offering training programs which have

the self-leadership approach. The goals of these programs can be diverse such as developing vitality, lifestyle and career development. In this regard, it is worthwhile to ask employees about their personal needs for development in order to make a good fit between the needs and program offering. Furthermore, due to the voluntary basis of the training programs, it is important to develop a good communication strategy such that employees are well informed about the development opportunities within their organization. For the development of self-leadership within teams, it is important to also include team leaders, managers, and HR advisors. If all participants engage in the development of self-leadership, they will inspire and support each other in creating a vitalizing workplace.



Samenvatting

Samenvatting

Werken in de gezondheidszorg wordt veelal ervaren als plezierig en zinvol, maar ook rapporteren zorgmedewerkers dat zij het werk als belastend en stressvol ervaren, zo blijkt uit veel wetenschappelijk onderzoek onder zorgmedewerkers. Om de werkomstandigheden te optimaliseren wordt door wetenschappers en beleidsmakers verondersteld dat zorgmedewerkers meer autonomie moeten krijgen in hun werk. Autonomie in het werk biedt zorgmedewerkers de mogelijkheid om zelf de werktaken zo te organiseren dat deze minder stressvol zijn. Bovendien wordt aangenomen dat autonomie in het werk tegemoet komt aan de psychologische basisbehoefte van mensen om autonoom te kunnen handelen. Zodoende is de verwachting dat zorgmedewerkers die meer kunnen profiteren van autonomie in het werk, meer bevlogen zijn en een betere gezondheid hebben. Echter, in dit promotieonderzoek, heb ik verondersteld dat meer autonomie in het werk ook van zorgmedewerkers vraagt dat zij in staat zijn tot *zelfleiderschap*.

Zelfleiderschap verwijst naar het proces van zelfmotivatie en zelfsturing om zo zelf invloed uit te oefenen op het eigen functioneren en eigen welzijn (Manz, 1986; 2015; Neck & Houghton, 2006). De theorie van zelfleiderschap beschrijft specifieke cognitieve en gedragsgerichte strategieën die bij dit proces van zelf-beïnvloeding kunnen helpen. Gedragsgerichte strategieën (bijv. zelf-observatie, doelen stellen, jezelf belonen, reminders inbouwen) hebben als doel om jezelf te motiveren tot het doen van taken die gedaan moeten worden, ook al zijn ze onaantrekkelijk, saai of anderszins lastig. Cognitieve strategieën (bijv. evaluatie van eigen aannames en overtuigingen, positieve peptalk) helpen om helpende gedachtepatronen te construeren, zelfs als een taak of situatie lastig of onaantrekkelijk is. Natuurlijke beloningen strategieën vertegenwoordigen zowel gedragsgerichte als cognitieve strategieën, en richten zich specifiek op het vergroten van intrinsieke motivatie (natuurlijke beloning). Dit kan door een activiteit dusdanig te veranderen dat deze leuker of uitdagender wordt. En het kan ook door de mentale focus te richten op de positieve, intrinsiek motiverende aspecten van het werk in plaats van op de negatieve aspecten. Behalve bovengenoemde strategieën, verwijst zelfleiderschap ook naar het feitelijke autonome gedrag. Zelfleiders tonen initiatief in het werk en zoeken zelfstandig naar oplossingen voor alledaagse problemen en uitdagingen in het werk. Ze nemen verantwoordelijkheid voor hun eigen functioneren.

Eerder onderzoek heeft laten zien dat zelfleiderschap positief kan bijdragen aan de prestaties en het welzijn van medewerkers. Desondanks is zelfleiderschap tot nu toe nauwelijks onderzocht onder zorgmedewerkers. Er is binnen de wetenschap enige discussie of zelfleiderschap wel toegepast kan worden binnen de zorg. Zorgmedewerkers hebben veelal praktisch werk, terwijl wordt aangenomen dat zelfleiderschap vooral relevant is bij meer complexe werkzaamheden. Bovendien is het werk van zorgmedewerkers vooral gericht op het zorgen voor anderen, en minder prestatiegericht. Toch heb ik in deze dissertatie verondersteld dat zorgmedewerkers baat kunnen hebben bij zelfleiderschap. Ik heb beargumenteerd dat zelfleiderschap zorgmedewerkers helpt om hun activiteiten in overeenstemming te brengen met persoonlijke behoeftes, doelen en interesses, met als gevolg meer werkplezier en meer gezondheid. Ook kan zelfleiderschap helpen bij het effectief functioneren in het alledaagse werk. Tevens veronderstel ik dat autonomie in het werk zorgmedewerkers zal aanmoedigen tot zelfleiderschap, terwijl andersom zelfleiderschap zorgmedewerkers ook kan helpen om zelf de autonomie in het werk te vergroten. Bovendien heb ik uiteengezet dat het nuttig is als zorgmedewerkers zich ontwikkelen in zelfleiderschap middels training, omdat dit zal bijdragen aan hun bevlogenheid, gezondheid en werkprestaties.
De centrale onderzoeksvraag van mijn thesis is:

> *Hoe kunnen zorgmedewerkers baat hebben bij zelfleiderschap als het gaat om hun bevlogenheid, gezondheid en prestatie?*

Ik heb vier deelvragen geformuleerd welke in vier deelstudies zijn onderzocht.

1. Verklaart zelfleiderschap de effecten van autonomie in het werk op bevlogenheid en gezondheid van zorgmedewerkers?

In de eerste studie is onderzocht of zelfleiderschap de positieve effecten van autonomie in het werk op bevlogenheid en gezondheid van zorgmedewerkers verklaart. Uit de studie bleek dat vooral natuurlijke beloningen deze relatie verklaren. De gedragsmatige en cognitieve strategieën bleken slechts marginaal het verband te verklaren; marginaal positief op bevlogenheid en marginaal negatief op gezondheid. Het zelfleiderschapsgedrag had in het geheel geen verklarende rol in de relatie tussen autonomie in het werk en respectievelijk bevlogenheid en gezondheid. Geconcludeerd werd dat vooral natuurlijke beloningen strategieën de relatie tussen autonomie in het werk en de effecten op

bevlogenheid en gezondheid verklaren.

2. Hoe zijn autonomie in het werk, zelfleiderschap en behoefte aan autonomie in het werk aan elkaar gerelateerd?

In de tweede studie is onderzocht of autonomie in het werk een causaal verband heeft met zelfleiderschap. Eveneens is onderzocht of dit verband ook omgekeerd geldt, dus of zelfleiderschap kan leiden tot meer autonomie in het werk. Bovendien is de mate van behoefte aan autonomie in het werk meegenomen in het onderzoek. Aangezien mensen verschillen in hun behoefte aan autonomie in het werk, heb ik verondersteld dat de mate van behoefte aan autonomie in het werk van invloed is op het wederkerig verband tussen autonomie in het werk en zelfleiderschap. Zelfleiderschap werd onderzocht als zelfleiderschapsstrategieën en zelfleiderschapsgedrag. Respondenten hebben twee keer dezelfde vragenlijst ingevuld met een tussenliggende periode van ongeveer 3 maanden, zodat de oorzakelijke verbanden tussen de variabelen getest konden worden. In tegenstelling tot onze verwachtingen werd alleen een klein wederkerig verband gevonden tussen autonomie in het werk en zelfleiderschapsgedrag. Er bleek geen oorzakelijk en ook geen wederkerig verband te zijn tussen autonomie in het werk en zelfleiderschapsstrategieën. Ook voor de veronderstelde invloed van de behoefte aan autonomie in het werk op de genoemde relaties werd geen bewijs gevonden. Geconcludeerd werd dat vermoedelijk andere factoren een rol spelen, waarbij te denken valt aan type werk, stijl van leidinggeven, stimulans van collega's om zelf keuzes te maken en ontwikkelmogelijkheden ten aanzien van zelfleiderschap binnen de organisatie. Ook kan de mate van werkdruk invloed hebben op het wederkerig verband tussen autonomie in het werk en zelfleiderschap.

3. Hoe kunnen zorgmedewerkers baat hebben van een training zelfleiderschap als het gaat om hun bevlogenheid, gezondheid en prestatie?

Voor de beantwoording van de derde onderzoeksvraag is een longitudinaal veldexperiment uitgevoerd, waarbij de effectiviteit van het trainen van zelfleiderschap is getest onder zorgmedewerkers van vijf verschillende zorgorganisaties. De training bestond uit 2 groepsworkshops (week 1 en week 8) en 8 wekelijkse e-learning reflectiemodules om zelfstandig te doen. Zorgmedewerkers konden zich vrijwillig aanmelden voor de training en werden naar willekeur ingedeeld in de experiment- of wachtlijstcontrolegroep. Respondenten hebben drie keer een vragenlijst ingevuld: voorafgaand, na afloop

en 2 maanden na afloop van de interventie. Uit de analyse bleek dat de training zelfleiderschap bijdraagt aan de bevlogenheid en prestatie direct na afloop van de training, maar niet direct aan de gezondheid. Wel bleek dat ten gevolge van de toename in bevlogenheid direct na de training, de respondenten na 2 maanden betere gezondheid ervaarden en ook beter gingen presteren. Geconcludeerd werd dat de training zelfleiderschap bijdraagt aan bevlogenheid en prestatie. Bovendien verklaart de toename in bevlogenheid het lange termijn effect van de training op gezondheid en prestatie.

4. Hoe kan zelfleiderschap worden ontwikkeld in teamverband binnen de gezondheidszorg?

De vierde studie is gericht op de ontwikkeling van zelfleiderschap binnen de setting van een zorgteam. Voor deze studie is een integraal interventieprogramma ontworpen ter versterking van het leiderschap op drie niveaus: individueel niveau (zelfleiderschap), teamniveau (gedeeld leiderschap) en management/HR stafniveau (coachend en faciliterend leiderschap). Twee intramurale zorgteams binnen een verpleeghuisen drie extramurale zorgteams, werkzaam binnen de wijkzorg participeerden in het onderzoek. Middels een kwalitatieve evaluatie is onderzocht wat de effecten van deze aanpak waren volgens de beleving van deelnemers. Geconcludeerd werd dat deze integrale benadering waardevol is voor zowel individuen, teams, alsmede voor hun managers en HR adviseurs, omdat deze bijdraagt aan de bevlogenheid van medewerkers en de effectiviteit van de teams. Ook werd binnen één team een reductie van ziekteverzuim waargenomen welke werd toegeschreven aan de interventieaanpak. Behalve deze positieve uitkomsten, waren er ook aanbevelingen voor verbetering van een dergelijke aanpak. Ten eerste was er behoefte aan meer voorbereidingstijd om het project goed te organiseren en de communicatie over het project goed uit te voeren. Ten tweede werd het verplichtende karakter voor deelname aan de training zelfleiderschap negatief ervaren door veel deelnemers. Deze training zou alleen op vrijwillige basis moeten worden aangeboden. Ten derde bleek dat de integrale aanpak alleen werkte in stabiele teams; dat wil zeggen in teams met een vaste leidinggevende en een vaste teamsamenstelling. Teams die gedurende het proces een fusie doormaken of van teamleider wisselen hadden onvoldoende stabiliteit om aan de teamontwikkeling te werken.

Algemene conclusies en aanbevelingen

Op basis van de vier studies concludeer ik dat zelfleiderschap een waardevol concept is om te gebruiken binnen de gezondheidszorg. Met name de strategieën om natuurlijke beloningen te vergroten zullen bijdragen aan de bevlogenheid en gezondheid van medewerkers. Voorzichtigheid is geboden bij de gedragsmatige en cognitieve strategieën aangezien deze een marginaal negatief effect laten zien op gezondheid en slechts een marginaal positief effect op bevlogenheid. Echter, in studie 3 heb ik ook beargumenteerd dat zelfleiderschapsstrategieën dusdanig kunnen worden aangepast, dat deze worden gebruikt voor het bereiken van zelfbepaalde doelen en activiteiten. De zelfdeterminatie theorie (Deci & Ryan, 2000; Deci, Olafsen & Ryan, 2017) gaat ervan uit dat als gedrag is gebaseerd op zelfbeschikking de motivatie gezien kan worden als autonome motivatie. Bij autonome motivatie is men gemotiveerd voor gedrag vanuit de inherente waarde, het plezier en/of de zinvolheid dat gekoppeld wordt aan dat gedrag, en dit heeft positieve effecten op de vitaliteit, persoonlijke groei en duurzame arbeidsprestaties. Indien zorgmedewerkers leren om bewust stil te staan bij wat zij zelf graag willen, dus bij hun autonome motivatie, dan kunnen zij doelen bepalen waar zij ook achter staan en vervolgens zelfleiderschapsstrategieën toepassen om deze doelen daadwerkelijk te bereiken. Als effect zullen zij meer bevlogenheid ervaren, met een lange termijn effect op hun gezondheid en prestaties in het werk.

Dit onderzoek laat geen overtuigend bewijs zien voor het veronderstelde verband tussen autonomie in het werk en zelfleiderschap. Dit betekent dat het vergroten van autonomie in het werk, niet het verwachte effect op zelfleiderschap van zorgmedewerkers heeft en vermoedelijk ook niet via zelfleiderschap zal leiden tot meer bevlogenheid en gezondheid. Mogelijk speelt een derde variabele, zoals de aanmoediging van leidinggevende of collega's om eigen keuzes te maken een rol in zowel zelfleiderschap als in de mate van autonomie in het werk. Vervolgonderzoek is nodig om beter te begrijpen hoe deze variabelen met elkaar samenhangen en hoe zij invloed hebben op de bevlogenheid, gezondheid en de prestaties van zorgmedewerkers.

Dit onderzoek draagt ook bij aan de theorieontwikkeling rondom zelfleiderschap. Ten eerste hebben we in studie 3 laten zien dat uitkomsten van het trainen van zelfleiderschap gerelateerd aan gezondheid en prestatie kunnen worden verklaard door de toegenomen bevlogenheid. Bevlogenheid is in dit onderzoek uitgelegd als een algemene indicator voor autonome motivatie in het

werk. Tot nu toe werden de effecten van zelfleiderschap op prestatie en welzijn voornamelijk verklaard door het toegenomen vertrouwen in eigen effectiviteit (self-efficacy). Vervolgonderzoek is nodig om inzicht te vergroten in de werking van zelfleiderschap en de rol van respectievelijk autonome motivatie en vertrouwen in eigen effectiviteit in dit proces. Ten tweede hebben de analyses in dit promotieonderzoek ook laten zien dat zelfleiderschapsstrategieën en zelfleiderschapsgedrag verschillende facetten van zelfleiderschap zijn. Ze hebben verschillende relaties met voorspellers en uitkomstvariabelen van zelfleiderschap. Daarmee hebben we aangetoond dat beide nodig zijn om inzicht te krijgen in de werking van zelfleiderschap, en dat deze elkaar niet kunnen vervangen. Voor toekomstig onderzoek is het nuttig om zowel strategieën als gedrag mee te nemen in de bestudering van zelfleiderschap.

Praktische implicaties voor de gezondheidszorg

Voor zorgmedewerkers

Op basis van dit promotieonderzoek stel ik dat zorgmedewerkers baat kunnen hebben bij de ontwikkeling van zelfleiderschap. Vooral het vergroten van natuurlijke beloningen in het werk is waardevol om te ontwikkelen, aangezien dit zal bijdragen aan de gezondheid en bevlogenheid. Daarnaast is het gebruik van zelfleiderschapsstrategieën aan te bevelen als deze dienend zijn aan het bereiken van zelfbepaalde doelen, dus doelen die zijn gebaseerd op autonome motivatie.

De volgende strategieën zijn aan te bevelen om regelmatig toe te passen:

- Reflectie op eigen welzijn en vaststellen van punten voor verbetering
- Focus op activiteiten waar je invloed op wil en kan uitoefenen
- Werken met doelen waar je zelf volledig achter staat, omdat je ze zinvol, waardevol, of plezierig vindt
- Actief werktaken en werkomgeving aanpassen op een manier dat je er meer energie krijgt
- Gebruiken van sterke kanten, met name als het gebruik van deze sterke kanten energie-gevend zijn voor jezelf
- Reminders inbouwen om gefocust te blijven op wat belangrijk is voor je eigen vitaliteit

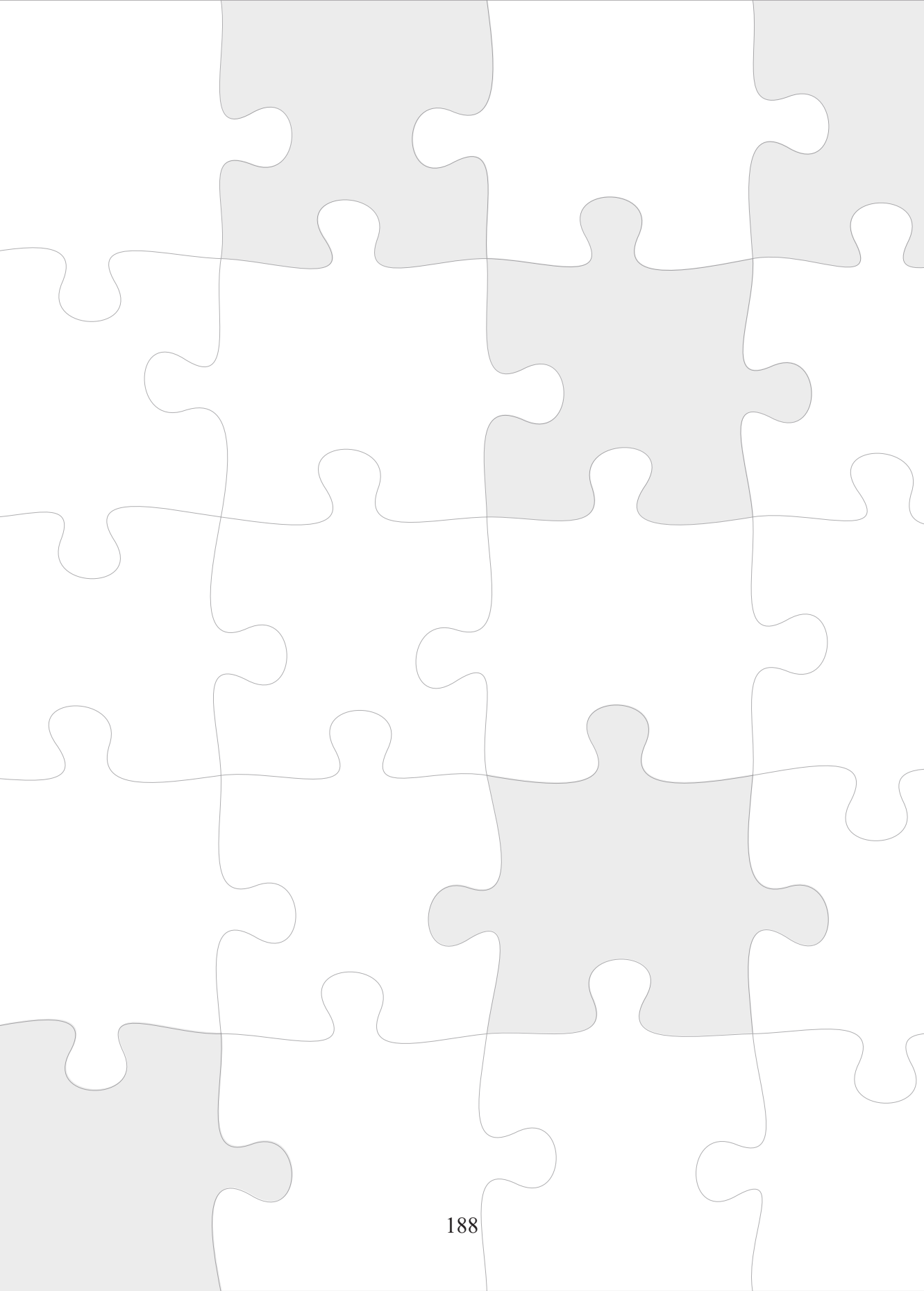
- Jezelf belonen met leuke activiteiten of tastbare beloningen waar je echt van geniet.

Daarnaast is het waardevol om regelmatig te reflecteren op:

- Welke positieve dingen zijn gebeurd gedurende je dag en hoe heb je daar zelf invloed op hebt gehad?
- Wat zijn de positieve aspecten van een moeilijke, saaie, of anderszins uitdagende taak of situatie?
- Kloppen jouw negatieve gedachten met de werkelijkheid? Het is zinvol om deze vraag samen met iemand anders te bespreken en samen te zoeken naar mogelijkheden om negatieve gedachten om te buigen tot helpende gedachten.

Voor werkgevers

De resultaten van deze thesis hebben laten zien dat het waardevol is om te investeren in de ontwikkeling van zelfleiderschap bij zorgmedewerkers, zowel op individueel niveau als binnen de setting van een team. Zorgorganisaties kunnen medewerkers faciliteren bij hun ontwikkeling in zelfleiderschap door trainingprogramma's aan te bieden die gebaseerd zijn op de principes van zelfleiderschap. De doelen van deze programma's kunnen divers zijn zoals het ontwikkelen van vitaliteit, leefstijl en loopbaanontwikkeling. Het is daarbij waardevol om medewerkers te vragen naar hun persoonlijke behoefte aan ontwikkeling, zodat het programma-aanbod past bij hun behoefte. Verder is het, vanwege de voorwaarde van vrijwillige deelname aan de trainingsprogramma's, belangrijk om een goede communicatiestrategie te ontwikkelen, zodat medewerkers goed op de hoogte zijn van de ontwikkelmogelijkheden binnen hun organisatie. Voor de ontwikkeling van zelfleiderschap binnen teams is het belangrijk om ook de teamleiders, managers en HR-adviseurs te betrekken. Als alle participanten werken aan de ontwikkeling van zelfleiderschap zullen zij ook elkaar aanmoedigen in het creëren van vitale werkomgeving.



About the Author

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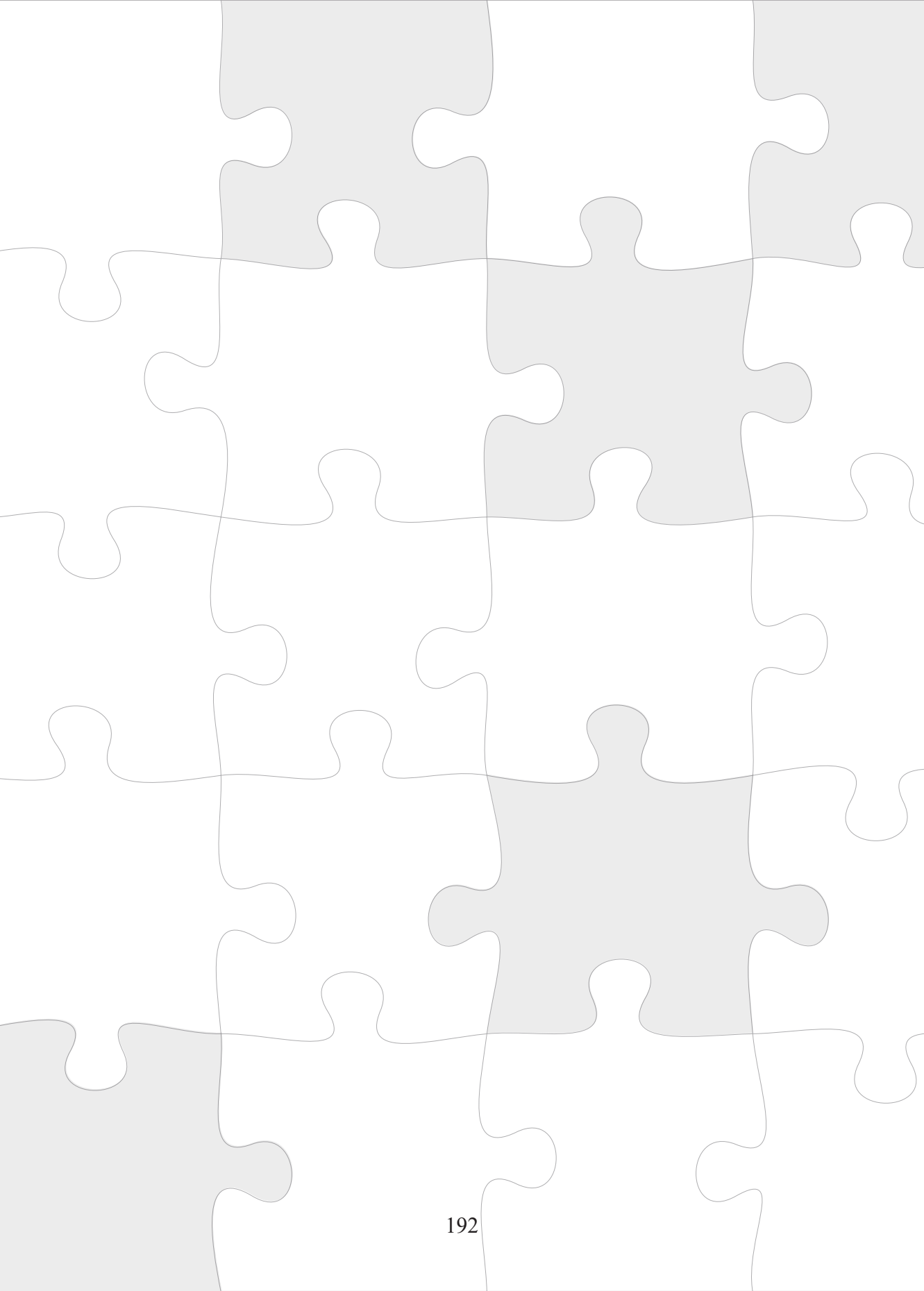
Pauline van Dorssen-Boog started her career in 1993 as a registered nurse in a clinical hospital (Reinier de Graaf Gasthuis, Delft). From 1997 till 2002 she worked as a nurse and junior team manager at the rehabilitation department for elderly people (Antonius Binnenweg, Rotterdam). Meanwhile she studied Psychology at the Leiden University, for which she graduated in 2001, with a specialization in Social and Organization Psychology. In 2002 she started as a consultant in the field of work and organization psychology and did projects for profit and not-for-profit organizations (Arbo Unie and Achmea Vitale). Since the end of 2006 she has her own company in which she primarily focuses on training and consultancy projects within the Healthcare Industry. Since 2014 she renamed her company as Intrinzis, and since then she cooperates with a group of professional freelance psychologists and coaches.

In 2011 Pauline started her PhD research project in which she focused on the potential benefits of self-leadership for the well-being of healthcare workers. She presented her research work at a diversity of international academic conferences, including the European Association of Work and Organization Psychology Conference (EAWOP, 2013, 2015, 2019), the European Conference for Positive Psychology Amsterdam (ECPP, 2014), the Werkgemeenschap van onderzoekers in Arbeids- en Organisatie Psychologie (WAOP, 2014, 2017), 50th Anniversary Congress of the German Psychological Society – LeiPSYCH (2016), International Conference Wellbeing at Work Amsterdam (2016), and the EAWOP Small Group Meeting (2018). She published her work in Frontiers in Psychology, Journal of Occupational and Organizational Psychology, and Tijdschrift voor HRM, and she was co-author in the chapter about the Dutch Healthy Healthcare project (Wendbaar aan het werk) in the book 'Integrating the organization of health services, worker wellbeing and quality of care (Løvseth & De Lange, 2020).

Pauline will continue her career as consultant, researcher, and teacher, with a specific interest for finding ways to develop both the vitality and effectiveness in work of healthcare workers.



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