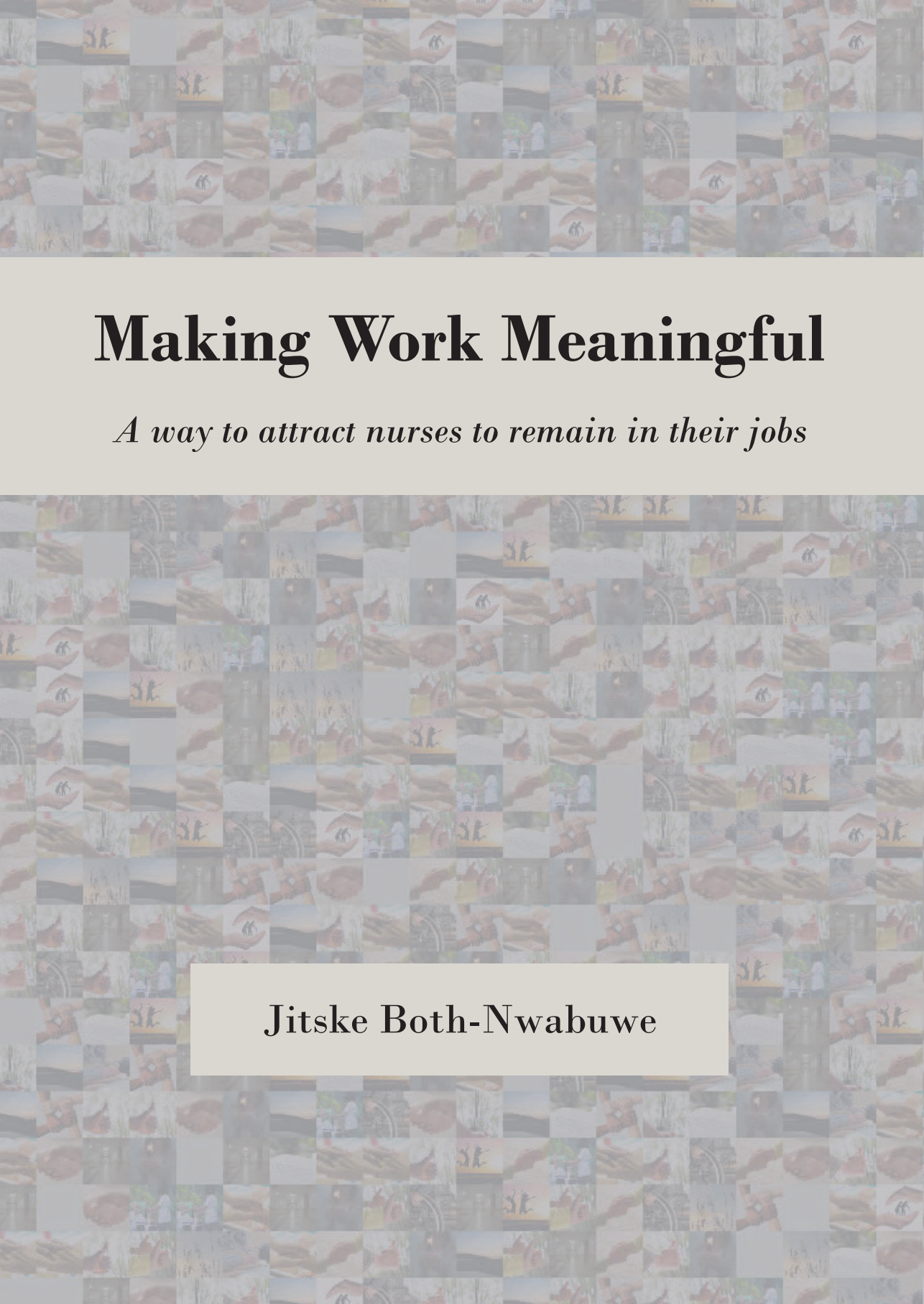

Making Work Meaningful

A way to attract nurses to remain in their jobs

Jitske Both-Nwabuwe

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Colofon

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VRIJE UNIVERSITEIT

MAKING WORK MEANINGFUL

A way to attract nurses to remain in their jobs

ACADEMISCH PROEFSCHRIFT

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de Vrije Universiteit Amsterdam,
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door

Jitske Marit Carlijn Both

geboren te Amersfoort

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CHAPTER 1

General Introduction[1]

Estimates from the World Health Organization (WHO) suggest that there will be a global shortage of 12.9 million healthcare workers by the year 2035 (World Health Organization, 2014). Such shortages of healthcare workers are also expected to occur in the Netherlands (Van der Aalst & Uitert, 2013), where, just like in most countries, nurses are the largest group of professionals in the healthcare workforce (Buchan, Duffield & Jordan, 2015; Van der Aalst & Van Uitert, 2013). The Netherlands and other countries, therefore, will be experiencing immense nursing shortages in the future (Sermeus et al., 2011).

An important point to make is that there is no single "magic bullet" solution that will solve nursing shortages (Buchan & Aiken, 2008). Solving nursing shortages requires a core set of human resource (HR) policy interventions, such as improving recruitment, retention (i.e. the extent to which nurses opt to remain working in their profession; Mrayyan, 2005) and effective use of skills of available nurses (Buchan & Aiken, 2008).

Research on the effectiveness of HR policy interventions highlights that there is a need to consider what has been termed "contingency," meaning that the HR policies being implemented should "fit" the characteristics, context and priorities of the organization or system in which they are being applied (Buchan & Aiken, 2008). Traditional HR policies for achieving a boost in recruitment and retention, such as compensation and reward programs, might not "fit" contemporary work environments in which employees' expectations of work and their attitudes towards it have changed (Chalofsky, 2010; Harpaz & Fu, 2002). Research indicates that nurses are attracted to work and remain working in their profession if they have opportunities to develop professionally, to gain autonomy and to participate in decision-making, while, at the same time, being fairly rewarded (see e.g., Buchan & Calman 2006). Their expectations of work go far beyond receiving a paycheck at the end of the month, and for many people in the Western world, nurses included, work is now a life domain in which

[1] This dissertation consists of a series of scholarly articles. Four of these articles have been published in academic journals (Chapter 2, Chapter 3, Chapter 4 and Chapter 5), one is accepted for publication and currently in press (Chapter 6). For this dissertation, the articles have been slightly adapted to ensure consistency of reference style. An advantage of presenting this dissertation in the form of a series of scholarly articles is that all chapters (except Chapters 1 and 8) can be read independently from the other chapters. A disadvantage is that there is some overlap between the chapters, for example in the introductions, definitions and explanations of the central concepts. Chapter 1, 6 and 8 are single authored, whereas Chapter 2, 3, 4, 5 and 7 are multi-authored.

they can fulfill their ambitions and achieve important goals (Van der Klink et al., 2016). As a consequence, employees want their work to be something more than a paycheck or a way to pass time (Gheaus & Herzorg, 2016; Harpaz & Fu, 2002). Instead, employees are seeking meaningful work (Gheaus & Herzorg, 2016; Harpaz & Fu, 2002), that is, work that has a level of existential significance that is perceived as satisfactory or sufficient (Lips-Wiersma & Wright, 2012).

As many employees want to find meaningfulness in their work (Gheaus & Herzorg, 2016; Harpaz & Fu, 2002), HR policies that focus on meaningful work might foster the extent to which nurses are attracted to their profession and remain working in it and, as such, reduce nursing shortages. Boosting retention can have an important impact on nursing shortages. In the Provence of Utrecht in 2015, for example, 42% of the 3,000 healthcare workers who left their organization moved out of the healthcare sector altogether (Stichting RegioPlus, 2016); if these healthcare workers had stayed in the healthcare sector, shortages would have been significantly reduced by 1,260 healthcare workers. Australian data suggest that if retention was improved by sustaining exit rates at 2% of the total workforce, the Australian nursing shortage would fall from the predicted 125,000 to a mere 25,000 in 2025, amounting to a reduction of approximately 100 thousand nurses (Health Workforce Australia, 2012). Results of a recent survey among 23,000 nurses working in medical and surgical hospital wards in ten European countries (Belgium, Finland, Germany, Ireland, the Netherlands, Norway, Poland, Spain, Switzerland and the UK) revealed that 9% of nurses in Europe intended to leave their profession. This "leaving the profession" turnover rate varied from 5% in the Netherlands to 17% in Germany (Heinen et al., 2013). The above-mentioned Australian example suggests that boosting retention by reducing exit rates in the Netherlands from 5% to 2% may reduce nursing shortages by more than half.

Given the impact that retention has on reducing the nursing workforce gap, this dissertation focuses on meaningful work, as a potential antidote against the causes of nursing shortages, and as such, as a potential contributor to nurse retention.

Experiencing a sense of meaningfulness in one's work has been found to relate to retention-related variables such as career commitment, work engagement, intrinsic work motivation and job satisfaction. Based on data from 370 employees from a large Western research university, Steger, Dik and Duffy (2012), for example, found that meaningful work is positively related to career commitment, i.e. "the strength of one's motivation to work in a chosen career" (Hall, 1971, p.59). In addition, they found that meaningful work is positively related to job satisfaction, i.e. "the degree of satisfaction experienced on the job" (Judge,

Locke, Durham & Kluger, 1998, p.17). Furthermore, they found a positive relation between meaningful work and intrinsic work motivation, i.e. "the motivation to engage in work primarily for its own sake, because the work itself is interesting, engaging, or in some way satisfying" (Amabile, Hill, Hennessey & Tighe, 1994, p.950). This is in line with the findings of Lips-Wiersma and Wright (2012), who found, in a sample of 405 workers, that meaningful work is positively related to work engagement, as a positive, fulfilling work-related state of mind that is characterized by vigor, dedication and absorption (Schaufeli, Taris, & Bakker, 2006). They also found a positive relation between meaningful work and intrinsic motivation (Lips-Wiersma & Wright, 2012).

The above findings imply that if nurses find their jobs meaningful, this should relate to higher job satisfaction, intrinsic work motivation, work engagement and career commitment. I argue, therefore, that it is highly plausible that these factors contribute to the extent to which nurses opt to keep working in their profession. As such, HR policies that focus on making work meaningful could be a worthwhile path to pursue.

Evidence on how nurses find meaningfulness in their work, or more specifically, what workplace factors influence nurses' perceptions of meaningfulness, is, however, currently scant (Lee, 2015; Pavlish & Hunt, 2012). Meaningful work and the associated outcomes may be conditioned by a wide range of organizational practices and antecedents (Rosso, Dekas, & Wrzesniewski, 2010). Without sufficient knowledge of how and when nurses experience their work as purposeful or significant, it would be challenging to develop HR policies that foster meaningful work. To be able to develop HR policies that boost nurse retention, therefore, we need to develop a deeper understanding of how and when nurses experience their work as purposeful or significant and, furthermore, of how we can create work environments that nurture meaningfulness.

In order to address the above-mentioned challenges, in this dissertation I focus on what makes work meaningful for nurses, how meaningful work can be fostered within the nursing work environment and what its potential role might be in retention. To examine these questions, in collaboration with the Department of Organizational Sciences at VU University and Stichting Cordaan, a healthcare organization in the western part of the Netherlands, I conducted a five-year collaborative research project, the findings of which are reported in this dissertation . More information on this collaborative research project can be found in Appendix I.

Below, I will first describe the impact of nursing shortages and the situation of nursing shortages in the Netherlands. Subsequently, I will define meaningful work. Next, I

will point to the gaps in the literature on meaningful work. I will end the chapter with an outline of the chapters that follow.

Nursing shortages and their impact

Just like in most Western countries, shortages of nurses in the Netherlands appear to be driven by the ageing population, which is the result of a sharp drop in birth rates combined with increased life expectancy. It is estimated that, in the Netherlands, the ratio of the population aged 65 and over to the population aged 20-64 will almost double within forty years, from 27.2% in 2012 to 52.5% in 2050 (Oude Hengel, 2013; Van der Aalst & Van Uitert, 2013). As people get older, they are at increased risk of (mild or serious) disability and functional impairment, resulting in an increased need for care (Eggink, Oudijk & Woittiez, 2010). The growing proportion of elderly people, consequently, increases the demand for nurses, while, at the same time, fewer nurses are available to do the job as older nurses retire.

In addition, social factors also contribute to shortages of nurses. Social factors include, for example, medical technical advancement. While advances in healthcare technology enable the volume and complexity of potential health care provision to rise, they also increase the demand for – specialized – nurses needed to actually provide such care (Baltagi, Moscone & Tosetti, 2012). Patients' growing knowledge and expectations, in addition, increase the demand for more diagnostic services and procedures (Fox, Ward & O'Rourke, 2005; Pourmand & Sikka, 2011) and, consequently, the demand for nurses. Another important factor is the declining enrolment of students in nursing programs due to the greater employment opportunities that are open to the young population (Eggink et al., 2010). The high turnover rates of nurses leaving the healthcare sector, furthermore, is an important factor in explaining shortages of nurses (Van der Heijden, Van Dam & Van Hasselhorn, 2009).

This increasing demand for nurses while the supply of them is decreasing obviously leads to lower nurse-to-patient ratios, and several studies have demonstrated that these, in turn, are related to several adverse patient outcomes (Buchan & Aiken, 2008; Duffield & O'Brien-Pallas, 2003).

First, nursing shortages have been found to relate to lower patient health status. Horn, Buerhaus, Bergstrom, and Smout (2005), for example, conducted a retrospective study among 1,376 residents in 82 long-term care facilities, showing that less direct care time per resident per day was associated with more occurrences of pressure ulcers, more weight loss and more functional decline among patients. Backhaus, Verbeek, Van Rossum, Capezuti and

Hamers (2014) confirmed this relation between lower numbers of nurses and more occurrences of pressure ulcers in their systematic review of longitudinal studies on nursing staffing and quality of care in nursing homes.

Second, research has shown a correlation between nurse staffing and complications after surgery. Based on an observational study conducted in 38 hospitals, Pronovost et al. (2001) reported that patients in hospitals with fewer nurses were more likely to have complications than patients in hospitals with more nurses. This is in line with the findings from an observational study conducted by Dimick, Swoboda, Pronovost and Lipsett (2001) among 569 adults who had liver resection. Although a causal relation was not established, Pronovost et al. (2001) suggested that nurses responsible for taking care of more than two patients simultaneously may have less time to detect potential complications at an early stage than nurses responsible for the care of one or two patients.

Third, nursing shortages have been found to relate to higher frequencies of medical errors. Healthcare organizations often try to resolve shortages by having nurses work extended shifts or do other forms of overtime (Rogers, Hwang, Scott, Aiken & Dinges, 2004). In their study on safety management and safety culture, Steyrer, Schiffinger, Huber, Valentin and Strunk (2013) showed that this policy increases medical errors. In an observational 48-hour cross-sectional study conducted in 57 intensive care units, they found that nurses experiencing a heavy workload − due to higher nurse to patient ratios − were more likely to make medical errors. This is consistent with the findings of Rogers et al. (2004), who reported, based on a logbook survey among 393 hospital nurses, that medical errors or near-errors are more likely to occur when hospital nurses work shifts of twelve hours or longer.

Finally, even patient mortality rates, appear to be related to nursing shortages. Based on a cross-sectional study conducted in 168 hospitals, Aiken, Clarke, Sloane, Sochalski, & Silber (2002) reported a 7% increase in mortality for each additional patient in the average nurse's workload. Based on a cross-sectional study conducted in 30 hospitals, Rafferty et al. (2007) reported, likewise, a 26% higher mortality rate in hospitals with the highest patient-to-nurse ratios than in hospitals with the lowest patient-to-nurse ratios. In a retrospective study using large clinical and administrative secondary databases and a survey among nurses from 75 hospitals, Tourangeau, Cranley and Jeffs (2006) found a negative relation between the proportion of registered nurses and mortality, with lower numbers of registered nurses being related to higher mortality.

To summarize, accumulating evidence shows that lower nurse-to-patient ratios in intramural settings are related to poorer patient outcomes, ranging from more medical errors to higher mortality. Nurses in intramural settings provide a continuous surveillance system for patients by providing care 24 hours a day, 7 days a week, which enables them to detect problems early and to take action when a patient's condition deteriorates. Lower nurse-to-patient ratios cause this surveillance system to be less effective, which increases the risk for negative changes in health status and mortality (Dimick et al., 2001; Hingstman, Langelaan, & Wagner, 2012; Pronovost et al., 2001; Twigg, Duffield, Thompson & Rapley., 2010). Solving nursing shortages such that nurse-to-patient ratios can be kept at an acceptable level, therefore, is of the utmost importance for patient outcomes.

There is no absolute norm regarding the "right" nurses-to-population ratio. From a country-level perspective, nursing shortage is usually defined and measured in relation to a country's own historical staffing levels, resources and estimates of demand for health services. Shortage, therefore, refers to the gap between the number of nurses currently available and the number of nurses needed to meet with the expected demand for health services (Buchan & Aiken, 2008). In this dissertation, I follow this view of nursing shortages. Now that I have discussed the impact of nursing shortages, I will turn to the causes of nursing shortages in the next section.

Causes of nursing shortages: scarcity or maldistribution of nurses

Nursing shortages can be caused by scarcity as well as maldistribution of nurses, or a combination of both. Scarcity of nurses occurs when the number of nurses is below a minimum density threshold for accomplishing specific health targets (Joint Learning Initiative, 2004; World Health Organization, 2006). Maldistribution of nurses is the imbalanced distribution of nurses in the healthcare system. Imbalanced distribution refers to particular inequities in the allocation of nurses with regard to a staff density standard or norm (Dussault & Franceschini, 2006; Munga & Mæstad, 2009). So, whereas scarcity of nurses refers to an absolute shortage, maldistribution of nurses denotes a more relative shortage.

Scarcity of nurses appears to be driven by an increasing demand for nurses and a decreasing supply of nurses, its ultimate causes being the demographic changes and social factors described earlier. In contrast to scarcity of nurses, maldistribution of nurses appears to be driven by the shift in healthcare services that can currently be observed in most Western countries. Health care services in the Netherlands, just like in most Western countries, are shifting from hospital care towards community and home care to reduce the costs of care

while still meeting the needs of an ageing population and chronic disease burden (Ashley, Halcomb, & Brown, 2016; Genet, Boerma, Koimann, Hutchenson, & Saltman, 2013; Tourangeau et al., 2014). Shifting healthcare services towards community and home care obviously increases the demand for community and home care nurses. As a result, nursing shortages in home and community care could increase more rapidly than those in other healthcare sectors. This would increase the risk of maldistribution of nurses.

As scarcity of nurses in general and maldistribution of nurses in the healthcare system have different causes, they require different policy responses. To implement effective policies, therefore, it is important to know the cause of nursing shortages. The extent to which nursing shortages in a specific healthcare sector are the result of scarcity of nurses in general or maldistribution of nurses in the healthcare system, however, is not well understood. Most attempts to examine nursing shortages have been directed at general scarcity rather than at sector-specific patterns (e.g., Attström, Niedlich, Sandvliet, Kuhn & Beavor, 2014; Ono, Lafortune & Schoenstein, 2013). Examining expected developments in the distribution of nurses across healthcare sectors could demonstrate other patterns than examining only general nursing shortages.

The first objective of this dissertation, therefore, is to provide insight into whether nursing shortages in the Netherlands are the result of an absolute shortage of nurses (scarcity) or of maldistribution of nurses in the healthcare system. In **Chapter 2,** together with three co-authors, I report, based on a literature review, how nursing shortages are distributed among the Dutch healthcare sectors. As a preview to what will be reported in **Chapter 2**, our results show that nursing shortages will be most pronounced in long-term elderly care, which includes convalescent homes, nursing homes and home care.

This finding highlights the importance of examining nursing shortages across the different healthcare sectors. As nursing shortages will be most pronounced in long-term elderly care, this is what I focus on in this dissertation. The nursing work environments of long-term elderly care *vs.* hospital care differ from each other: long-term elderly care work has less prestige than work in hospitals, nurses often have very little time available to utilize their clinical nursing skills, tend to feel isolated from other regular staff and have few full-time job opportunities (McGilton, Tourangeau, Kavcic, & Wodchis, 2013).

The types of nurses that work in long-term elderly care also differ from those in hospital care, with long-term elderly care mainly employing practical nurses and nurse assistants, and hospitals mostly employing first- and second-level registered nurses (see Table 1).

Table 1

Nurses in the Netherlands (AZWinfo 2016)

Types of nurses ---------- Types of patient care	**First-level registered nurses**	**Second-level registered nurses**	**Practical nurses**	**Nurse assistants**
Hospital	46%	47%	5%	3%
Nursing / convalescent homes	11%	14%	53%	53%
Home care	15%	7%	27%	19%
Disabled care	6%	14%	6%	7%
Mental healthcare	14%	9%	2%	1%

Given these differences in nursing work environments and also in the type of nurses, focusing on nurses in long-term elderly care rather than on nurses in general is more helpful towards designing and implementing HR and retention policies that "fit" the characteristics and contexts of long-term elderly care. Therefore, in order to deepen our understanding of how and when nurses in long-term elderly care experience their work as purposeful or significant, the empirical studies in this dissertation were performed in a long-term elderly care setting. Before I turn over to the empirical studies, however, I will first conceptualize meaningful work. In the next section, therefore, I will discuss the concept of meaningful work.

The concept of meaningful work

To be able to examine how and when nurses experience their work as of existential significance, we must know what the concept of meaningful work entails. Meaningful work, however, has been conceptualized in many different ways (Rosso et al., 2010). Some researchers conceptualize meaningful work from a one-dimensional view as the degree to which people find their work significant or purposeful (e.g., Hackman & Oldham, 1975; Spreitzer, 1995). Most studies that conceptualize meaningful work from a one-dimensional view have drawn on the job characteristics model (For example, Johns, Xie & Fang, 1992;

May, Gilson & Harter, 2004). The job characteristics model positions meaningfulness as one of a set of three psychological states that mediate relations between three of the five job design features and outcomes in terms of motivation and (growth) satisfaction (Hackman & Oldham, 1975). In this model, meaningful work is depicted and measured as a one-dimensional construct and defined as "[t]he degree to which the employee experiences the job as one which is generally meaningful, valuable, and worthwhile" (Hackman & Oldham, 1976, p. 162). Meaningful work, consequently, is only captured by the experience of work as being generally significant or purposeful. As such, this model does not explain how work becomes meaningful to people.

Based on recent research, however, the idea is emerging that meaningful work is a multidimensional construct that encompasses experiences such as self-worth and other-oriented experiences (e.g., Chalofsky, 2003; Lips-Wiersma & Morris, 2011; Rosso et al., 2010; Steger et al., 2012). Work is experienced as purposeful or of existential significance because it contributes to the wider good, to a sense of belonging and to personal growth (e.g., Steger et al., 2012; Lips-Wiersma & Wright, 2012).

This means that for work to be meaningful, several self-oriented and other-oriented dimensions must be fulfilled to give people the feeling that what they are doing is meaningful (Lips-Wiersma & Wright, 2012). There is, however, no consensus about the exact nature of the different dimensions that underlie the concept of meaningful work (Bendassolli, Borges-Andrade, Alves, and Torres, 2015). The map of meaning, for example, a model proposed by Lips-Wiersma and Morris (2011), identifies four core dimensions of meaningful work: 1) Integrity with Self, 2) Unity with Others, 3) Service to Others, and 4) Expressing the Self. Work is perceived as of existential significance when all of these core dimensions are experienced (Lips-Wiersma & Morris, 2011; Lips-Wiersma & Wright, 2012). Rosso et al. (2010), in turn, suggest four − partly similar − dimensions: 1) Self-Connection: people experience alignment with their actions and the way they see themselves; 2) Unification: people experience harmony with others; 3) Contribution: people experience contributing to something greater than themselves; and 4) Individuation: people experience themselves as valuable and worthy. The authors suggest that work experiences that activate more than one of these dimensions could contribute to stronger perceptions of meaningfulness (Rosso et al., 2010). Another example of a model, proposed by Steger et al. (2012), identifies three − also partly similar − dimensions of meaningful work: 1) Meaning Making: people are able to make sense of their experience; 2) Purpose in Work: people develop a sense of purpose; and 3) the Greater Good: people directly or indirectly serve the greater good.

These different multi-dimensional conceptualizations of meaningful work have led to different multi-dimensional measures of meaningful work, suggesting that there is no consensus on how to operationalize meaningful work either. There are many different instruments to measure meaningful work, which has led to scattered research findings with questionable comparability. This is unfortunate because a sufficient level of agreement within a scientific field regarding rules for operationalization is very useful, as this facilitates comparison of results and integration of theoretical perspectives (Pfeffer, 1993).

Consensus in a research field is often considered to be essential for scientific progress because without some minimal level of consensus about paradigmatic approaches and methods, knowledge development in a scientific field cannot occur (Pfeffer, 1993). Given this disparate range of definitions and similarly extensive range of theoretical frameworks of meaningful work, the field of meaningful work finds itself at the beginning of paradigm development. I believe that, instead of developing new theories and definitions, the field would benefit from integrating existing theories and corresponding definitions of meaningful work to establish an unambiguous overarching definition of meaningful work. Such a definition can then be employed in different theories and empirical studies in this field. In addition, an integrative definition of meaningful work would then open the way to agreement regarding rules for operationalization. Agreement on methodology, as it leads to comparable research findings, will help to advance knowledge in the field. **The second objective**, therefore, is to develop an integrative definition of meaningful work and to identify a corresponding scale.

In Chapter 3, therefore, together with two co-authors, I report two literature reviews, one that focuses on definitions of meaningful work and one that focuses on measures of meaningful work. Based on these reviews and previewing what will be reported in **Chapter 3**, we identify the models of Lips-Wiersma and Morris (2011) and Steger et al. (2012) and their corresponding measures as being the most suitable to capture the integrative definition of meaningful work. The Work And Meaning Inventory (WAMI), as an operationalization of Steger et al.'s (2012) model, was designed to capture *when* work is meaningful (Steger et al., 2012). The Comprehensive Meaningful Work Scale (CMWS), as an operationalization of the map of meaning, was designed to capture the complexity of the construct by measuring the subjective experience of existential significance in work (*when* work is meaningful) *and* specific dimensions of meaningful work (*how* work becomes meaningful). In other words, when individuals say, "my work is meaningful because […]," they describe experiences that foster meaningful work (Lips-Wiersma & Morris, 2011).

As this dissertation aims to understand how *and* when nurses experience their work as being of existential significance, I used the CMWS and its underlying framework map of meaning rather than the model of Steger et al. (2012) to conceptualize meaningful work in the empirical studies in this dissertation. Their model only focuses on *when* work becomes meaningful work. The CMWS makes it possible to measure the subjective perception of meaningful work and specific dimensions of meaningful work, thus contributing to our knowledge of *how* work becomes meaningful. In the next section, I will describe the map of meaning, as the theoretical framework of meaningful work in this dissertation, in greater detail.

Map of meaning: a conceptual framework of meaningful work

The map of meaning was developed by Marjolein Lips-Wiersma (Lips-Wiersma, 2002a; 2002b). The model is based on her two research projects on the spiritual meaning of work. The first project was an in-depth, small-sample, qualitative psycho-biographical study on meaningfulness in work, which was complemented by a diary-keeping study to assess meaningfulness in work on a day-to-day basis. The second project involved action research in workshops with a total of 214 participants. The focus was on the manner in which research participants identified and actively shaped meaningful work (Lips-Wiersma & Wright, 2012). Based on the findings of both projects, different dimensions underlying the perception of meaningful work were identified, and the map of meaning was developed.

The map of meaning is a framework to conceptualize meaningful work from a multidimensional perspective. It identifies seven dimensions of meaningful work divided into three components: 1) core dimensions, 2) Balancing Tensions and 3) Inspiration-Facing Reality (See Figure 1). The four core dimensions of meaningful work, the pathways through which individuals experience existential purpose, are represented in the center of Figure 1. The four core dimensions are *Integrity with Self, Unity with Others, Service to Others, and Expressing Full Potential.*

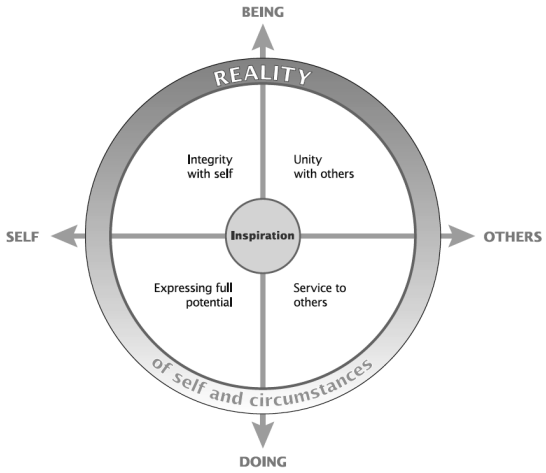

Figure 1. Map of meaning (Lips-Wiersma and Wright, 2012).

The *Integrity with Self* dimension refers to being true to oneself, to moral development and to being authentic (Lips-Wiersma & Wright, 2012). Lips-Wiersma and Morris (2011, pp. 21) provided the following example to illustrate what people say when they experience this in their work: "Currently we have many discussions about 'what is the right thing to do here'."

The *Unity with Others* dimension refers to the experience of existential purpose through working together with other people. This occurs when people experience mutual support, a sense of belonging and a sense of shared values. Lips-Wiersma and Morris (2011, pp. 28) provided the following example to illustrate how people experience this in their work: "In my work I need to find some sort of bond with people, some common shared beliefs or value that you place on humanity in the broader sense of the word. And I get quite excited when I locate people like that at work because you don't come across them too often."

The *Service to Others* dimension refers to the meaningfulness people derive from making a difference or from contributing to the well-being of other people or to the common good. An example of what people could say if they experience this in their work is: "I know that the organization is ever so slightly better off because I'm here" (Lips-Wiersma & Morris, 2011, pp. 36).

The *Expressing Full Potential* dimension refers to meaningfulness that comes from people expressing their talents, displaying creativity and experiencing a sense of achievement. An example of what people say if they experience this in their work is: "There

is an inherent meaning in mastering something. When something comes out of my hands that I know to be good, it is a great feeling." (Lips-Wiersma & Morris, 2011, pp. 33).

The second component of the model (i.e. *Balancing Tensions*) refers to the need to experience all four core dimensions over time in order to perceive the maximum existential significance in work. Too much focus on one core dimension can lead to loss of meaningfulness because existential significance in work is perceived when people experience all four core dimensions. This is illustrated by the following participant: "I achieved a lot and am glad that I did it but had many stressful times and felt my life was becoming totally unbalanced"; "I just can't get any time for myself. I don't spend the time properly caring for myself." (Lips-Wiersma & Morris, 2011, pp. 39). This research participant focused too much on Expressing Full Potential without focusing on the other three core dimensions. As a result, the research participant felt unbalanced and lost meaningfulness. The balance of tensions may explain why a nursing career, for example, is initially chosen for the opportunity it offers to serve others, but how a lacking opportunity to express one's full potential or to establish unity with others may lead to loss of meaningfulness and, consequently, to career change (Lips-Wiersma & Wright, 2012).

The second component is depicted in Figure 1 along the x and y axes of the model. The x axis depicts the tension between self and others. To illustrate this tension, Lips-Wiersma & Morris (2011, pp. 74) quoted a research participant who said: "I got burned out because I was constantly meeting people's demands; a whole lot of people's demands and suddenly everything got very bleak and empty. I had no time for myself." In this case, the research participant focused too much on others, and there was no balance between self and others. As a result, meaningfulness in work got lost.

The y axis depicts the tension between being and doing. To illustrate this tension, Lips-Wiersma & Morris (2011, pp. 79) quoted a research participant who said: "I noticed that I had had the same goal for a long time and that I was spending a lot of time daydreaming about it and discussing it with others. Yet after all this time I still had not done anything about it." In this case, the research participant focused too much on being rather than on doing, which led to loss of meaningfulness.

The third component, *Inspiration-Facing Reality*, refers to work that is hopeful and aligned with an ideal but also work that is grounded in reality rather than utopian. The third component is depicted in the inner and outer circle of the model in Figure 1 (Lips-Wiersma & Wright, 2012). To illustrate this component, Lips-Wiersma & Morris (2011, pp. 45) quoted a research participant as saying: "There is nothing wrong with all of this mission and vision

and values stuff in itself. However, if we are not allowed to articulate where we do not and cannot live up to this, it feels as if we mock something that is really quite profound; when I read some of our ads, or value statements I think, this is partly true; this is a good company. But every time we overstate, we also lose a little of ourselves in the process. It has to be grounded."

Bearing in mind this theoretical framework which explains how work becomes meaningful and how meaningfulness may get lost in work, I will examine in the following section what organizations can do to increase meaningful work.

Organizational practices to enhance meaningful work

As I indicated earlier, traditional HR retention instruments may not fit our contemporary work environments as many employees want to find meaningfulness in their work (Gheaus & Herzorg, 2016; Harpaz & Fu, 2002). It is highly plausible, therefore, that meaningful work will foster the extent to which nurses opt to remain working in their profession. An important question, therefore, is what organizations can do to increase meaningful work for their employees. I focus specifically on two organizational practices that many organizations are considering or implementing and that are likely to be related to meaningful work: 1) granting autonomy and 2) self-managing teams.

The first practice I focus on is granting autonomy to employees. In organizational studies and in the ethics literature (Chalofsky & Krishna, 2009; Rosso et al., 2010; Bowie, 1998), meaningful work is often associated with the concept of autonomy, which is seen as an important antecedent to meaningful work. Indeed, earlier studies have demonstrated that autonomy is related to meaningful work (Bowie, 1998; Fried & Ferris, 1987; Hackman & Oldham, 1976; Humphrey, Nahrgang & Morgeson, 2007; Hodson, 2001; Isaksen, 2000; Michaelson, 2005; Michaelson, Pratt, Grant & Dunn, 2014; Schwartz, 1982). When we are able to choose our activities and work tasks autonomously, these are likely to be experienced as significant. Jobs allowing for higher levels of autonomy in particular have been shown to lead to more meaningfulness in work (Fried & Ferris, 1987; Ryff, 1989; McGregor & Little, 1998). Research suggests that people have a need to see themselves as being capable of exercising free choice and effectively managing their own activities. Being capable of exercising free choice and managing their own activities gives people the feeling they have a degree of control over their fate and gives them a sense of being in control rather than powerless (Baumeister, 1998; Deci, 1975). As Rosso et al. (2010) put it: "If an individual takes proactive steps to independently alter the way he accomplishes his work, and feels he

has the autonomy and support to do so, he is likely to experience meaningfulness based on a sense of having a degree of control over his fate" (p. 110).

In today's work environment, autonomy can take many forms: it could be the freedom to schedule your own work, the freedom to decide what tasks to perform and how or the freedom to grant autonomy to groups of employees in the form of self-managing teams (Langfred & Rockmann, 2016). In this dissertation, I will specifically examine three types of autonomy that can be distinguished in the contemporary nursing work environment: 1) professional nurse autonomy; 2) individual task-based autonomy; and 3) group task-based autonomy. Regarding professional autonomy, I specifically focus on professional nurse autonomy as nurses are the subject of this dissertation. Professional nurse autonomy relates to the scope of practice for which nurses are accountable, such as acting in emergency situations to save a patient's life, triaging and coordinating care and preventing harm or complications.

Whereas professional nurse autonomy refers to the freedom for nurses to act in accordance with their professional knowledge, individual and group task-based autonomy refer to the freedom to control the work situation, such as pace of work, work scheduling or time spent on a work activity. Individual and group task-based autonomy require organizational knowledge and skills, whereas professional autonomy requires subject-matter knowledge and subject-matter skills (Kramer, Maguire & Schmalenberg, 2006).

These different forms of autonomy, while related to each other, have unique predictive validity for a range of outcome measures such as job satisfaction (Humphrey, Nahrgang & Morgeson, 2007). Most research on the relation between autonomy and meaningful work, however, conceives of autonomy and meaningful work as one-dimensional constructs. The fact that there are multiple types of autonomy in today's nursing work environment and that meaningful work is a multifaceted construct could mean that some types of autonomy relate to some dimensions of meaningful work, but not, or even negatively, to other dimensions. Granting nurses professional autonomy in home care, for example, may increase their experience of Expressing Full Potential, as this gives nurses the freedom to act in accordance with their professional knowledge; at the same time, however, it may reduce meaningfulness, as working in patients' homes in relative isolation may reduce their experience of unity with colleagues.

For organizations struggling with the question what kind of autonomy to give to employees, it could be very helpful to improve our understanding of which types of autonomy are related to which dimensions of meaningful work. This will help healthcare organizations to allocate resources specifically to those types of autonomy that are most

likely to contribute to nurses' experience of existential purpose in work and its associated positive work outcomes, such as job satisfaction. **The third objective** of this dissertation, therefore, is to examine the relation between autonomy and meaningful work with greater precision. **In Chapters 4 and 5**, therefore, I will examine, together with three co-authors, the relations between three types of autonomy that can be distinguished in the contemporary nursing work environment: 1) professional autonomy, 2) individual task-based autonomy, and 3) group task-based autonomy and meaningful work.

The second practice I focus on is working in self-managing teams. While conducting research for this dissertation, the introduction of self-managing teams in healthcare organizations became the topic of much debate. Proponents of self-managing teams used Buurtzorg as an example of a successful Dutch home care organization that implemented self-managing principles in 2006 (Gray, Sarnak & Burgers, 2015). Others argued, however, that working in self-managing teams increases the risk of a poor work-life balance as a consequence of working flexible hours and working overtime, possibly resulting in long-term sick leave or burn-out (Actiz, 2014). Understanding the relation between self-managing teams and work experiences is highly relevant, as many healthcare organizations have implemented or are considering implementing self-managing teams (Graaf, 2015).

Research on the effect of working in self-managing teams and retention is, however, ambiguous (Stewart, Courtright & Manz, 2011; Van Mierlo, Rutte, Kompier & Doorewaard, 2005). According to various studies, team self-management is related to higher levels of turnover (e.g., Wall, Kemp, Jackson & Clegg, 1986), but there are also studies that found that it is related to lower levels of turnover (e.g., Seers et al., 1995). For example, Beekun's meta-analysis (1989) found that self-managing teams decreased turnover. In contrast, Cordery, Muller and Smith (1991) found that employees in self-managing teams have higher levels of turnover than employees in traditional teams. Thus, the literature is unclear about the relation between team self-management and retention, and little is known about the reasons why some people leave the organization after self-management has been introduced. These ambiguous research results raise the question what self-managing teams can contribute to employees' work experiences. In this dissertation, I set out to answer this question by using the multidimensional perspective of meaningful work and explore whether working in self-managing teams perhaps increases meaningful work on some dimensions, while diminishing others. **The fourth objective** of this dissertation, therefore, is to provide insight into the relation between working in self-managing teams and the multidimensionality of meaningful work. **In Chapter 6**, therefore, I take a multidimensional perspective of meaningful work and

examine, in a qualitative exploratory study, how nurses who had left or were about to leave their organization experienced working in self-managing teams. By asking participants about their experiences of core dimensions of meaningful work (i.e. Integrity with Self, Unity with Others, Service to Others and Expressing Full Potential) while working in self-managing teams, I get a better picture of the benefits and drawbacks of working in self-management teams than has been obtained in previous studies. By interviewing participants, I learn if and when core dimensions of meaningful work are experienced when working in self-managing teams. The multidimensional perspective of meaningful work can explain, for example, how working in self-managing teams can provide an opportunity to experience Unity with Others, on the one hand, but how lacking Integrity with Self can lead to loss of meaningfulness and, consequently, to absenteeism or nurses leaving their organization, on the other hand.

In this section, I focused on two organizational practices that are likely to be related to meaningful work: autonomy and self-managing teams. The next step is to examine my assumption that experiencing meaningful work is related to retention.

Meaningful Work and Retention of Nurses

As this dissertation reports on the collaboration between an academic department and a healthcare organization, retention has been examined from an organizational perspective. From an organizational perspective, retention is not merely about preventing nurses from leaving the nursing workforce. Rather, healthcare organizations want their nurses to stay *and* be motivated and able to keep on fulfilling their core tasks. Retention requires, thus, first of all, that nurses are willing to continue working in their jobs. Currently, in the Netherlands, less than half the nurses (39%) are willing to continue working until statutory retirement age (de Veer & Francke, 2011).

Secondly, the work context of nurses warrants specific attention for the ability to continue working. (i.e. being physically and mentally capable to conduct one's work; Pak, Kooij, De Lange, Van Veldhoven, 2019). Nurses may be exposed to psychosocial risk factors, such as high-intensity workload, violent, abusive or demanding patients and seriously ill patients (Escribà-Agüir, Pérez-Hoyos, & Martin-Baena, 2006). These risk factors may affect their health and as such their ability to continue working in their job, but if work is a significant part of their life, this could possibly act as an antidote to such psychosocial risk factors.

Meaningful work, for example, has been associated with well-being variables such as lower levels of burn-out and depression and a higher level of general health (Arnold &

Walsh, 2015; Lips-Wiersma & Wright, 2012; Steger et al., 2012). Previous studies on working until statutory retirement age found that health plays an important role in willingness and ability to continue working (Geuskens, Oude Hengel, Koppes, & Ybema, 2015; Nilsson, Hydbom, Rylander, 2011). Thus, meaningful work has a positive relation with general health, and as such may have a positive relation with willingness and ability to continue working. To gain insight in the relation between meaningful work and retention, we must, therefore, examine how meaningful work is related to both willingness and the ability to continue working.

Although previous research has shown that meaningful work correlates with outcome variables related to retention such as health, and it is therefore highly plausible that meaningful work is positively related to willingness and ability to continue working, unfortunately, most of these studies have tended to focus on meaningful work as a unidimensional construct. Measuring meaningful work in this way makes it difficult to discern the precise relations between dimensions of meaningful work and outcomes. As a consequence, uncertainty remains over which dimensions (for example 'mastery', 'unity', 'authenticity' and 'helping others') of meaningfulness are most salient to people in relation to retention. Using willingness and ability as indicators of retention, I examine, together with two co-authors, in **Chapter 7**, through an exploratory quantitative study, how meaningful work is related to willingness as well as ability to continue working. Using the map of meaning, we explore how dimensions of meaningful work are related to willingness and ability to continue working. This enabled us to address the **fifth and last objective** of this dissertation: to examine the relation between meaningful work and the willingness and ability to continue working.

Outline of This Dissertation

The general purpose of this dissertation is to explore how meaningful work could serve as a potential antidote against the causes of nursing shortages, and as such contribute to nurse retention. **Chapter 2** identifies the different causes of nursing shortages and solutions aiming to reduce these shortages. A systematic literature review was conducted for this chapter. This chapter addresses the first objective of this dissertation: to provide insight into whether nursing shortages are the result of scarcity of nurses or maldistribution of nurses. **Chapter 3** describes two literature reviews to define and measure meaningful work. This chapter addresses the second objective of this dissertation: to develop an integrative definition of meaningful work and identify a corresponding scale. **Chapter 4** describes the theoretical

proposition of a framework for autonomy and meaningful work based on literature on autonomy and meaningful work from nursing, organizational sciences and business ethics domains. **Chapter 5** reports an empirical study on the relation between three forms of autonomy and meaningful work, using quantitative data on 510 employees from three organizations. Hierarchical multilevel analyses were conducted to test the proposed autonomy-meaningful work framework. Together, **Chapters 4 and 5** address the third objective of this dissertation: to examine the relation between autonomy and meaningful work. **Chapter 6** presents a qualitative exploratory study on the relation between self-managing teams and meaningful work, using data from fifteen interviews with nurses who left or were about to leave the organization from one healthcare organization. This chapter addresses the fourth objective of this dissertation: to provide insight into the relation between working in self-managing teams and meaningful work. **Chapter 7** presents an exploratory quantitative study on the relation between meaningful work and retention, using data from 514 nurses from three healthcare organizations. This chapter addresses the fifth and last objective of this dissertation: to examine the relation between meaningful work and willingness and ability to continue working. The final chapter, **Chapter 8,** summarizes the main findings of the dissertation and discusses the implications for future research and practice.

Table 2

An overview of the objectives with corresponding chapters, research methods and data sources

Dissertation objectives	**Chapter**	**Research method**	**Data source**	**Publication status**
1. to provide insight into whether nursing shortages are the result of scarcity of nurses or maldistribution of nurses	Chapter 2	Systematic literature review	Literature	Both-Nwabuwe, J. M.C., Dijkstra, M. T.M., Klink, A., & Beersma, B. (2018). Maldistribution or scarcity of nurses? The devil is in the detail. Journal of nursing management, 26(2), 86-93.
2. to develop an integrative definition of meaningful work and identify a corresponding scale	Chapter 3	Two literature reviews	Literature	Both-Nwabuwe, J.M.C., Dijkstra, M.T.M., & Beersma, B. (2017). Sweeping the floor or putting a man on the moon: How to define and measure meaningful work. Frontiers in psychology, 8, 1658. An earlier version of this paper has also been presented at the 2nd international symposium on Meaningful Work in Auckland, New Zealand (December 2016) .
3. to examine the relation between different types of autonomy and meaningful work	Chapter 4 Chapter 5	Literature review Quantitative survey	Literature 510 nurses from three long-term elderly care organizations	Both-Nwabuwe, J. M.C., Lips-Wiersma, M., Dijkstra, M. T.M., & Beersma, B. (2019). Understanding the autonomy–meaningful work relationship in nursing: A theoretical framework, Nursing Outlook, 1-10.

Dissertation objectives	Chapter	Research method	Data source	Publication status
4. to provide insight into the relation between working in self-managing teams and meaningful work	Chapter 6	Qualitative study	15 interviews with ex-employees of one long-term elderly care organization	Both-Nwabuwe, J. M.C., Lips-Wiersma, M., Dijkstra, M.T.M., & Beersma, B. (2019). Nurses' experience of individual, group-based, and professional autonomy. Nursing Outlook, 67(6), 734-746.
5. to examine the relation between meaningful work and willingness and ability to continue working	Chapter 7	Quantitative survey	514 nurses from three long-term elderly care organizations	-

CHAPTER 2

Maldistribution or scarcity of nurses? The devil is in the detail[2]

Abstract
Most Western countries are shifting health care services from hospital care towards community and home care, thus increasing nursing workforce challenges in home and community care. In order to implement appropriate policy responses to nursing workforce challenges, we need to know if these challenges are caused by maldistribution of nurses and/or the scarcity of nurses in general.

Focusing on the Netherlands, we reviewed articles based on data of a labour market research programme and/or data from the Dutch Employed Persons' Insurance Administration Agency. The data were analyzed using a data synthesis approach.

We found that nursing shortages are unevenly distributed across the various health care sectors. Shortages of practical nurses are caused by maldistribution, with a longterm projected surplus of practical nurses in hospitals and projected shortages in nursing/ convalescent homes and home care. Shortages of first-level registered nurses are caused by general scarcity in the long term, mainly in hospitals and home care.

In conclusion, nursing workforce challenges are caused by a maldistribution of nurses and the scarcity of nurses in general. To implement appropriate policy responses to nursing workforce challenges, integrated health care workforce planning is necessary.

[2] This chapter has been published as: Both-Nwabuwe, J. M.C., Dijkstra, M. T.M., Klink, A., & Beersma, B. (2018). Maldistribution or scarcity of nurses? The devil is in the detail. Journal of nursing management, 26(2), 86-93.

In order to reduce the costs of care and meet the needs of an aging population and chronic disease burden, most Western countries are shifting healthcare services from hospital care towards community and home care (Ashley, Halcomb, & Brown, 2016; Genet, Boerma, Koimann, Hutchenson, & Saltman, 2013; Tourangeau et al., 2014). In their integrative review of transition experiences of acute care nurses entering employment in primary health care settings, Ashley et al. (2016), for example argue for recruiting new graduate nurses and encouraging experienced nurses to move from employment in hospital care to community and home care.

This call for nurses to be repositioned in order to meet the increasing needs of community and home care nurses implies that nursing shortages in community and home care are caused by maldistribution of nurses. Maldistribution of nurses is defined as the imbalanced distribution of nurses in the healthcare system. Imbalanced distribution refers to particular inequities in the allocation of nurses as to a standard or social norm of a certain staff density. From this perspective, balanced distribution of nurses can be realized by allocating nurses according to the need for health care services (Dussault & Franceschini 2006; Munga & Mæstad 2009).

In their editorial on nursing shortages, however, Buchan, Duffield & Jordan (2015) argue that nursing shortages are currently experienced worldwide and are likely to get worse without remedial policy interventions. These nursing shortages are mainly caused by increasing and changing demands on health services and a shrinking nursing workforce, with more nurses nearing or reaching retirement age and leaving the nursing workforce (Buchan et al. 2015). As a result, there is a scarcity of nurses, that is, the number of nurses is below a minimum density threshold of nurses to accomplish specific health targets (Joint Learning Initiative 2004; World Health Organization 2006). The World Health Organization (WHO) recently estimated a global deficit of 12.9 million health workers by 2035 (World Health Organization 2014). As nurses are the largest professional group within the health workforce in most countries, these estimates are troublesome (Buchan et al. 2015) and solutions aiming to help nurses to make the transition from hospital care to home care (Ashley et al., 2016) will not help.

Whereas solutions to maldistribution of nurses are related to nurse transitioning programs (i.e., helping nurses who work in one type of care to transition to another type of care), solutions to scarcity of nurses are related to increasing supply and/or decreasing demand for nurses (i.e., training more nurses in general, motivating nurses to work longer, or organizing care in a more efficient way). To design appropriate policy responses to nursing

workforce challenges, we need to know first and foremost if nursing shortages are caused by scarcity of nurses in general or by maldistribution across the various healthcare sectors.

Unfortunately, most attempts to examine nursing shortages have been directed at general scarcity rather than at sector-specific patterns (for example, Attström, Niedlich, Sandvliet, Kuhn & Beavor, 2014; Ono, Lafortune & Schoenstein, 2013). Our aim, however, is to show that "the devil is in the detail": by examining expected developments in the distribution of nurses across healthcare sectors, we will demonstrate that other patterns emerge than by examining only general nursing shortages and that this more specific approach is more helpful towards designing interventions.

Healthcare systems in different countries are organized in different ways (Sermeus et al. 2011; Ono et al. 2013) and nursing shortages are defined and measured in relation to countries' own standards regarding the right nurses-to-population ratio (Sermeus et al. 2011). In order to improve our understanding of nursing shortages across various healthcare sectors, we have examined the case of nursing shortages in the Netherlands. Examining the details of nursing shortages within one particular country has the advantage of understanding those shortages in relation to the local healthcare system and the nursing workforce. In 2015, the Dutch government instigated a reform of the healthcare system, and, in consequence, healthcare delivery has shifted from intramural care to care at home and in patients' own environment (Panteia, SEOR, & Etil, 2013). Therefore, the Dutch healthcare system is an interesting example of healthcare reforms that have occurred in many Western European countries (Ashley et al. 2016; Genet et al. 2013; Tourangeau et al. 2014).

Nurses in The Dutch Healthcare System

Before describing what sources of information we used and how these were evaluated, we will briefly describe the structure of the Dutch healthcare system, the nursing profession and nursing workforce policies.

The Dutch healthcare system is governed by four basic healthcare-related acts: the Health Insurance Act (Zorgverzekeringswet), the Long-Term Care Act (Wet langdurige zorg), the Social Support Act (Wet maatschappelijke ondersteuning) and the Youth Act (Jeugdwet). The four healthcare-related acts form the foundation of the healthcare system. The Health Insurance Act (which provides for hospital care) and the Long-Term Care Act (which focuses on other types of care) account for the bulk of the healthcare budget available in the Netherlands (Ministerie van Volksgezondheid, Welzijn en Sport, 2016).

People in the Netherlands who require permanent or 24-hour (home) care can make use of provisions under the Long-Term Care Act. More specifically, this includes 1) nursing and care for the elderly and chronically ill, 2) care for disabled people and 3) long-term mental healthcare (Ministerie van Volksgezondheid, Welzijn en Sport, 2016; Ministerie van Volksgezondheid, Welzijn en Sport, n.d.).

Nursing and care for the elderly and chronically ill is long-term care for people with somatic or psycho-geriatric problems. Nursing homes and convalescent homes provide institutionalized care, the former providing intensive care and the latter providing support and non-intensive care. Home care provides care at home (Panteia et al. 2013). Care for disabled people is long-term care and support for people with disabilities, such as physical limitations, mental limitations, or sensory limitations such as blindness or visually impairment and deafness or aural impairment (Panteia et al. 2013). Long-term mental healthcare provides long-term care for people with mental or psychiatric problems (Panteia et al. 2013).

In both hospital care and long-term care, nursing and care services are provided by four types of nurses: first- and second-level registered nurses, practical nurses, and nurse assistants. Table 1 provides an overview of these types of nurses arranged by level of education and work responsibilities, a higher level of education being associated with more complex work responsibilities (Post & Gijsen 2013; YouChooze.nl n.d.).

Table 1

An overview of types of nurses by level of education and work responsibilities (Post & Gijsen 2013; Panteia et al. 2013; YouChooze.nl n.d.)

Types of nurses	**Education by European Qualifications Framework Level (only relevant levels are shown)**	**Work responsibilities**
First-level registered nurses	Level 6	• Assess patients' nursing needs; • Decide appropriate level of nursing care; • Provide nursing and support to patients.
Second-level registered nurses	Level 4	• Assess patients' nursing needs; • Provide nursing and support to patients.
Practical nurses	Level 3	• Provide nursing and support to patients.

Nurse assistants	Level 2	• Provide support in basic everyday activities, such as bathing, dressing, personal hygiene, cleaning, and food preparation.

Most nurses, that is, 26% and 23% of the nursing workforce (level 2 to level 6), work in hospitals or nursing and convalescent homes, respectively (AZWinfo 2016). Hospitals employ mostly first- and second-level registered nurses, whereas nursing and convalescent homes employ mostly practical nurses and nurse assistants (AZWinfo 2016). See Table 1 in **Chapter 1**.

Compared to most other countries, the Netherlands have an advanced demand-led forecasting model for medical and specialist professions. Health workforce planning is an important instrument for forecasting and controlling shortages and oversupply. The forecasting model is developed to support national policy decisions on the inflow, that is, implementing numerus clausus, in medical and specialist training (Batenburg 2013; Kroneman et al. 2016). Adjusting the student intake or inflow is the primary health policy action to control medical and specialist workforce size and supply. For nurses, however, such a forecasting model is not existing. Nursing workforce developments are only monitored at regional level (van Greuningen 2016). This implies that policy decisions on the numerus clausus for educational programs in nursing are made by educational institutions and are based on the capacity of internships rather than nursing workforce developments.

Evaluation

Aims

The goal of this paper is to increase our understanding of nursing shortages across the variety of current healthcare sectors in the Netherlands and how this may affect the agenda for addressing nursing shortages. Reviewing the literature, we have examined the magnitude of current and future nursing shortages across the various healthcare sectors in the Dutch healthcare system.

Search Strategy

We conducted an Internet literature review using electronic databases and search engines. The following electronic databases were used: Sciencedirect, Cochrane Library, and SSRN: Social Science Research Network. The primary search engines used for the Internet searches were provided by Google at http://www.google.com and Google Scholar at

http://www.scholar.google.com. We used the following key words in English and Dutch "nursing shortages" AND "Netherlands" OR "Europe".

Inclusion Criteria

We applied three inclusion criteria: 1) scientific literature as well as non-academic research publications that has appeared from 2014 onwards, focusing on current and future nursing shortages in the Netherlands after the introduction of the healthcare reform; 2) scientific literature as well as secondary literature focusing on current and future nursing shortages in Europe, and 3) publications in English or Dutch. We used one exclusion criterion: scientific literature as well as secondary literature that did not take the 2015 Dutch healthcare reform into account.

Screening

Titles were reviewed and abstracts retrieved if potentially relevant information was identified in the title. Consequently, abstracts were reviewed and full texts were retrieved if potentially relevant information was identified in the abstract. Furthermore, reference lists of retrieved full texts were scanned, and Web of Science (a citation index) was searched for related literature that had previously been missed or omitted.

Included publications were critically appraised using the critical appraisal tool developed by Woolliams et al. (2009). This appraisal tool is suitable for all types of academic literature (Aveyard 2014).

Data Extraction and Synthesis

The included studies were reviewed to extract the following data: author, organization, date, setting, design, and predictions. The data were analyzed using the data synthesis approach described by Aveyard (2014).

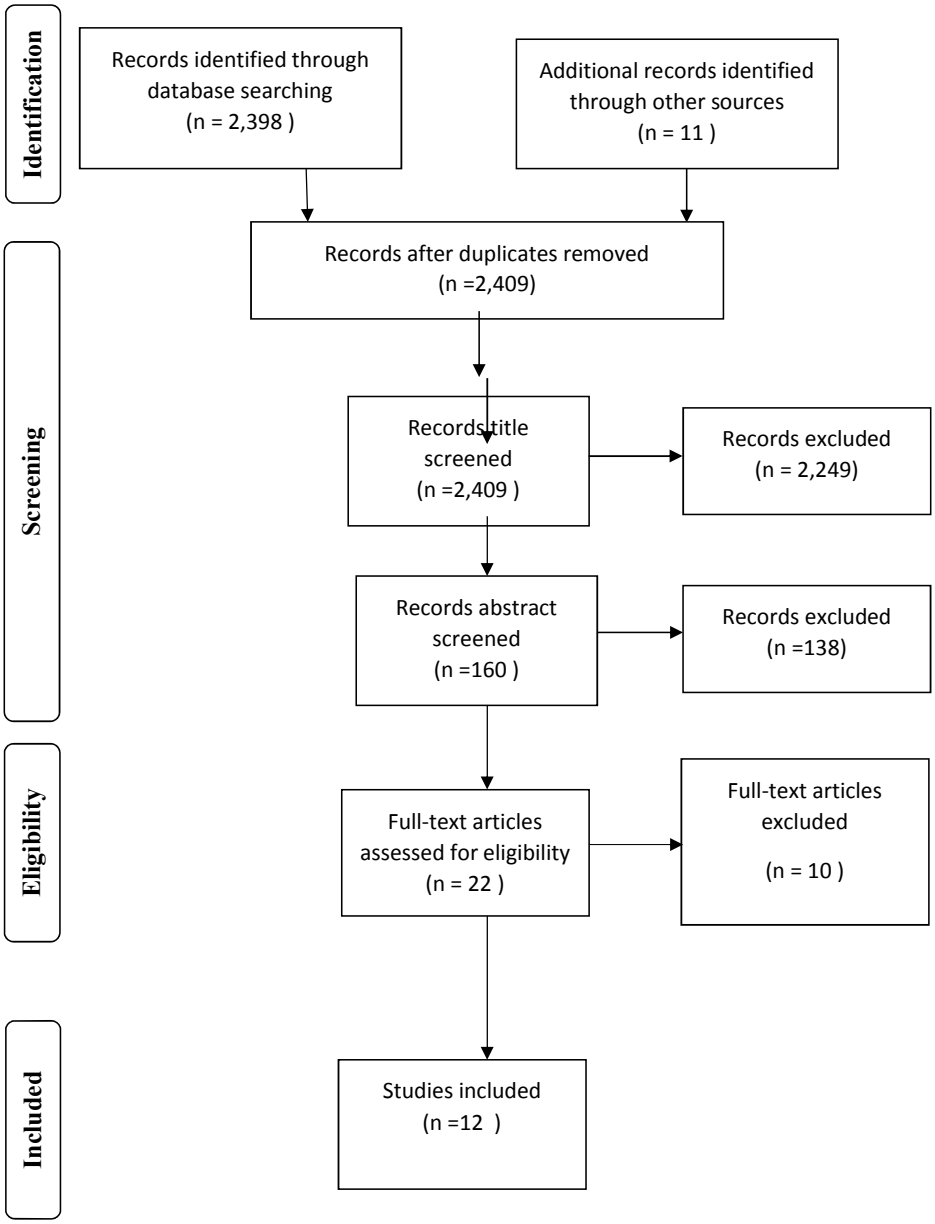

Figure 1. Search strategy.

Table 3

Data extraction

Author	Organization	Date	Setting	Design	Predictions
Bloemendaal et al. (2015)	Kiwa Charity / CAOP	2015	Home care	interviews with healthcare organizations and government, questionnaires among healthcare workers, and scenario generation methodology	In the coming years, huge shortages of first-level registered home care nurses are expected. A shortage of 750 to 1,000 first-level nurses is expected in 2016. Depending on the different scenarios, shortages are expected to remain or increase until 2019.
Kalkhoven & Van der Aalst (2015)	UWV	2015	Healthcare general	data from a labor market research program[3] and three other databases	In 2017-2019 nursing shortages are expected for first-level and second-level registered home care nurses. In 2017-2019, nursing shortages are expected for first-level registered nurses in long-term care facilities. Surplus of nurse assistants is present and expected to remain in the near future.
Van der Windt & Bloemendaal (2015a)	Kiwa Charity	2015	Academic hospitals	data from a labor market research program	Shortages of first-level registered nurses are expected in hospitals, home care, and mental care from 2016 to 2019. The data for second-level registered is in conclusive. Depending on governmental policies, a small shortage of second-level

[3] The labor market research program used scenario generation methodology and interviews and/or focus groups with employers and experts to make projections about the healthcare labor market.

					registered nurses can be expected from 2016 towards 2019 or a small surplus until 2019**.**
Van der Windt & Bloemendaal (2015b)	Kiwa Charity	2015	General hospitals	data from a labor market research program	Shortages of first-level registered nurses are expected in hospitals, home care, and mental care from 2016 to 2019. The data for second-level registered is in conclusive. Depending on governmental policies, a small shortage of second-level registered nurses can be expected from 2016 towards 2019 or a small surplus until 2019.
Van der Windt & Bloemendaal (2015c)	Kiwa Charity	2015	Homecare	data from a labor market research program	Shortages of first-level registered nurses are expected in hospitals, home care, and mental care from 2016 to 2019. The data for second-level registered is in conclusive. Depending on governmental policies, a small shortage of second-level registered nurses can be expected from 2016 towards 2019 or a small surplus until 2019. Shortages of practical nurses are expected from 2017 or 2018 towards 2019.
Van der Windt & Bloemendaal (2015d)	Kiwa Charity	2015	Nursing / convalescent homes	data from a labor market research program	Shortages of first-level registered nurses are expected in hospitals, home care, and mental care from 2016 to 2019. The data for second-level registered is in conclusive. Depending on governmental policies, a small shortage of second-level

					registered nurses can be expected from 2016 towards 2019 or a small surplus until 2019. Shortages of practical nurses are expected from 2017 or 2018 towards 2019.
Van der Windt & Bloemendaal (2015e)	Kiwa Charity	2015	Disabled care	data from a labor market research program	Shortages of second-level registered nurses expected in 2017 or 2019, depending on governmental policies. Shortages of practical nurses are expected from 2017 or 2018 towards 2019.
Van der Windt & Bloemendaal (2015f)	Kiwa Charity	2015	Mental healthcare	data from a labor market research program	The data for second level registered are in-conclusive. Depending on governmental policies, a small shortage of second-level registered nurses can be expected from 2016 towards 2019 or a small surplus until 2019. Shortages of practical nurses are expected from 2017 or 2018 towards 2019.
Van der Windt & Bloemendaal (2015g)	Kiwa Charity	2015	Nursing and social welfare staff	data from a labor market research program	Shortages of practical nurses are expected in nursing and convalescent homes in 2019. Shortages of first-level registered nurses are expected in hospitals, home care, and mental care between 2014 and 2019. The data for second-level registered are in-conclusive. Depending on governmental policies, a small shortage of second-level registered nurses can be expected from 2016

					towards 2019 or a small surplus until 2019.
Panteia et al. (2014)	Panteia, SEOR, Etil	2014	Health and social care	data from a labor market research program	Surplus of first-level nurses expected in hospitals until 2017. Shortages of second-level registered nurses are possible but not sure until 2017. Shortages of second-level nurses expected in hospitals until 2017. Surplus of practical nurses until 2017. Surplus of nurse assistants until 2017.
Van der Aalst (2015)	UWV	2015	Labour market general	a database and qualitative interviews with labor market experts	Due to the healthcare system transition towards home care, shortages of first-level registered nurses are present (2014) and expected to remain between 2017 and 2019. Shortages are expected for second-level registered nurses in 2017-2019. Many nurse assistants are losing their jobs
Van Essen et al. (2016)	CAOP	2016	Health and social care	data from a labor market research program	There is and will be shortages of first-level registered nurses in the home care sector. In the coming year, shortages are expected for first-level registered nurses due to expansion of advanced practice roles for theses nurses in hospitals. However, a surplus of these nurses is expected in hospitals in the short term.

Key Issues

Overview of The Included Studies

The included papers were published in the 2014- 2016 period. All papers were in Dutch. Table 3 shows an overview of the included studies with their methodology and their findings.

Quality of The Included Studies

The included studies were based on the data of a labor market research program and/or data from the Dutch Employed Persons' Insurance Administration Agency. We also included non-academic research publications after careful examination of the methodology and sources of publications. Regarding the methodology, the articles used scenario generation methodology and interviews and/or focus groups with employers and experts. Regarding the sources of the publications, the labor market research program has been founded to provide reliable information on the healthcare labor market for organizations in the healthcare sector to make strategic human resource planning decisions. This research program was funded by the government and other social parties. The Dutch Employed Persons' Insurance Administration Agency provides information about the labor market to public organizations to prevent unnecessary unemployment.

Nursing Shortages Across The Dutch Healthcare System

The reports on nursing shortages are based on narratives as well as on qualitative data and show that future nursing shortages are expected in the Netherlands. See Table 3. Shortages are imminent for first-level registered nurses, although there are differences between healthcare sectors. A surplus of first-level registered nurses is expected in hospitals in the short term (Panteia et al. 2014), followed by a shortage from the year 2017 or 2019 onwards due to the advanced roles these first-level registered nurses will be playing (Van Essen et al. 2015; Van der Windt & Bloemendaal 2015a; 2015b; 2015c; 2015d; 2015g): in order to reduce cost and improve care, first-level registered nurses will take over certain tasks from physicians, thus advancing the roles these nurses are expected to play. In home care, shortages of first-level registered nurses already exist, and, depending on different scenarios, are expected to remain or to increase until the year 2019 (Bloemendaal et al. 2015). Shortages of first-level registered nurses are also expected in mental care (Van der Windt & Bloemendaal 2015g), but there are no projections for 2020 and beyond.

Projections of shortages of second-level registered nurses are inconclusive. Depending on governmental policies, a shortage of second-level registered nurses can be expected from 2016 till 2019, or a small surplus can be expected until 2019 (Van der Windt & Bloemendaal 2015a; 2015b; 2015c; 2015d; 2015e; 2015f; 2015g; Kalkhoven & Van der Aalst 2015). There

are no projections for 2020 and beyond. Projections of shortages of second-level registered nurses focus on hospitals and home care (Panteia et al. 2014; Kalkhoven & Van der Aalst 2015).

A surplus of practical nurses is expected in the short term (Panteia et al. 2014), followed by a shortage from the year 2017 or 2019 onwards (Van der Windt & Bloemendaal 2015c; 2015d; 2015e; 2015f; 2015g. A surplus of practical nurses is expected in hospitals (Panteia et al. 2014). Shortages of practical nurses are mainly expected in the nursing homes and convalescent homes sector and the home sector from the year 2019 (Van der Windt & Bloemendaal, 2015). There are no projections for 2020 and beyond.[4]

For nurse assistants, a surplus is expected in all types of patient care (Panteia et al. 2014; Van der Aalst 2015; Kalkhoven & Van der Aalst 2015).

Discussion

We conclude from these findings that nursing shortages are projected for practical as well as first-level registered nurses. These shortages, however, are unevenly distributed across the various healthcare sectors. Regarding shortages of practical nurses, our results show that maldistribution appears to be responsible for these shortages, with a long-term projected surplus of practical nurses in hospitals and shortages in nursing/convalescent homes and home care. Our findings suggest the appropriateness of encouraging experienced practical nurses to move from employment in hospital care to community and home care.

Encouraging experienced nurses to move, however, is challenging. The working environments of home care nurses differ from those of hospital nurses in many ways. Hospital nurses, for example, work in an environment in which physical resources are readily available, but home care nurses work in clients' homes where physical resources, such as pulse oximeters and stethoscopes, are not always present, which makes their work challenging (Tourangeau et al. 2014). Working at clients' homes alone, moreover, may be lonely, whereas hospital nurses have colleagues close by (Tourangeau et al. 2014). Working alone at night, in potentially unsafe neighborhoods or with unfamiliar clients, is a significant safety concern for home care nurses (Tourangeau et al. 2014).

Due to these differences in working environments it is unlikely that hospital nurses can transfer to home and community care without any additional education or coaching (Panteia et al. 2013). Hospital nurses who transfer to community and home care are often not adequately prepared for this change in practice, and limited attention has been paid to such nurse transitions

[4] In the last chapter of this dissertation I will discuss to what extent these predictions have turned in reality.

(Ashley et al., 2016). Research is urgently needed to explore effective transition programs that facilitate optimal transition experiences and enhance the recruitment and retention of nurses in home care.

Regarding shortages of first-level registered nurses, our results show that general scarcity in the long term rather than maldistribution appears to be responsible for the projected shortages. Surprisingly, we found that even though hospitals employ the highest percentage of first-level registered nurses, a small surplus of first-level registered nurses is expected in hospitals in the short term. In the long term, however, shortages of first-level registered nurses are expected to occur in hospitals because the implementation of advanced roles to be taken on by them will increase demand for them. The home care sector, however, is already facing shortages of first-level registered nurses and is expecting these to increase. Our results show that general scarcity in the long term rather than maldistribution appears to be responsible for these shortages.

Another surprising finding was the negative influence of advanced practice roles on nursing shortages. Advanced practice roles are offered as a general solution for nursing shortages, as nurse retention is expected to improve by offering advanced career prospects and additional training (Buchan et al. 2015). However, we found that advanced practice roles will actually increase demands for nurses: as tasks will be devolved from physicians to first-level registered nurses, more nurses will be required to perform these tasks (Van Essen et al. 2015).

Implications for Nursing Management

The primary goal of the Dutch health workforce planning model is to support policy decision making on medical and specialist workforce planning (Van Greuningen 2016). Government and policymakers should, however, use an integrated health workforce-planning model which also takes the nursing workforce and various healthcare sectors into account. It implies a shift from planning separate occupations to an integrating workforce-planning model of multiple health professionals across healthcare sectors (Van Greuningen 2016).The development of such integrated workforce-planning model across healthcare sectors is necessary to understand and predict the impact of reallocation of tasks between these healthcare professionals.

Furthermore, integrated workforce planning models could evaluate ex ante the impact of healthcare transformation plans (Van Greuningen 2016) and guide national policy decisions on transition programs. Effective transition programs, that facilitate optimal transition experiences, are needed to make more effective and productive use of the nursing staff and nursing skills present in the nursing workforce. Transition programs towards home care should contain support systems such as organizational orientation, mentoring and team support in the work to teach the

autonomous nature of the work and the development of rewarding relations with clients (Ashley et al. 2016).

The scarcity of first-level registered nurses challenges the sustainability of health systems. Traditional solutions for dealing with scarcity of nurses have focused on supply side manipulation, such as recruiting new first-level registered nurses and retaining nurses. In addition, new models of care are needed to decrease demands for first-level nurses. Demands for nurses could be reduced by new models of care, focusing on disease prevention, reducing over-utilization of healthcare services, and a mix of professional nurses and informal carers who use technology effectively. Research is needed to explore new models of care that will be sustainable in terms of costs and human resources.

Limitation

A limitation of this review is its use of non-academic literature. However, we considered these articles reliable because of the methodology they used and the reason and purpose of their publication.

Conclusion

The goal of this paper was to improve our understanding of nursing shortages across the variety of current healthcare sectors and how this may affect the agenda for addressing nursing shortages. We found that predicted nursing shortages are unevenly distributed over the Dutch healthcare system and are caused by both maldistribution and scarcity of nurses. Integrated health workforce planning across various healthcare sectors is essential to be able to decide on appropriate policy responses to nursing workforce challenges.

CHAPTER 3

Sweeping the floor or putting a man on the moon: How to define and measure meaningful work[5]

Abstract
Meaningful work is integral to well-being and a flourishing life. The construct of "meaningful work" is, however, consistently affected by conceptual ambiguity. Although there is substantial support for arguments to maintain the status of conceptual ambiguity, we make a case for the benefits of having consensus on a definition and scale of meaningful work in the context of paid work. The objective of this article, therefore, was twofold. Firstly, we wanted to develop a more integrative definition of meaningful work. Secondly, we wanted to establish a corresponding operationalization. We reviewed the literature on the existing definitions of meaningful work and the scales designed to measure it. We found 14 definitions of meaningful work. Based on these definitions, we identified four categories of definitions, which led us to propose an integrative and comprehensive definition of meaningful work. We identified two validated scales that were partly aligned with the proposed definition. Based on our review, we conclude that scholars in this field should coalesce rather than diverge their efforts to conceptualize and measure meaningful work.

[5] This chapter has been published as: Both-Nwabuwe, J.M.C., Dijkstra, M.T.M., & Beersma, B. (2017). Sweeping the floor or putting a man on the moon: How to define and measure meaningful work. Frontiers in psychology, 8, 1658.
An earlier version of this paper has also been presented at the 2nd international symposium on Meaningful Work in Auckland, New Zealand (December 2016) .

There is a famous story about President John F. Kennedy's first visit to NASA's headquarters back in 1961. During his visit to the NASA space center, as the story goes, President John F. Kennedy noticed a janitor carrying a broom. He interrupted his tour, walked over to the man and asked: "What are you doing?" "Well, Mr. President," the janitor responded, "I'm helping to put a man on the moon."

This story brings to life an image of how seeing a bigger purpose for one's work than just the tasks at hand can make employees more engaged and satisfied in their work. Furthermore, it is easy to imagine that seeing such bigger purpose would serve both their personal and the organizational goals. Indeed, research has linked experiencing work as "meaningful" to individual outcomes such, as work engagement, job satisfaction and motivation, and to organizational outcomes such as performance (Lips-Wiersma & Wright, 2012; Martela, 2010; Steger, Dik & Duffy, 2012). Furthermore, meaningful work is believed to be integral to well-being and a flourishing life (Rosso et al., 2010; Veltman, 2016). Flourishing describes a sense of happiness (Veltman, 2016). Without meaningful work, it is unlikely that a person will flourish (Veltman, 2016). Considering these research findings, it is no surprise that meaningful work is receiving increasing attention from researchers as well as practitioners (Lips-Wiersma & Morris, 2009).

The main focus in the present study is on the definition and operationalization of the construct of meaningful work. We define work from an ethical perspective, meaning that it is morally worthy and legal. Immoral or illegal activities, drug dealing for example, are not considered to be work because they are not lawful or morally worthy as regards their nature. Furthermore, we define work from a capitalistic point of view as implying paid work (Lepisto & Pratt, 2017). In this perspective, tasks and activities are defined as work when they concern paid tasks and activities on an occupational basis that are lawful as regards their nature.

Although Veltman and others (Veltman, 2016) argue to define work as a holistic concept covering also tasks and activities within family or volunteering work, there are also apparent differences between paid and other types of work. Within family life and volunteering there is a great level of personal and autonomous choice involved. While this is not to say that many paid workers are not doing what they like for a living, they most likely work, at least in part, because they need to earn money. This difference in personal and autonomous choice influences the meaningfulness people experience in their work. Research on meaningful work should therefore be viewed in the specific context in which it is performed.

Our purpose is twofold. First, we aim to develop an integrative definition of meaningful work. Second, we aim to produce a uniform and unequivocal operationalization of the construct of meaningful work. In order to do so, we built on the work of Rosso, Dekas and Wrzesniewksi (2010) who provided an extensive literature review of empirical and theoretical articles on meaningful work. Their analysis revealed that, although meaningful work was examined in different contexts, two key issues are central in understanding what makes work meaningful: first, what factors influence the experience of meaningful work, that is, its sources, and second, how work becomes meaningful, that is, its underlying psychological and social mechanisms. These two issues were often entangled in the past (Lips-Wiersma & Morris, 2009; Steger et al., 2012). Though Rosso et al. (2010) have undoubtedly strengthened the research field on meaningful work by pointing out these two key issues, the construct of "meaningful work" is still consistently affected by conceptual ambiguity.

One reason for this conceptual ambiguity is that the meaningful work construct has been examined in many different research contexts. In the empowerment literature, for example, meaningful work is understood as a sub-construct of empowerment (Lee, 2015) whereas it is understood as an experience or sense of purpose in research on transformational leadership (Martela, 2010; Lee, 2015).

Another reason for the conceptual ambiguity surrounding meaningful work is that different theoretical frameworks have been proposed as to what it comprises. Based on their review, Lepisto and Pratt (2017) recently proposed to consider meaningful work from either of two perspectives: a realization perspective or a justification perspective. Viewed from the realization perspective, meaningful work is created through fulfilment of needs, motivations, and desires associated with self-actualization. Viewed from the justification perspective, it is created through the subjective experience of the value or worth of one's work, that is, its higher purpose.

While the two perspectives proposed by Lepisto and Pratt (2017) help to organize the literature on meaningful work, their proposed alternative perspectives appear to be disregarding the multidimensionality of the construct of meaningful work. Recently, there has been more agreement that meaningful work needs to be conceptualized as a multidimensional construct, or as the result of a complex interplay of multiple dimensions (Chalofsky, 2003; Lips-Wiersma, 2002a; 2002b; Lips-Wiersma & Morris, 2009; Rosso et al., 2010; Steger et al., 2012). Despite such agreement, there is no consensus about the exact nature of the different dimensions underlying the concept of meaningful work (Bendassolli, Borges-Andrade, Alves, & Torres, 2015). As a result, it has been defined in many different ways, and, as authors have previously noted, there is no generally agreed upon definition (Martela, 2010; Rosso et al., 2010).

According to the definition of Rosso et al. (2010), "meaningful work is work experienced as particularly significant and holding more positive meaning for individuals" (p. 95). As this definition repeats the term to be explained in the phrase that is meant to explain it, it is tautological, and as the concepts of "work" and "positive meaning" are not really explained, the definition does not provide us with a full understanding of the concept of meaningful work.

Addressing the conceptual ambiguity of the construct of meaningful work, Lee (2015) proposed an alternative definition based on concept analysis. Based on identifying critical attributes of meaningful work in the literature, Lee (2015) defines meaningful work as follows: "Meaningful work is the discovery of existential meaning from work experience, work itself and work purpose/goals" (p. 2263). In this definition, Lee (2015) provides an underlying conceptual framework that is believed to bring forth meaningful work (work experience, work itself, and work purpose/ goals). Although this definition clarifies what underlying conceptual framework has been used, the framework itself only comprises the work context and omits the other three sources of meaningful work (i.e., the self, others, and spiritual life). These three other sources also affect the meaningfulness workers experience in their work (Rosso et al., 2010). Emphasizing a single source of meaningful work provides an overly simplistic view of how people construct meaningfulness in their work (Rosso et al., 2010). To understand comprehensively how work becomes meaningful, we must take into account the integrative nature of sources of meaningful work (Rosso et al., 2010).

Lee's (2015) definition, based on only the work context, therefore, does not establish consensus but rather adds to the discussion on what defines meaningful work. In spite of these recent attempts by Rosso et al. (2010) and Lee (2015) to improve our understanding of the concept of meaningful work, consensus on how the construct should be defined has still not been reached, as currently available definitions are either incomplete or tautological.

Although striving for consensus on a definition of meaningful work is challenging, consensus in a research field is often seen as an essential factor in making scientific progress, and without some minimal level of consensus about paradigmatic approaches and methods, knowledge development in the scientific field cannot occur (Pfeffer, 1993). Adding empirical findings to this perspective, two studies by Lewandowsky, Gignac and Vaughan (2012) demonstrated that perceived scientific consensus is essential the acceptance of scientific research by the general public. In their first study on pedestrians in downtown Perth, for example, they found that people were more likely to accept scientific facts when they believed there was consensus within the field of study these facts derived from. In their second study, they found

that scientific consensus even improves the acceptance of scientific facts in situations in which social norms are ambiguous, which could cause people to discredit the scientific facts.

In line with these findings, Rolfe-Redding Maibach, Feldman and Leiserowits (2012) found, in their detailed analysis of Republican opinion on climate change, that perceived scientific consensus is the strongest predictor of acceptance of climate science by policymakers. In their experiment-control study on vaccine safety, Van der Linden, Clarke and Maibach (2015) found that highlighting medical consensus on vaccine safety increases perceived scientific agreement, which promotes favorable public attitudes toward vaccination and reduces perceived risk and belief in the (long discredited) autism-vaccine link. In their quantitative study comparing the structure of knowledge in four scientific fields, Lodahl and Gordon (1973) found that high-paradigm fields, which are high in consensus on certain theories and findings, attract more funding. According to Lodahl and Gordon (1973), the reason for this might be that the consensus on certain theories and findings that characterizes high-paradigm fields clarifies directions for further lines of inquiry. Both policymakers and the public, therefore, can be more certain of obtaining results, which leads to more funding being allocated to high-paradigm fields (Lodahl & Gordon, 1973). Highlighting scientific consensus to the general public and policymakers, therefore, is important for public acceptance as well as for receiving financial support.

Other benefits of consensus on paradigmatic approaches and methods in a given scientific field are manifold. Pfeffer (1993), for example, discusses how such approaches and methods are related to lower journal rejection rates and more collaboration on research. Hargens (1988) analyzed journal rejection rates for 30 scientific journals from 1967 to 1983, and found that journal acceptance rates in high-paradigm fields were higher. Pfeffer and Langton (1993) explored the antecedents and circumstances of research collaboration among more than 60,000 faculty members in 303 colleges and universities. They concluded that research collaboration in the high-paradigm field was much more intense than in low-paradigm fields, meaning there was greater awareness of each other's research projects and there were more joint research projects. They suggested that, as paradigms develop, greater efficiency is achieved through the achievement of consensus and its communication (Pfeffer & Langton, 1993). In other words: if researchers agree on their topics of study, it becomes easier to communicate and collaborate, which, in its turn, leads to scientific progress.

Of course, there are also arguments in favor of not having consensus in a field of study. Lack of consensus, for example, has been found to relate to creativity, inclusiveness, and theoretical and methodological diversity (Pfeffer, 1993). Although we agree that diversity in

theoretical and methodological perspectives can be useful, we would argue that, in light of the arguments and research findings presented earlier, it is very helpful for a scientific field to at least agree on definitions of central constructs on the basis of accumulated evidence. Such agreement, on the multidimensional characteristic of meaningful work, for example, can facilitate efficient communication and effective collaboration among researchers.

Furthermore, a sufficient level of agreement over rules for operationalization (for example, multidimensional meaningful work scales) is very useful, as it facilitates comparing results and integrating theoretical perspectives (Pfeffer, 1993). In the research field of meaningful work, we are at the beginning of paradigm development. Reaching consensus on a definition of meaningful work, explaining what it is and what it is not, could enhance knowledge development and communication efficiency in this field, in other fields, and in the public at large. Highlighting scientific consensus on a definition of meaningful work could enhance public acceptance of research findings as well as secure financial support for further research. To advance the field of meaningful work, therefore, we believe that, instead of developing new theories and definitions, we should be integrating existing theories and corresponding definitions of meaningful work to establish an unambiguous integrative definition of meaningful work. Such a definition can then be employed in different theories and empirical studies in this field.

Another benefit of consensus on a definition of meaningful work is that it opens the way to some agreement over rules for operationalization. Of course, the ambiguity surrounding the definition of meaningful work inhibits comparisons between theories on the construct, but it also has implications for its measurement: if the definition of meaningful work is ambiguous, so will be its measurement. As a result, there are many different instruments to measure meaningful work, which has led to scattered research findings with questionable comparability. As many scales already exist, we will examine currently existing meaningful work scales – rather than develop a new one – to identify universal methodological approaches. Agreement on methodology, as it leads to comparable research findings, will help to advance knowledge in the field.

In summary, we argue that, due to conceptual ambiguity, research on meaningful work lacks consensus on how to define its central concept and, hence, on how to measure it. Consensus on the definition of meaningful work and its measurement are essential to the field and its progress (Pfeffer, 1993). Therefore, in the current article, we will review previous definitions of meaningful work in order to arrive at a more integrative definition. We will also review scales designed to measure the construct to evaluate a) the extent to which they fit this integrative definition and b) their psychometric qualities.

Below, we will introduce our first literature review, focusing on definitions of meaningful work. After discussing the results of this review and integrating the results into an integrative definition of meaningful work, we will introduce our second literature review, focusing on scales designed to measure meaningful work. Finally, we will discuss the outcomes of our review of measurement scales and formulate several directions for future research.

Study 1: Defining Meaningful Work

The purpose of the first literature review was to analyze the concept of meaningful work in the literature, to provide an overview of the existing definitions, and to propose an integrative and comprehensive definition based on this overview. Researchers have often used "meaningfulness" and "meaning" interchangeably. Following Rosso et al. (2010), we have differentiated between these concepts in this article. Meaningfulness refers to the perceived level of significance of one's work (Monnot and Beehr, 2014). As such, a single work event may be experienced as extremely significant, or meaningful, by one worker and as not significant at all, or not meaningful, by another worker (Rosso et al., 2010).

Meaning, on the other hand, is the outcome of having made sense of work. As Rosso et al. (2010, pp 94.) put it: "meaning is an individual interpreting what her work means, or the role her work plays, in the context of her life (e.g., work is a pay check, a higher calling, something to do, an oppression)." We have focused on the literature that addresses meaningful work as a multidimensional construct. The meaning of work is outside the scope of this review.

Methods

Search Strategy.

In order to provide an overview of the existing definitions of meaningful work, we conducted a literature review in June 2016 via Internet using electronic databases and a search engine. We used the following electronic databases: Medline (Ovid), Sciencedirect, PsycINFO, and SSRN: Social Science Research Network, in order to obtain articles related to meaningful work studies from distinct areas, including humanist studies, psychology, and organizational science. As search terms in the electronic databases, we used the combined keywords "meaningful work" and "definition" and the combined keywords "meaningful work" and "concept." We used the Google Scholar search engine at http://www.scholar.google.com for our Internet search. As search terms for the search engine, we used "allintitle: meaningful work." When searching for articles, we did not put limits on year of publication.

Inclusion and exclusion criteria.

We applied two inclusion criteria. First, in line with the emerging conceptualization of meaningful work as a multidimensional construct (see, e.g., Chalofsky, 2003; Lips-Wiersma, 2002a, 2002b; Rosso et al., 2010; Steger et al., 2012), we selected articles that conceptualized meaningful work as a multidimensional construct. Second, we selected only articles that were written in English. In order to better understand the concept of meaningful work and following Lee (2015), we applied the following exclusion criterion: articles that did not provide any reasoning for the definition they used or did not provide an underlying conceptual framework of meaningful work.

Data extraction and analysis.

The initial screening of articles was done by reading the titles and abstracts. Titles were reviewed, and abstracts were retrieved if potentially relevant information was identified in the title. Then, abstracts were reviewed, and full texts were retrieved if potentially relevant information was identified in the abstract. Furthermore, reference lists of retrieved full texts were scanned, and Web of Science (a citation index) was searched for related literature that had previously been missed or omitted.

A four-step inductive content analysis procedure was used. The objective was to let the themes emerge from the data rather than predetermine them. This inductive process was considered appropriate because of the conceptual ambiguity around the concept of meaningful work. If knowledge is fragmented, the inductive approach is recommended (Elo & Kynga¨s, 2008). The first step included the recording of the identified definitions and framework of meaningful work. Next, themes within the recorded definitions were identified and coded. The third step involved comparing themes and naming emerging categories. A particular category was formed when a theme occurred more than once across the definitions. The following step included exploring the properties of categories, identifying relations between categories and uncovering patterns to draw conclusion for an integrative definition. The goal was to draw an integrative definition based on all the identified categories. The first author performed the steps first. Thereafter, all the steps were discussed among the three authors.

Results

The search yielded 1,990 articles. Screening of titles and abstracts resulted in 1,919 articles being excluded. One article was identified through the reference list of a retrieved full text. The full texts of 72 articles were read, and 14 definitions of meaningful work were identified (Bendassolli et al., 2015; Bowie, 1998; Allan, Autin & Duffy, 2016; Chalofsky, 2003; Fairlie, 2011; Lee, 2015; Lips-Wiersma & Morris, 2009; Lips-Wiersma & Wright, 2012;

Martela, 2010; Miller, 2008; Pavlish & Hunt, 2012; Pratt & Ashfort, 2003; Rosso et al., 2010; Robertson, 2013; Steger et al., 2012). Some authors used the same multidimensional framework for meaningful work – for example, the Kantian model, in which meaningful work can be created by certain objective normative ethical work characteristics (Bowie, 1998; Pavlish & Hunt, 2012) – but provided different definitions.

We identified 14 unique definitions. The content analysis approach led us to identify four categories of definitions: 1) "positive significance or purpose," the largest category with seven definitions of meaningful work, focusing on the experience of positive significance or purpose through work; 2) "constituents of meaningful work," with four definitions, focusing on what meaningful work consists of; 3) "fit," with two definitions, focusing on the fit between the individual and his/her work; and 4) "fulfilment," with two definitions focusing on fulfilling a certain need or dimension. Looking closer at the categories and relations between categories, we noticed that most definitions fell within the category of "positive significance or purpose". Two out of seven definitions in this category refer to Rosso et al.'s (2010) definition while adding some extra explanation. However, these two definitions are still tautological: they essentially define meaningful work as work that generates meaning. Looking for the patterns and relation between the categories we found that the categories "constituents of meaningful work" and "fulfilment" define meaningful work in terms of "how" work becomes meaningful. The category "positive significance or purpose" defines meaningful work in terms of experiences. The "fit" category defines meaningful in terms of "when" work becomes meaningful. The definition "meaningful work is an individual subjective experience of the existential significance or purpose of work" was most align with the other definitions in this category and there for used as part of the integrative definition. Within the other categories overall alignment by one of the definitions was not observed. It was therefore decided to use the categorical names in the integrative definition. The findings are presented in Table 1.

Table 1

Overview of definitions and framework of meaningful work (meaningful work)

Reference	Framework Meaningful work	Definition
	Category 1: Positive significance and/or purpose	
Rosso et al., 2010	Based on the literature, Rosso et al. (2010) offer four main pathways to the creation or maintenance of meaningful work: individuation, contribution, self-connection, and unification.	meaningful work is work experienced as particularly *significant* and holding more *positive* meaning for individuals.
Robertson, 2013	Follows the framework of Rosso et al. (2010)	This paper adopts Rosso et al.'s (2010) definition of meaningful work: "work experienced as particularly *significant* and holding more *positive* meaning for individuals," and adds: where "meaning" is the result of making sense of something within the context of one's life.
Steger et al., 2012	Based on research on calling and meaningful work, Steger et al. (2012) propose a three-dimensional model of meaningful work: 1) positive meaning in work; 2) meaning making; and 3) greater good. Positive meaning is the subjective experience that what one is doing has personal significance. Meaning making is the experience that work attributes to meaning in life as a whole. Greater good is the desire to make a positive impact on others.	This paper adopts Rosso et al.'s (2010) definition of meaningful work: work that is both *significant* and *positive* in valence (meaningfulness) and adds: the positive valence of meaningful work has a eudemonic (growth- and purpose-oriented) rather than hedonic (pleasure-oriented) focus.
Martela, 2010	Based on Baumeister's model for meaning, meaningful work is proposed to consist of four individual elements: the need for purpose, values, efficacy, and self-worth. Work is meaningful when it is able to fulfill one or many of these needs, but the needs individual workers attempt to fulfill through their work depend on their larger life context.	meaningful work is work that offers the worker *positive significance* in life thus contributing to the fulfillment of the human need for meaningfulness.
Lips-Wiersma & Wright, 2012	Based on qualitative psycho-biographical research and action research, Lips-Wiersma (2002a; 2002b) proposes a four-dimensional	meaningful work is an individual subjective experience of the existential *significance* or *purpose* of work.

Lips-Wiersma & Morris, 2009	model of meaningful work: 1) developing and becoming self; 2) Expressing Full Potential; 3) Unity with Others; 4) Service to Others. Moreover, Lips-Wiersma (2002a; 2002b) argues these dimensions are on three existential continuums: 1) individual- others; 2) doing and being; and 3) Facing Reality and Inspiration. The individual-other continuum refers to fulfilling the needs of oneself and others. The doing-being continuum refers to fulfilling the need to do and the need to be. The "need to be" can be described in terms of self-actualization or one's own identity. The Facing Reality-Inspiration continuum refers to coming to terms with an imperfect self in an imperfect world (reality-check) at one end, and the inspiration or hope to improve oneself and the conditions for others at the other end. The dimensions need to be balanced on these continuums in order to experience meaningful work. meaningful work is thus a seven-factor construct, consisting of four dimensions on three continuums.	
Pratt & Ashfort, 2003	Based on identity theory and social identity theory, Pratt & Ashfort propose a four-dimensional model of meaningful work: 1) one's role and 2) one's membership leads to 3) one's identity, which leads to 4) meaningfulness through sense-making.	Work and/or its context are perceived by its practitioners to be, at minimum, *purposeful and significant.*
Chalofsky, 2003	Based on the literature, Chalofsky proposes that meaningful work consists of three dimensions: work itself, a sense of self, and a sense of balance.	meaningful work *gives essence* to what we do and brings a *sense of fulfillment* to our lives.
	Category 2: Constituents of meaningful work	
Allan, Autin & Duffy, 2016	meaningful work is experienced in engaging in intrinsically motivated work behavior, thereby creating congruence between work behaviors and one's self-concept, which results in feelings of meaningfulness. meaningful work is considered as a key outcome of self-determination. Based on Self-Determination Theory and the Psychology of Working Framework, intrinsically motivated work is achieved through autonomy, relatedness, and competence, survival/power needs, relational needs, and self-determination needs.	meaningful work is the subjective experience that one's work *has significance, facilitates personal growth, and contributes to the greater good.*

Lee, 2015	Based on concept analysis, Lee proposes a four-dimensional model for meaningful work: 1) experienced positive emotion at work; 2) meaning from work itself; 3) meaningful purpose and goals of work; and 4) work as a part of life toward meaningful existence. meaningful work is defined as the discovery of existential meaning from work experience, work itself, and work purpose/goals. Experienced positive emotion at work reflects subjective positive experience including meaningfulness, a sense of worth, and self-fulfillment, when employees have meaning in work. Meaning from work itself indicates work attributes that provide meaning, such as work significance, work values, and work orientation. Meaningful purpose and goals of work indicate that meaning in work can be derived from knowing what employees want to be and do in the workplace. Work as a part of life toward meaningful existence reflects the impact of meaning in work on one's personal life, a personal reason for existence, and an authentic self. The instrument integrates the perspectives of the experience of meaningful work and work as an attribute of existential meaning.	meaningful work is the discovery of existential meaning from experiencing *positive emotion, finding meaning from work, and pursuing purpose or goals in the workplace.*
Bowie, 1998	Based on Kant's Moral Theory, Bowie describes six characteristics of meaningful work: 1. Meaningful work is work that is freely entered into. 2. Meaningful work allows the worker to exercise her autonomy and independence. 3. Meaningful work enables the worker to develop her rational capacities. 4. Meaningful work provides a wage sufficient for physical welfare. 5. Meaningful work supports the moral development of employees. 6. Meaningful work is not paternalistic in the sense of interfering with the worker's conception of how she wishes to obtain happiness.	meaningful work is work that is *freely entered into,* *that allows the worker to exercise her autonomy and independence, that enables the worker to develop her rational capacities, that provides a wage sufficient for physical welfare, that supports the moral development of employees, and that is not paternalistic in the sense of interfering with the worker's conception of how she wishes to obtain happiness.*
	Category 3: Fit perspective	
Bendassolli et al. (2015)	Based on the work of Morin and Dassa (2006), meaningful work is viewed as a three-dimensional model: 1) the significance of work; 2) individual's orientation; and 3) coherence or harmony in work.	meaningful work is *an effect of the coherence* between the characteristics one pursues and the

	The significance of work refers to the significance an individual attaches to work and the representations and values the individual attributes to it. The individual's orientation refers to the individual's inclination regarding work, the individual's objective at work, and the plans that guide the individual's actions. Coherence refers to the coherence or harmony between the individual and his or her work. The MWS measures the effect of this coherence based on the identification of six general characteristics of meaningful work: work utility; moral correctness; autonomy; development and learning; quality of working relations; and expressiveness and identification at work. Work Utility assesses the social function of work and its impact on people and society. Moral Correctness assesses the perception of justice and fairness in labor relations. Autonomy evaluates the perception of the subject's freedom to organize work his or her own way. Development and Learning addresses how much work enables growth and skill development. Quality of Work Relationships evaluates the work environment, interactions, and companionship at work. Expressiveness and Identification at work assesses how much work enables expressiveness and identification at work.	characteristics he/she identifies at the work he/she does.
Pavlish & Hunt, 2012	Following Bowie's characteristics of meaningful work based on Kantian theory (1998).	Meaningful work is *the value of work goals judged in relation to an individual's own ideals and passions* and specifically as work that "gives essence to what we do and brings fulfillment to our lives."
	Category 4: Fulfillment	
Miller, 2008	Based on the model of Chalofsky, 2003	meaningful work is the *ability to earn a living doing that which satisfies an individual's psychological, spiritual, and social sense of purpose and contribution*.
Fairlie, P. (2011).	Based on Baumeister's model of meaning, four needs are identified for meaningful work: purpose (including goals and fulfillments), values, efficacy, and self-worth.	Meaningful work is defined as *aspects of one's job or work environment that facilitate the attainment or maintenance of one or more dimensions* of meaning

Discussion

At the beginning of this article, we observed that there is no universally accepted definition of meaningful work. For this field to develop and grow, therefore, it is important to reach some level of consensus, which the review of Rosso et al. (2010) has not established. Indeed, our Study 1 demonstrated that 14 different definitions could be identified in the literature. Within these 14 definitions, we identified four categories. Most definitions fell within the category of "positive significance or purpose," perhaps because of the influence of the review by Rosso et al. (2010).

Unexpectedly, Study 1 demonstrated that research on meaningful work rarely defines "work". This omission has also been noted by Lepisto and Pratt (2017) in their review of the nature of meaningful work. If a definition of work is lacking (Chalofsky, 2003; Lepisto & Pratt, 2017), the term may refer to different entities, such as work activities and tasks, a collection of tasks that make up a job, or one's career as one of life's dimensions (Lepisto & Pratt, 2017).

In order to bring consensus to the field of meaningful work, to conceptualize meaningful work more comprehensively, and to avoid tautology, we propose to define it on the basis of all the four categories we derived from our review, as follows: Meaningful work is the subjective experience of existential significance resulting from the fit between the individual and work. "The subjective experience of existential significance" refers to the process of personally perceiving work as contributing to, or making sense of, one's reason of existence in the world. "Resulting from the fit" refers to the fulfilment of certain dimensions – inherent in every human being – through or in work. These dimensions should be further defined by an underlying conceptual framework.

Study 2: Meaningful Work Scale

The purpose of the second literature study was to evaluate meaningful work scales in light of the definition proposed above and to assess their psychometric characteristics, by providing an overview and examining validated scales.

Methods

Search strategy.

In order to provide an overview of meaningful work scales, we conducted a literature review via Internet in June 2016 using the same electronic databases and search engine as for

Study 1. We used the search terms “meaningful work scale” and “measuring meaningful work.” The search was done without putting limits on year of publication.

Inclusion and exclusion criteria.

We applied two inclusion criteria: 1) empirical studies that used, validated, or adapted instruments that measured meaningful work as a multidimensional construct; and 2) studies written in English. We applied three exclusion criteria: studies in which 1) no definition of meaningful work was provided; 2) the method of measuring meaningful work was not described; or 3) meaningful work was measured one-dimensionally. We chose these exclusion criteria to focus exclusively on validated instruments that measured meaningful work as a multidimensional construct.

Data extraction and quality assessment.

For the data extraction process, we followed the same steps as described in Study 1. In one instance, the authors were contacted for a copy of the text when the full text could not be retrieved.

Following extraction, the characteristics of studies were recorded, including definition of meaningful work, operationalized dimensions of meaningful work, study characteristics, scale characteristics, and psychometric characteristics.

To evaluate measurement alignment between the scales and our proposed definition, we checked the scales for face validity (Drost, 2011). We specifically checked whether the scales: 1) captured the experience of meaningful work and 2) captured the features of both work and the individual contributing to fit.

Methodological quality assessment of the scales was done by describing the sample characteristics, reliability, and measurement validity of each scale. Sample characteristics were described by examining study size. Reliability assessment addressed whether the internal consistency of the subscales was sufficient. We were interested in subscale reliability because the scales were developed on the basis of a priori multidimensional frameworks of meaningful work. Hence, each dimension should be measured by its own reliable subscale.

Following Campbell and Fiske (1959), we addressed the construct validity of the included scales by describing their convergent and discriminant validity. We addressed the convergent validity of the scales by describing the correlations between the scale and other scales measuring similar constructs (for example, “calling,” conceptualized as a specific purpose to serve some greater good; Lips-Wiersma & Wright, 2012; Steger et al., 2012). We addressed the discriminant validity of the scales by describing the correlations between the scale and other scales measuring different constructs (for example, meaning in life; Lips-

Wiersma & Wright, 2012). Following the recommendations of Hu and Bentler (1999), we also assessed the results of the confirmatory factor analyses by describing the Comparative Fit Index (CFI) and Root Mean Square Error of Approximation (RMSEA) of the instruments.

Table 2

Operationalized dimensions of meaningful work in the scales

Scales	Comprehensive Meaningful Work Scale (CMWS) Lips-Wiersma & Wright (2012)	The Work And Meaning Inventory (WAMI) Steger et al. (2012)	Meaningful Work Scale (MWS) Bendassolli et al. (2015)	Meaning in Work Scale (MIWS) Lee (2015)
Definitions	meaningful work is an individual subjective experience of the existential *significance* or *purpose* of work.	This paper adopts Rosso et al.'s (2010) definition of meaningful work: work that is both *significant* and *positive* in valence (meaningfulness) and adds: the positive valence of meaningful work has a eudemonic (growth- and purpose-oriented) rather than hedonic (pleasure-oriented) focus.	meaningful work is *an effect of the coherence* between the characteristics one pursues nd the characteristics he/she identifies at the work he/she does.	meaningful work is the discovery of existential meaning from experiencing *positive emotion, finding meaning from work, and pursuing purpose or goals in the workplace.*
Subscale	Developing and becoming self	Meaning making	Moral correctness Expressiveness and identification at work.	Work as a part of life toward meaningful existence *Significance of work related to life* *Work toward meaningful existence* *Experienced an authentic self in work*
Subscale	Expressing Full Potential		Autonomya Development and learning	
Subscale	Unity with Others		Quality of working relations	

Subscale	Service to Others	Greater good	Work Utility	Meaningful purpose and goals of work *Work purpose* *work goals*
Subscale	Inspiration			
Subscale	Reality			
Subscale	Balance			
Subscale				Meaning from work itself *Significance of work itself* *Work values* *Work orientation*
Subscale		Positive meaning in work,		Experienced positive emotion in work *Meaningfulness in work* *A sense of worth in work* *Self-fulfilling in work*
In alignment with proposed definition?	Yes, the result of fit perspective	Yes, the subjective experience perspective	Yes, the result of fit perspective	Meaningful purpose and goals of work *Work purpose* *work goals* Yes, the subjective experience perspective

Table 3
Characteristic of the scales used in the review

Title and author	**Study characteristics**	**No. of scale items and scoring method**	**Psychometric characteristics**
Comprehensive Meaningful Work Scale (CMWS) Lips-Wiersma & Wright (2012)	N=275 *Sector* Various organizations *Gender* Male: 44% Female: 56% *Age* Mean age: 37.9 *Education level* 75% post-high school education	28-item scale using a 5-point Likert Scale.	*Construct validity* Convergent Copenhagen Psychosocial Questionnaire, subscale meaning of work r = .69, p<.001 Existential Meaning of Work Scale, work as enabling self r = .17, p<001 Existential Meaning of Work Scale, work as inhibiting selfhood r = -.37, p<.001 Divergent Meaning in Life Questionnaire r = .19, p<.001 Neoclassical Calling Scale r = .56, p<.001 Work Engagement Scale r = .71, p<.001 Work Values Scale r = .34, p<001 Work Preference Inventory r = .34, p<001 CFI = .972 RMSEA = .059 *Internal reliability* α = .72 to .92.
The Work And Meaning Inventory (WAMI) Steger et al. (2012)	N=370 *Sector* Employees of one Western university *Gender* Male: 30.3% Female: 69.7%	10-item scale using a 5-point Likert Scale.	*Construct validity* Convergent The Brief Calling Scale range subscales r = .42 to r = .54, p<.001 Work orientation range subscales r = .49 to r = .61, p<.001 Divergent

	Age Mean age: 44.6 *Education level* Mean 9.4 years of education past 8th grade		No analyses CFI = .96 RMSEA = .09 *Internal reliability* α = .82 to .93
Meaningful Work Scale (MWS) Bendassolli et al. (2015)	N=446 *Sector* Professionals working in creative industries in Brazil *Gender* Male: 44.8% Female: 55.2% *Age* Mean age: 29.7 *Education level* Unknown	25-item scale using a 6-point Likert Scale.	*Construct validity* Convergent No evidence/no analyses Divergent No evidence/no analyses CFI = .942 RMSEA = .057 *Internal reliability* α = .79 to .88

Meaning In Work Scale (MIWS) Lee (2015)	N= 158 *Sector* Nurses in acute-care hospital settings working full-time (36hrs/week) in USA *Gender* Male: 12% Female: 86,7% Missing 1.35% *Age* Mean age: 43.2 *Education level* Diploma in nursing 4.4% Associate degree 41.1% Bachelor's degree 42.4% Master's degree 3.8% Doctorate degree 0.0% Missing/other 8.2%	25-item scale using a 5-point Likert Scale.	*Construct validity* Convergent No evidence/no analyses Divergent No evidence/no analyses CFI = .907 RMSEA = .08 *Internal reliability* α = .91 to .95.

Results

The search yielded 212 articles. Screening of titles and abstracts resulted in 101 articles being excluded because they only addressed meaningful work without measuring it.

The full texts of 111 articles were read, and seven instruments were initially identified that measured meaningful work as a multidimensional construct. After closer examination, three instruments were excluded because the scale validation study for one instrument was written in German (Höge & Schnell, 2012); the scale validation study for a second instrument did not include confirmatory factor analysis (Fairlie & Flett, 2004); and the scale for a third instrument was intended to measure the role work plays in the context of life (e.g., work meaning, pay check, or life fulfilment) and significance of work. For this latter part, the authors used a scale that was included in this review, the so-called WAMI scale (Arnoux-Nicolas, Sovet, Lhotellier & Bernaud ,2016).

We found that many studies used instruments that measured concepts that were related to the construct of meaningful work or did not address the various dimensions of meaningful work. For example, we found that some instruments measured similar but different concepts, such as the Engagement in Meaningful Work Scale (EMWS; Treadgold, 1999). The EMWS is designed to measure the degree to which people perceive their work as something they are intrinsically motivated to do and also feel called upon to do by their inner guidance. It measures the concepts of calling and intrinsically motivating work. Although these concepts are very similar to meaningful work, they are conceptually different. Callings are often seen as being related to one's authenticity (Rosso et al., 2010). Research on calling suggests that when work provides individuals with opportunities to pursue their identified specific purpose, work is considered to be more meaningful because it is experienced as being personally fulfilling (Rosso et al., 2010). Steger et al. (2012) describe calling as "a more specific construct that falls under the umbrella of meaningful work". Calling is, therefore, a different construct from meaningful work and should not be used to measure meaningful work. (Lips-Wiersma &Wright, 2012).

We also found instruments that measured meaningful work as a one-dimensional construct, such as the "meaning" subscale of the Psychological Empowerment Scale (PES) (Spreitzer, 1995) and the Spirituality at Work Scale (SWS) (Ashmos & Duchon, 2000). The "meaning" subscale of the PES consists of three items and reflects the degree to which people find their work to hold personal meaning, significance, or purpose. This subscale was originally taken from the research of Tymon (1988) on empowerment (Spreitzer, 1995). The "meaning at work" subscale of the SWS consists of seven items. Although the SWS

considers meaningful work to be a one-dimensional construct, two dimensions can be identified in the scale: 1) the degree to which people find their work to hold personal meaning, significance, or purpose and 2) the contribution or benefit of work for others.

We included only scales that considered meaningful work as a multidimensional construct. The four scales included in this review are: 1) the Comprehensive Meaningful Work Scale (CMWS); 2) the Work And Meaning Inventory (WAMI); 3) the Meaningful Work Scale (MWS); and 4) the Meaning In Work Scale (MIWS). Table 2 and 3 provide an overview of the characteristics of the four included meaningful work scales.

General scale characteristics.

The number of items in the meaningful work scales ranged from 10 to 28. Items were scored on a 5- or 6-point Likert Scale. In all studies in our final selection, the researchers identified dimensions of meaningful work based on empirical or literature studies and operationalized these dimensions into subscales in the meaningful work scales. As such, the a priori theoretical frameworks provided the structure of the instrument. The scales measured meaningful work as a three- or four-dimensional construct through corresponding subscales. The subscales of the meaningful work scale were partially overlapping. All scales measured the purpose or significance of work (service to others, greater good, meaning from work itself, significance of work itself) and the authenticity of the self (developing and becoming self, meaning making, moral correctness, expressiveness and identification at work, work as a part of life toward meaningful existence, significance of work related to life, work toward meaningful existence, experienced an authentic self in work, see Table 2).

Definition-measurement alignment.

In the first study, we proposed an integrative and comprehensive definition of meaningful work. Evaluating the complete alignment of scales with this integrative definition, we found no match. We found that the WAMI and the MIWS are aligned with "the subjective experience of existential significance." Particularly the Positive meaning subscale (e.g., I understand how my work contributes to my life's meaning) of the WAMI and the subscale Experienced positive Emotion in Work of the MIWS (e.g., I have a good sense of what makes my job meaningful) are aligned with "The subjective experience of existential significance." These subscales contained some similar items, which is no coincidence, as the WAMI has been partially used to develop the MIWS (Lee, 2015). The WAMI captures the experience of meaningful work, whereas the MIWS captures the experience as well as the existential significance of work in life (see Table 2).

We found that the CMWS and the MWS are aligned with "the features contributing to the fit between the individual and work." The CMWS considers Integrity with Self, Expressing Full Potential, Unity with Others, and Service to Others as constituents of meaningful work, while the MWS considers moral correctness, expressiveness and identification at work, autonomy, development and learning, quality of working relations, and work utility as constituents of meaningful work. The CMWS and the MWS contain similar subscales, but the MWS subscales measure work characteristics (my job is useful to society; my job allows me to develop), whereas the CMWS subscales measure the fit between the individual and work features or experienced fulfilment of dimensions (what we do is worthwhile; I am excited by the opportunities available to me). In addition, the CMWS also measures the balance between these dimensions through three factors: Facing Reality, Inspiration, and the Balance between self and others and doing/being.

Reliability and validity.

The CMWS, WAMI, and MWS scales were validated in studies sized N=275 or more. The MIWS (Lee, 2015) was validated in a study sized N=158. Hu and Bentler (1999) argued that a study sample of 250 or larger is necessary for validation purposes. The sample used to validate the MIWS, therefore, was considered too small. All subscale reliabilities (Cronbach's Alpha) were 0.72 or higher. The subscale reliabilities, therefore, were acceptable (Peterson, 1994).

We found that convergent validity was only examined for the CMWS and the WAMI; for the CMWS, correlations with the Copenhagen Psychosocial Questionnaire, subscale meaning of work (r = .69) and Existential Meaning of Work Scale were examined (subscales r = .17 to r = .37). For the WAMI, correlations with scores on the Brief Calling Scale (subscales r = . 42 to r = .54) and Scale for Work Orientation (subscales r = .49 to r = .61) were examined. As Carlson and Herdman (2012) suggested values of r = .70 or higher for acceptable convergent validity, however, the CMWS and the WAMI showed convergent validity correlations below r = .70.

We found that divergent validity was only examined for the CMWS; its correlation with scores on the Meaning in Life Questionnaire (a non-work scale, r = .19), Neoclassical Calling Scale (r = .56), Work Engagement Scale (r = .71), Work Values Scales (r = .34), and Work Preference Inventory (r = .34) were examined. Values of r = 0.30 or lower can be considered as acceptable for divergent validity, and r = .30 or lower is viewed as a weak correlation (Hinkle, Wiersma & Jurs, 2003). The CMWS only showed a correlation below r =

.30 with the Meaning in Life questionnaire; correlations with the others scales where higher than r = .30.

All instruments we reviewed had CFI values of 0.90 or higher. The CMWS and the MWS had an RMSEA value of 0.59 or less. The WAMI had an RMSEA value of 0.09. The MIWS had a value of 0.08. Hu and Bentler (1999) consider CFI values of 0.90 or higher and RMSEA values of 0.06 or less acceptable for results of confirmatory factor analyses. Only two instruments, therefore, the CMWS and the MWS, met the criterion of having a CFI value of 0.90 or higher and an RMSEA value of 0.06 or less. The other instruments met the level of acceptance of CFI value but not RMSEA value. See Table 4 for an overview of the methodological quality findings.

Discussion

At the beginning of this article, we argued that the conceptual ambiguity surrounding the construct of meaningful work has also made its mark on the scales that are available to measure the construct. We found that recent studies still use meaningful work scales that measure meaningful work as a one-dimensional concept or measure concepts that are similar to yet different from meaningful work (e.g., Scroggins, 2008, Bunderson & Thompson, 2009; Pradhan & Pradhan, 2016).

The recent use of one-dimensional scales can perhaps be explained by the fact that empirical studies often do not use definitions of meaningful work that are based on an underling theoretical framework. Without consensus in the field on how to measure meaningful work, any available scale is used as an ad hoc measure without being driven by a comprehensive definition or underling theoretical framework. Rosso et al. (2010) observe, furthermore, that meaningful work is frequently approached as a one-dimensional construct, although recent research suggests it is a multidimensional construct. As a result, available scales of meaningful work have nonspecific items such as “the work that I do is meaningful to me” (Spreitzer, 1995); “I experience joy in my work” (Ashmos & Dutton, 2000); “the work I do on this job is very important to me” (May, Gilson & Harter, 2004); “Life is most worth living when I am absorbed in work” (Fairlie & Flatt, 2004); and “my job is very significant and important in the broader scheme of things” (Rafferty & Restubog, 2011).

Another scale frequently used to measure meaningful work is the meaningfulness subscale of the Job Diagnostic Survey or JDS (Hackman & Oldham, 1975). The JDS uses two pairs of items referring to the respondents’ personal feelings and their perceptions of their co-workers’ feelings about whether job tasks seem useless and whether their work is meaningful.

Table 4 *Ratings for each of the scales included in the review (X if criteria met and 0 if not)*

Title and author	**Study sample 250 or more**	**Convergent r = .70 or higher**	**Discriminant r = .30 or lower**	**CFI value of 0.90 or higher**	**RMSEA value of 0.06 or less**	**Reliability scores above 0.7**
Comprehensive Meaningful Work Scale (CMWS) Lips-Wiersma & Wright (2012)	X	0	X/0	X	X	X
Work And Meaning Inventory (WAMI) Steger et al. (2012)	X	0	0	X	0	X
Meaningful Work Scale (MWS) Bendassolli et al. (2015)	X	0	0	X	X	X
Meaning In Work Scale (MIWS) Lee (2015)	0	0	0	X	0	X

Although most of these scales have acceptable reliabilities, the non-specific items raise the question what they actually measure (Steger et al., 2012). The items “the work that I do is meaningful to me” of Spreitzer (1995); “I experience joy in my work” (Ashmos & Dutton, 2000); and “the work I do on this job is very important to me” (May et al., 2004), for example, can be interpreted as work being important rather than work being a reason for being. The other two items of Fairlie and Flatt (2004) and Rafferty and Restubog (2011) are more related to the role of work in one’s life rather than what is meaningful in work. The simplicity of the scales limits their explanatory potential. These scales, therefore, are not precise enough to adequately distinguish antecedents to and outcomes from multiple

dimensions contributing to meaningful work or to understand their complex interplay (Lips-Wiersma & Wright, 2012; Steger et al., 2012).

None of the reviewed scales are completely aligned with the full proposed definition. However, we found that the WAMI aligns with experience of meaningful work, and the CMWS aligns with features of work and individual contributing to the fit between the individual and work. These findings suggest that a scale can be developed that fully aligns with our proposed definition of meaningful work by integrating the above- mentioned scales.

By assessing the methodological qualities of the scales, we found that none of the scales had good evidence of convergent and divergent validity. However, we found that the WAMI and the CMWS showed values of acceptable model fit. Based on the evaluation of alignment and quality assessment, we argue for using the WAMI for studies aiming to examine the relations between the experience of meaningful work and certain antecedents or outcomes. The WAMI was specifically developed to capture the multidimensional experience of meaningful work. We observed that a number of experimental studies from recent years have used the WAMI (e.g., Allan, Autin, & Duffy, 2016; Tims, Derks, & Bakker, 2016; Tavares, 2016), which is encouraging for the field.

We argue for using the CMWWS for studies aiming to improve our understanding of the way in which personal characteristics, task activities, and organizational practices create meaningful work. The CMW has three additional subscales (Facing Reality, Inspiration, and Balancing Tensions) to capture the dynamic interplay between the dimensions. As such, the CMWS is more suitable than the MWS – which views work as a static rather than a dynamic process – to explain the complex interplay between the dimensions and relations to antecedents and outcomes.

In conclusion, we evaluated existing meaningful work scales in light of our proposed definition and assessed their psychometrics characteristics. We argue for using two scales. In the next section, we will discuss the results, limitations, and implications of both studies together.

General Conclusion and Discussion

Although previous reviews of meaningful work have increased coherence in the disparate literature on meaningful work, this article reveals that the construct of meaningful work is still defined and, hence, measured in suboptimal ways. For the meaningful work research field to mature scientifically, conceptualization and measurement efforts should begin to coalesce rather than diverge. The objectives of this article were to establish an

integrative and comprehensive definition of meaningful work and to evaluate existing meaningful work scales in light of this definition. Therefore, we conducted two literature studies on definitions and scales of meaningful work.

Based on the results of the first literature study we propose the following integrative and comprehensive definition: Meaningful work is the subjective experience of existential significance resulting from the fit between the individual and work. The "subjective experience of existential significance" refers to the process of personally perceiving work as contributing to, or making sense of, one's reason for existence in the world. The "result of the fit" refers to the fulfilment of dimensions – inherent in every human being – through or in work. These dimensions should be defined further by the underlying conceptual framework. Based on the results of the second literature study we have identified two validated scales that align with this definition and have been validated: the WAMI and the CMWS. Using these scales could create greater consistency and integration of results in the field. Therefore, we argue that these two scales should be considered as appropriate scales for the future research in the field regarding paid work. We suggest that the WAMI and the CMWS might be integrated into one scale in order to have a single scale that is fully aligned with the proposed definition.

Limitations of Both Studies

There are two limitations to this article we would like to discuss. The first limitation concerns the subjective categorization of the definitions and the subjective evaluation of alignment with the proposed definition. The categories have been identified and alignment has been evaluated by the first author herself, potentially reflecting a subjective view. However, the categorization and alignment were discussed among the three authors to alleviate this concern.

The second limitation concerns the exclusion of scales that were not validated. Because the focus of this systematic review was on meaningful work scales for which psychometric properties had been reported, studies that used a meaningful work scale but did not report instrument validation or psychometric analysis were not included (e.g., Fairlie & Flett, 2004). Studies that reported validation of meaningful work scales in languages other than English were not included either (e.g., Höge & Schnell, 2012; Morin, 2003). Methodological quality assessment of these scales would be a valuable step in introducing greater coherence into the field of meaningful work.

Avenues for Further Research

In order to enable comparing results and reaching consensus, we urgently call for using a comprehensive definition of meaningful work and corresponding validated meaningful work scales in empirical studies in paid work contexts. We argue that achieving consensus on using existing scales instead of developing new ones will greatly facilitate the development of the field of meaningful work.

In this article, we presented a systematic review of the instruments used to measure meaningful work. We did not conduct validation studies. Although our findings provide some insights into the convergent and divergent validity of meaningful work scales, additional work is needed to understand the validity of these scales more fully.

Furthermore, in this article we viewed work in the context of paid work. Future research should examine the applicability of our findings in the holistic context of work.

CHAPTER 4

Understanding the autonomy-meaningful work relation in nursing: a theoretical framework[6]

Abstract

Within nursing literature, the value and contribution of autonomy to nurse work satisfaction has been consistently demonstrated. Given the current forms of work and today's technology, the scope of freedom a nurse has over and in work has expanded in many different ways. However, although autonomy is viewed as an important antecedent to meaningful work, no formal theory exists that attempts to explain the relations between the various different forms of autonomy and meaningful work. Such a theoretical framework would guide health care organizations to direct resources specifically toward those types of autonomy that are most likely to cultivate the meaningful work and its associated outcomes such as job satisfaction.

To address this important gap, this article introduces a theoretical, empirically testable model of the autonomy-meaningful work relationship that is suitable for the contemporary work environment of nurses. Drawing from research and theory in nursing literature, organizational sciences, and business ethics on autonomy and meaningful work, the model is presented in four parts: the proposed relations between perceived (1) professional autonomy, (2) individual autonomy, (3) group autonomy with core dimensions of meaningful work, and (4) the proposed relations between these three forms of autonomy with the dimensions Inspiration and Facing Reality.

By using a multidimensional meaningful work construct, our model offers finetuned propositions regarding how different types of autonomy influence different dimensions of meaningful work. The model proposes that the three forms of autonomy relate differently to the dimensions of meaningful work. This model can be used as starting point for empirical research on autonomy–meaningful work relations.

[6] This chapter has been published online as: Both-Nwabuwe, J. M.C., Lips-Wiersma, M., Dijkstra, M. T.M., & Beersma, B. (2019). Understanding the autonomy–meaningful work relationship in nursing: A theoretical framework, Nursing Outlook, 1-10. https://doi.org/10.1016/j.outlook.2019.05.008

Within nursing literature, the value and contribution of autonomy to nurse work satisfaction has been consistently demonstrated (Aiken, Clark, Sloane, Lake & Cheney, 2008; Finn, 2001; Lake & Friese, 2006). Given the current forms of work and today's technology, the scope of freedom a nurse has over and in work has expanded in many different ways (Langfred & Rockmann, 2016). Healthcare organizations have been experimenting with different forms of autonomy in a range of practices from personal empowerment to self-managing teams, with ambiguous results. For example, in some healthcare organizations nurses working in self-managing teams indeed reported more motivation and happiness (Weerheim, Van Rossum & Ten Have, 2019), however, in other healthcare organizations nurses working in self-managing teams reported to be more demotivated and unhappy (Skipr, 2018). In practice we have also seen some organisations instigating more self-managed teams whereas others are stepping back from it. More insight into the various forms of autonomy can possible explain these ambiguous work outcomes. Furthermore, this knowledge could guide healthcare organizations to direct resources specifically towards those types of autonomy that are most likely to contribute to work outcomes such as job satisfaction.

Three types of autonomy are distinguished in the contemporary nursing work environment: 1) professional autonomy, 2) individual task-based autonomy, and 3) group task-based autonomy. Regarding professional autonomy, we specifically focus on professional nurse autonomy as nurses are the subject of this particular study. Professional nurse autonomy relates to the scope of practice for which nurses are accountable, for example, acting in emergency situations to save a patient's life, triaging and coordination of care and preventing harm or complications.

Whereas professional autonomy refers to the freedom to act in accordance with one's professional knowledge, individual and group task-based autonomy refer to the freedom to control the work situation, such as pace of the work, work scheduling or time spend to a work activity. Individual and group task-based autonomy require organizational knowledge and skills, whereas professional autonomy requires subject matter knowledge and subject matter skills (Kramer, Maguire & Schmalenberg, 2006). These different forms of autonomy, while related to each other, have unique predictive validity on various outcome measures such as job satisfaction (Humphrey, Nahrgang & Morgeson, 2007).

The contribution of autonomy to nurse work satisfaction is argued to occur when work is experienced as meaningful (Humphrey et al., 2007). Meaningful work is the subjective experience of existential significance of work (Lips-Wiersma & Wright, 2012). While the meaningful work literature has modelled and empirically confirmed that autonomy is an

antecedent of meaningful work (Bailey & Madden, 2017; Bowie, 1998; Fried & Ferris, 1987; Hackman & Oldham, 1976; Humphrey et al., 2007; Hodson, 2001; Isaksen, 2000; Michaelson, 2005; Michaelson, Pratt, Grant & Dunn, 2014; Schwartz, 1982) none of this work makes a distinction between the three different forms of autonomy. It is therefore not clear if forms of autonomy differ in their importance for meaningful work and if so, which form of autonomy is most significant for cultivating meaningful work. Furthermore, meaningful work has also been found to be a multidimensional construct (Lips-Wiersma & Morris, 2009; Morgeson & Humprey 2006, See Chapter 3). The implications of this multi-dimensionality have not been studied in any depth. However, it is increasingly recognized that a combination of multiple elements might make up the meaningful work experience (See Chapter 3). For example, Pratt, Pradies and Lepisto (2013) refer to meaningful work as composed of craftsmanship (using skill and expertise); doing good (serving beneficiaries) and kinship (the quality of relations one experiences or creates in one's work). At the same time, the few studies currently available show that antecedents such as responsible leadership are positively related to the meaningful work dimension of Unity with Others but not to the dimension of Integrity with Self. Thus, the scarce research that has compared the relative influence of antecedents on multiple dimensions of meaningful work has indeed shown that the different dimensions of meaningful work were impacted differently by different antecedents, emphasizing the importance of exploring meaningful work as a multi-dimensional construct (Lips-Wiersma et al., 2018).

The recognition of meaningful work as a multidimensional construct, and dimensions being differently influenced by various antecedents is not yet reflected in the measures used to assess meaningful work. Recent reviews show that Spreizer's (1995) three item scale is the most widely used scale in the meaningful work literature (Bailey et al., 2019; Wang & Xu, 2019). This scale does not recognise the multi-dimensionality of meaningful work since the three items in the scale are: "my job activities are personally meaningful to me"; "the work I do is very important to me" and "the work I do is meaningful to me". The wide range of possible interpretations of what is important, meaningful or significant that these items allow, hinders a more nuanced analysis of the mechanisms that cultivate meaningful work (Lips-Wiersma et al., 2018).

The fact that there are multiple types of autonomy, and that meaningful work is a multidimensional construct, could mean that some types of autonomy relate to some dimensions of meaningful work, but not, or even negatively, to other dimensions. However, currently, no formal theory exists that attempts to explain the relations between the various

forms of autonomy in the contemporary nursing work environment and the different dimensions of meaningful work. Developing a sound theoretical framework that specifies which types of autonomy are most likely to increase multiple dimensions of meaningful work could contribute to cultivating the meaningful work experience, by guiding healthcare organizations to direct resources specifically towards those types of autonomy that are most likely to contribute to nurses experience of meaningful work (and its associated positive work outcomes such as job satisfaction). At a time where different healthcare organisations seem to be unsure about how to best meet the nurses' need for autonomy a framework also helps to think through the different practical options.

In this article we therefore formulate a theoretical framework of autonomy – meaningful work relations in nursing. The model in this article is unique in depicting how three forms of autonomy, present in the contemporary nursing work environment, are associated with different dimensions of meaningful work. This offers an integrative perspective intended to paint a more complete picture on how autonomy leads to meaningful work. We begin by conceptualization the meaningful work construct. Next, we propose a model that explains how individual, group and professional autonomy are related to different dimensions of meaningful work and can serve as a basis for further empirical exploration of these relations.

Conceptualization of Meaningful Work

Although the current consensus within the literature is that work becomes meaningful when multiple dimensions are fulfilled, there is, however, no consensus on what these dimensions of meaningful work are. A recent literature review on meaningful work based on 72 scientific articles in which meaningful work is regarded as a multidimensional construct (See Chapter 3) showed that there are currently as much as ten different multidimensional models that identify dimensions of meaningful work. There is some overlap in the dimensions within these models, for example, "pursuing a higher goal or making contributions to others or the world" and "authenticity" are reflected in multiple models. The map of meaning is the only model that mentions the complex dynamics between the different dimensions of meaningful work. This offers the most refined insight into how the experience of meaningful work can be created under the influence of a combination of factors in the work or an organization (Lips-Wiersma et al., 2018; See Chapter 3). We, therefore, use the map of meaning to conceptualize meaningful work, as it provides a means to explain how organizational practices, such as autonomy, cultivate meaningful work in a dynamic interplay

of multiple dimensions. The map of meaning identifies seven dimensions of meaningful work, divided into three components: 1) core dimensions, 2) Balancing Tensions between the core dimensions and 3) Inspiration and Facing Reality (See Figure 1).

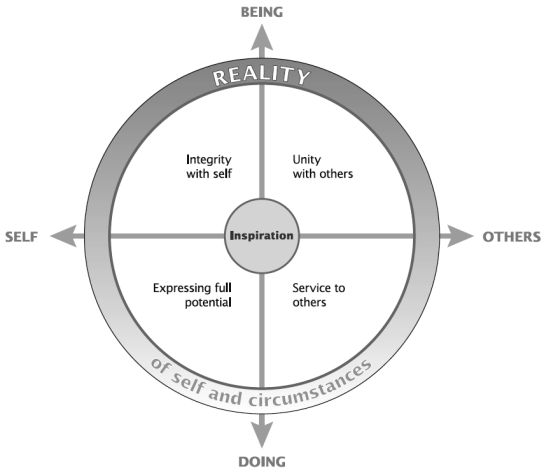

Figure 1. Map of meaning (Lips-Wiersma & Wright, 2012).

The four core dimensions of meaningful work are Integrity with Self, Unity with Others, Service to Others, and Expressing Full Potential (see Figure 1). The dimension Integrity with Self refers to being true to oneself, moral development and being authentic (Lips-Wiersma & Wright, 2012). The dimension Expressing Full Potential refers to meaningfulness that comes from expressing one's talents, displaying creativity, and experiencing a sense of achievement. The dimension Unity with Others refers to the meaningfulness experienced in working together with other people when mutual support, a sense of belonging and a sense of shared values is experienced. The dimension Service to Others refers to the meaningfulness one draws from a sense of contribution to the well-being of others or to the common good.

The second component of the model (i.e. Balancing Tensions) refers to the need to, over time, experience and balance all dimensions in order to experience the maximum of meaningful work. The second component is depicted in Figure 1 along the x and y axis of the model. The x axis depicts the tension between self and others. The y axis depicts the tension between being and doing.

The third component comprises the dimensions Inspiration and Facing Reality. It refers to work that is hopeful and aligned to some form of ideal but at the same time to work that is grounded in reality (rather than being utopian). Employees experience their work as more significant when multiple dimensions of meaning are experienced and less meaningful when this is not the case. The third component is depicted in Figure 1 in the inner and outer circle of the model (Lips-Wiersma & Wright, 2012).

Theoretical Propositions

With this conceptualization of meaningful work in mind, we now turn to discussing the key propositions concerning relations between the three forms of autonomy and the seven dimensions of meaningful work. In this theory we focus on individual perceptions of the three forms of autonomy in the work; thus, the freedom, independence and discretion perceived by those performing the work. The propositions are presented in four parts: the proposed relations between perceived 1) professional autonomy, 2) individual autonomy, 3) group autonomy with core dimensions of meaningful work and 4) the proposed relations between these three forms of autonomy with the dimensions Inspiration and Facing Reality. First we will state the proposition, followed by the theoretical arguments for this proposition.

Perceived professional autonomy and meaningful work

Professional nurse autonomy is defined as the perceived freedom to make independent decisions that exceed standard nursing practice and are in the best interest of the patient. Freedom means without fear, not unduly inhibited by bureaucratic rules, and not having to get consent, orders, or permission first (Kramer & Schmalenberg, 2004). There is as yet no theory of professional autonomy and its relation to meaningful work (Lee, 2015). Building on normative ethics and nursing literature we propose:

Proposition 1. Perceived professional autonomy is positively related to the core dimensions of Integrity with Self, Expressing Full Potential, Unity with Others, and service to Others and also with the dimension Balancing Tensions.

Integrity with Self. From the nursing literature professional autonomy seems to be negatively related to moral distress and positively related to a feeling of being true to oneself. Papathanassoglou, Karanikola, Kalafati, Giannakopoulou, Lemonidou and Albarran (2012) found – in their study on levels of autonomy among European critical care nurses and potential associations of autonomy with nurse-physician collaboration, moral distress, and nurses' characteristics - an inverse relation between professional autonomy and moral distress. Moral distress is a painful feeling that occurs when, for example, because of institutional

constraints, the nurse cannot do what he or she perceives to be what is needed. Limited autonomy may inhibit nurses' ability to apply personal and professional moral reasoning, a situation that may lead to moral distress (Papathanassoglou et al., 2012). Sarkoohijabalbarezi, Ghodousi and Davaridolatabadi (2017) found, however, - in a study on professional autonomy and moral distress among nurses working in children's units and paediatric intensive care wards – that there was a significant positive relation between professional autonomy and moral distress. Sarkoohijabalbarezi et al. (2017) argue that it is possible that when professional autonomy is increased, without adequate support from relevant authorities, moral distress occurs. If professional autonomy is not supported by authorities, however, it may be argued that professionals do not really have professional autonomy. Professional autonomy is the freedom to act on one's knowledge base without the need for permission of some authority. Professional autonomy, which includes using one's own judgement, impacts the extent to which one experiences Integrity with Self as a certain measure of autonomy is required to be able to be responsible for one's actions. As such, we expect that professional autonomy will be positively related to Integrity with Self.

Expressing Full Potential. As described above, having professional autonomy means having the freedom to act on one's own professional expertise. Professional autonomy provides the opportunity for nurses to fully use their skill set. Professional autonomy is therefore likely to contribute to Expressing Full Potential and will be positively related to Expressing Full Potential.

Unity with Others. Several studies have found a positive relation between higher levels of professional nurse autonomy and higher levels of team work (i.e. nurses' working relationships with others) (e.g. Poghosyan & Liu 2016; Rafferty, Ball & Aiken, 2001). Team working may be most effective when the staff involved have professional autonomy as they feel their practice is not restricted. Teamwork is improved by professional autonomy because individual team members can make their own professional expert contribution to the team and are therefore more engaged in teamwork (Poghosyan & Liu, 2016). The more team members are aware of each other's contribution to the teamwork, in this case patient care, the more they experience that when working together more can be achieved. Through working together, a sense of belonging is experienced, as such meaningfulness is experienced through Unity with Others. Thus, perceived professional autonomy is likely to be positively related to Unity with Others.

Service to Others. Although empirical evidence demonstrating the relation between professional nurse autonomy and patient outcomes is limited, a recent study by Rao, Kumar,

and McHugh (2017) - on the relation between nurse autonomy and 30-day mortality and failure to rescue in a hospitalized surgical population - show that there is positive relation between professional nurse autonomy and quality of patient care. As quality of patient care improves, the experience of the impact of the work increase. In line with these findings, we propose that perceived professional autonomy will be positively related to Service to Others.

Balancing Tensions. As stated above, we expect that professional autonomy has positive relations with all four core dimensions of meaningful work. As such, all the dimensions are experienced and there is balance between self and others and being and doing. Therefore, we expect that professional autonomy has a positive relation with Balancing Tensions as well.

Perceived individual autonomy and meaningful work

Individual task-based autonomy is the perceived "freedom, independence and discretion in scheduling the work and in determining the procedures to be used in carrying out the individual task" (Hackman & Oldham, 1976, p. 258). Practically, individual task-based autonomy concerns decision authority of nurses to plan their work, decide when to take a break, and having the freedom to take a variety of approaches to the different tasks. Building on organization sciences, normative ethics and nursing literature we propose the following relations for individual autonomy:

Proposition 2. Perceived individual task-based autonomy is positively related to the core dimensions of Integrity with Self, Expressing Full Potential and Service to Others.

Integrity with Self. As nurses have freedom in scheduling the work and decision authority over the procedures used, they have the opportunity to choose certain modes of acting over other ones. When these modes of acting are in accordance with their interests and values they will experience self-concordance (i.e. the degree to which people believe they are behaving consistently with their interests and values; Rosso et al., 2010). The experience of self-concordance is thought to promote feelings of deep and authentic connection to oneself (Bono & Judge, 2003). As such, it is likely that perceived individual task-based autonomy will be positively related to the experience of Integrity with Self.

Expressing Full Potential. Individual task-based autonomy is based on the principle of allowing greater control over implementation of the work (Langfred & Rockmann, 2016). From a normative ethics perspective, granting autonomy to employees means organizing the work so that people can exercise skills in occupational life. When work supports autonomous agency the work itself permits opportunities for carrying out projects, exercising forethought and judgment, making decisions, taking responsibilities, planning methods and so forth

(Veltman, 2016, p. 82). De Groot, Maurits and Francke (2018) found, in their study on the attractiveness of working in home care, that work autonomy - in the sense of being able to schedule the activities and set priorities - made their work positively challenging because such autonomy requires making decisions and planning (De Groot et al., 2018). As individual autonomy provides the opportunity to take responsibility for scheduling the work and determining the best procedures to be used in carrying out the work to the best of one's ability, it promotes creativity, maximum use of talents and a sense of achievement of a job well done. As such, we expect perceived individual task-based autonomy to be positively related to Expressing Full Potential.

Service to Others. From a normative ethics perspective, work can provide a sense of purposefulness as it is through work a person can have an impact on the lives and needs of others (Veltman, 2016, p.7). Through individual task based autonomy nurses are able to match tasks to the specific needs of patients, rather than, for example, applying a specific procedure at a specific time, because protocol dictates so. Because the nurses are therefore likely to have more impact on the client, individual autonomy is likely positively related to Service to Others.

Despite all the positive relations of individual autonomy with core dimensions of the map of meaning, the concept of autonomy is entangled with the concept of independence (Veltman, 2016). This association between perceived individual task based autonomy and individualism or focus on oneself lead us to propose:

Proposition 3. Perceived individual autonomy is negatively related to the core dimension of Unity with Others and to the component of Balancing Tensions.

Unity with Others. In his study on the relation between individual and group autonomy and group cohesiveness, Langfred (2000) found that individual autonomy negatively influences group cohesiveness. Individual autonomy focuses the attention on the individual, thereby decreasing perceived group identity and membership (Langfred, 2000). Thus, individual autonomy is likely to be negatively related to the experience of Unity with Others.

Balancing Tensions. As high individual autonomy induces employees to focus on themselves, such focus on self may not necessarily be balanced with a focus on the needs of the group and this creates a tension between meeting the needs of individual team members (i.e. self) as well as those of the group (i.e. others). Thus, individual autonomy will also likely be negatively related to Balancing Tensions between the self- and other- directed dimensions of meaningful work.

Perceived Group Autonomy and meaningful work

Whereas individual autonomy refers to the individual freedom to control the work situation, group autonomy refers to the freedom of the group to control the work situation. Group autonomy occurs when task-based autonomy is granted to work groups. For example, organizations can provide their workers group task-based autonomy through the means of autonomous work groups or self-managing teams (Langfred & Rockmann, 2016). Group task-based autonomy does not necessarily mean individual task-based autonomy. As Barker (1993) illustrated, some self-managing work groups can actually end up being very restrictive and even coercive in terms of the control they exert over individual workers. Thus, an organization granting group task-based autonomy does not necessarily mean that individuals will experience individual task-based autonomy (Langfred & Rockmann, 2016).

Group task-based autonomy is the extent to which the group has the freedom, independence and discretion in scheduling the work and in determining the procedures to be used in carrying out team tasks (Van Mierlo, Rutte, Vermunt, Kompier & Doorewaard, 2006). Perceived group task-based autonomy, which refers to group task-based autonomy *perceived* by group members, is therefore defined as the freedom, independence and discretion of the team *perceived* by group members in scheduling the work and in determining the procedures to be used in carrying out team tasks (Van Mierlo et al., 2006). Building on organization sciences and normative ethics we propose the following relations for perceived group autonomy:

Proposition 4. Perceived group autonomy is positively related to the core dimensions of Expressing Full Potential and Unity with Others.

Expressing Full Potential. Group autonomy provides its team members the opportunity to take on extra responsibilities (Van Mierlo et al., 2006). The opportunity to take on extra responsibilities increases the opportunity for task variety. Task variety challenges the skills and abilities of workers (Hackman & Oldham, 1976). If work provides opportunities for the development of job specific skills as well as general problem-solving skills, social skills and decision-making skills it contributes to people flourishing even outside of work (Veltman, 2016, p. 5). Weerheim et al. (2019), in their study on implementation of self-managing nursing teams, found that in self-managing nursing teams, nurses have several learning experiences in solving problems, decision making and communication. As a result, perceived group autonomy may be positively related to Expressing Full Potential.

Unity with Others. Group autonomy may provide team members the opportunity to belong to a collective. Langfred (2000), in the earlier mentioned study on the relation between

individual and group autonomy and group cohesiveness, found that group autonomy positively relates to group cohesiveness. Group autonomy is likely to focus the attention of group members on the group as a unit, thereby increasing perceived group identity and membership (Langfred, 2000). This is also found by Weerheim et al. (2019), who reported that within self-managing nursing teams, perceived group identification is found. Thus, we expect that perceived group autonomy will be positively related to Unity with Others.

Despite all the proposed positive relations of perceived group autonomy with the core dimensions of the map of meaning, negative effects of group autonomy have been reported mainly where the needs of the individual are in tension with those of the group. We therefore propose:

Proposition 5. Perceived group autonomy is negatively related to the core dimensions of Integrity with Self and to the component of Balancing Tensions.

Integrity with Self. Research has shown that autonomous work teams develop their own system of norms and rules, and peers within the team enforce the coercive control system on each other (Barker, 1993; Wright & Barker, 2000). Team members may feel the pressure to conform to this system, thereby violating their feeling of authenticity and reducing their moral sensibility for the work. Such forms of normative control would, from an existential perspective, destroy rather than enhance meaningful work. Even if they did make the person feel good about their work (through for example having a sense of belonging), they would not be free because one's identity would be managed by others (Bailey, Madden, Alfes, Shantz, & Soane, 2017). Perceived group autonomy therefore could be negatively related to Integrity with Self.

Balancing Tensions. Minssen (1994) proposes on the basis of case material that individual workload may increase as a result of increasing demands (more tasks and more responsibilities) due to group autonomy. Weerheim et al. (2019) has reported that increased workload is experienced after implementation of self-managing nursing teams due to the increase in supporting tasks that self-management entails. As high group autonomy focuses on the group, there is a tension between meeting the needs of the group (i.e. others) and meeting the needs of individual team members (i.e. self). Thus, perceived group autonomy will also likely be negatively related to Balancing Tensions between the needs of self and those of others.

Autonomy and Inspiration and Facing Reality

Inspiration and Facing Reality are related to each other, because for one to experience meaningfulness one needs to combine the inspiration of a positive vision of the ultimate purpose of one's work with the acceptance of the reality that a meaningful life is never lived under perfect conditions. These conditions can therefore not be ignored if the individual wants to experience meaningfulness. It is measured by items such as "we recognise that life is messy and that's ok" (Lips-Wiersma &Wright, 2012). Based on existing literature we expect all three forms of autonomy to be positively related to Inspiration and Facing Reality. We therefore propose:

Proposition 6. Perceived professional autonomy, individual autonomy and group autonomy are positively related to Inspiration.

Proposition 7. Perceived professional autonomy, individual autonomy and group autonomy are positively related to Facing Reality.

Inspiration. Inspiration within the context of healthcare, the context of this research, is related to healthcare organizations' reason of existence, as expressed in their organizational vision, which is essentially about the delivery of quality care to patients. As such, in order for Inspiration to be experienced, there needs to be a clear linkage between the work nurses do and the vision of the organization. If certain organizational meanings are, however, forced on the individual, for example if everyone has to adopt a meaning of the organization being "a happy family" (Casey, 1999) this results in existential acting - which leads to exhaustion, depersonalization and intent to quit rather than meaningful work (Bailey et al., 2017). In this context, Bailey et al. (2017, p. 419) refer to "the dark side of managing meaningfulness" where meaning is used instrumentally to enhance motivation, performance and commitment. Autonomy is the opposite of management of meaningfulness as it provides individuals the freedom to choose for themselves to connect to the organization's vision. Therefore, we expect that all the three forms of autonomy have a positive relation with Inspiration.

Facing Reality. Facing Reality means coming to terms with an imperfect self in an imperfect world (Lips-Wiersma & Morris, 2009). Rather than pretending that one can completely live up to one's Inspiration, work is experienced as more meaningful when one places this experience in the context of one's own reality which usually falls short of the ideal (in terms of having a lack of time, resources, personal skills or virtues such as patience). In organizations this often translates into having conversations of doing the best we can with the constraints we have rather than talking or planning as if such constraints to do not exist. Granting autonomy means that employees have the freedom to effectively manage their own

activities and environment and its shortcomings. It allows the employees to freely question whether results can be reached with the available resources. Autonomy within the nursing context means that nurses themselves can discuss and make decisions about how to use available resources to provide good quality of care. For example, they can decide, when they are short of staff, not to admit more patients to keep the quality of care high instead of being directed by those in formal positions of authority. Meaning is lost when those in formal positions of authority claim that perfect results can be reached when employees perceive that the resources, or means to achieve this, are simply not available. The very nature of autonomy is that one does not depend on a leader, but rather is able to adjust goals in light of reality. We therefore expect that all three forms of autonomy will lead to the ability of employees to face, and work with, reality and all its shortcomings. Figure 2 shows the theoretical model with all the above stated propositions.

Research agenda and implications for science and practice

Our major thesis in this paper is that at present three types of autonomy are enacted. We propose that these different types of autonomy, while related to each other, uniquely influence different dimensions of meaningful work. The theoretical framework provided in this article explains the autonomy – meaningful work relation and offers healthcare organizations a roadmap in granting specific forms of autonomy to cultivate the meaningful work experience (and its associated positive work outcomes such as job satisfaction). The theoretical framework is informed by a substantial body of existing literature that until this point has accumulated within different scientific fields (i.e. nursing literature, organization science and business ethics) without being guided by an overarching theoretical framework.

Having proposed a theoretical framework on autonomy-meaningful work relations – the focus of this article – an obvious next step is to empirically test the seven propositions, because they are currently supported by varying levels of existing evidence. The most important potential contribution of the model is to inform research that tests these propositions and, based on this research, adapt the model accordingly.

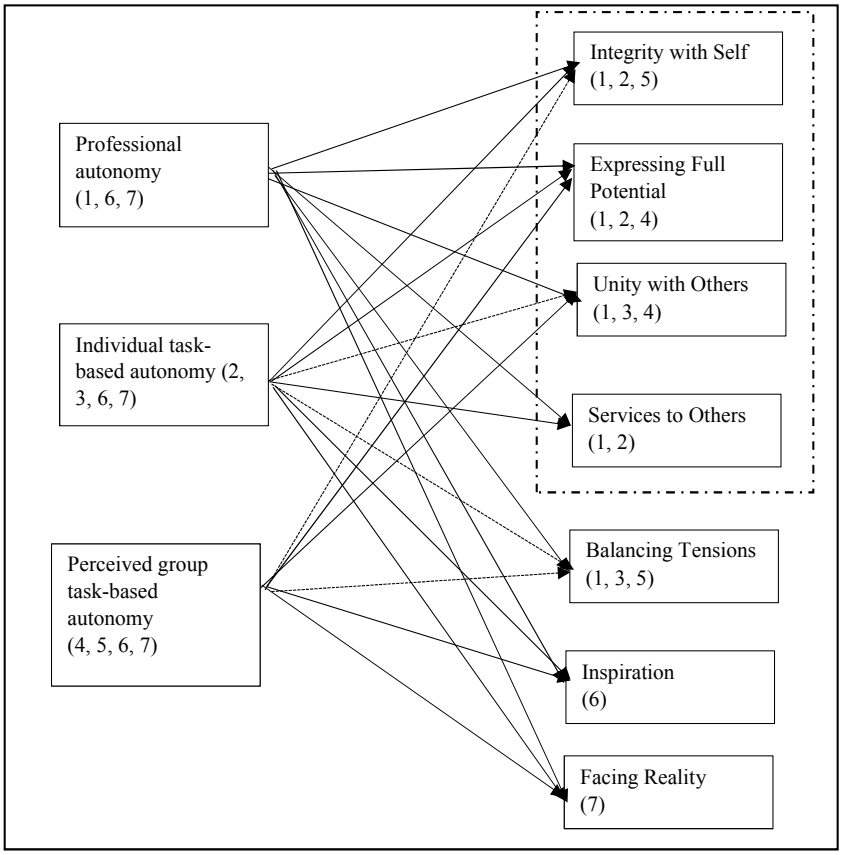

Figure 2: Theoretical model. Notes: dashed lines indicate proposed negative associations. The numbers refer to propositions.

Besides contributing to the scientific literature, the autonomy-meaningful work model is intended to inform policymakers and managers working within the healthcare field. The model indicates that, while autonomous teamwork seems to be gaining popularity and is generally assumed to increase workers' meaningfulness in work, healthcare organizations need to prioritize professional autonomy over individual and group autonomy. Professional autonomy would relate to the whole meaningful work experience (as experienced through seven different dimensions). Thus to achieve meaningful work, it is very important to put practices in place where individuals feel free to take risks, where they can get on with the job rather than getting permission for every single action, where they can use their own

professional judgement and where they have to deal with bureaucratic interference as little as possible. This practical recommendations based on the model should be considered with caution for two reasons. First, as stated earlier, empirical testing of the model is needed to examine support for the model's propositions. Ideally, empirical studies that test the model should examine different nursing work environments (e.g. hospitals, community care, home care). Second, not all nurses aim to find meaningful work. Although more employees are looking for meaning in their work, there will also be employees who will not (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997). These employees regard their work just as a job, and research should examine how different forms of autonomy affect employees who are not interested in meaningfulness.

Concluding remarks

Given the current forms of work and today's technology, the scope of freedom a nurse has over and in work has expanded in many different ways. As a result, organizations can grant different types of autonomy to their nurses. Healthcare organizations have been experimenting with different forms of autonomy in a range of practices from personal empowerment to self-managing teams. A theoretical framework that specifies which types of autonomy are related to which dimensions of meaningful work would help healthcare organizations to prioritize autonomy practices that cultivate meaningful work. Our model suggests that healthcare organizations should devote energy and resources to enhance professional autonomy to affect multiple dimensions of meaningful work through which workers can experience meaningful work and its associated positive work outcomes.

CHAPTER 5

Nurses' experience of individual, group-based and professional autonomy[7]

Abstract

Autonomy and meaningful work have both been positively related to work satisfaction for nurses, however, the relation between the various forms of autonomy and meaningful work is unclear. Both autonomy and meaningful work are complex concepts, and it is important to understand how different forms of autonomy, such as individual, professional, and perceived group-based autonomy, influence different dimensions of meaningful work such as Expressing Full Potential and Service to Others. It is critical to fully understand the autonomy/meaningful work relation, because this knowledge can serve as a basis for developing effective and efficient interventions. The purpose of this paper is to better understand the relation between autonomy and meaningful work by examining the autonomy– meaningful work framework.

Multilevel analyses using data from 510 nurses nested within four organizational divisions from three health care organizations were conducted. The Comprehensive Meaningful Works Scale was used to measure multiple dimensions of meaningful work.

Our study demonstrated that individual and professional autonomy have significant positive relations with six of the seven meaningful work dimensions. Perceived group autonomy has significant positive, though weak, relations with two dimensions of meaningful work. Our results show that different forms of autonomy relate differently to the dimensions of meaningful work and as such demonstrate that the relation between autonomy and meaningful work is not a simple input–output relation. Our results show partial support for the autonomy–meaningful work framework. Health care organizations that want to cultivate meaningful work should not automatically implement autonomous teams but rather understand that a combination of autonomy practices could lead to meaningful work.

[7] This chapter has been published as: Both-Nwabuwe, J. M.C., Lips-Wiersma, M., Dijkstra, M.T.M., & Beersma, B. (2019a). Nurses' experience of individual, group-based, and professional autonomy. Nursing Outlook, 67(6), 734-746.

Within nursing literature, the value and contribution of autonomy to nurse satisfaction has been consistently demonstrated (Aiken, Clark, Sloane, Lake & Cheney, 2008; Lake & Friese, 2006) and therefore, autonomy tends to be viewed as an important antecedent to meaningful work (Chalofsky & Krishna, 2009; Rosso et al., 2010; Bowie, 1998; See Chapter 4), which is the subjective experience of the existential significance of work[8] (Lips-Wiersma & Morris, 2009). However, currently healthcare organizations have been experimenting with different forms of autonomy in a range of practices from personal empowerment to self-managing teams, and it is unclear how these different forms of autonomy each contribute to meaningful work in their own unique ways. In order to improve understanding of how different forms of autonomy are related to meaningful work, in Chapter 4 we proposed a theoretical framework for the autonomy-meaningful work relation. The model is specifically intended to capture the autonomy–meaningful work relation from a multidimensional perspective. In doing so, the model offers a fine-tuned understanding of which dimensions of meaningful work are influenced by which types of autonomy. However, in order to be able to guide healthcare organizations to direct resources specifically towards those types of autonomy that are most likely to cultivate the meaningful work experience (and its associated positive work outcomes such as job satisfaction), the theoretical framework requires empirical testing, and this was the goal of the current study. Specifically, we test the autonomy–meaningful work framework (See Chapter 4), using data from nurses in home care and nursing homes.

Theoretical Framework

The autonomy-meaningful work framework (See Chapter 4) contains seven propositions that seek to explain how perceived individual, group and professional autonomy, three forms of autonomy that can be distinguished in the current nursing work environment, each uniquely relate to different dimensions of meaningful work. Individual autonomy refers to the individual freedom to control the work situation, such as pace of the work, work scheduling or time spend to a work activity (Hackman & Oldham, 1976), whereas group autonomy refers to the group's freedom to control the work situation (Karhatsu, Ikonen, Kettunen, Fagerholm, & Abrahamsson, 2010). Professional autonomy refers to the freedom to act in accordance with one's professional knowledge (Kramer, Maguire & Schmalenberg,

[8] "The subjective experience of existential significance" refers to the process of personally perceiving work as contributing to, or making sense of, one's reason for existence in the world. Work, in this definition, is understood as paid tasks and activities on an occupational basis that are lawful and morally good as regards to their nature (See Chapter 3).

2006). The autonomy-meaningful work framework views meaningful work as a multidimensional construct. This means multiple dimensions of meaningful work have to be fulfilled to experience meaningful work. This distinguishes the framework from the Job Characteristics Theory (Hackman & Oldham, 1976), which views autonomy and meaningful work as one-dimensional constructs.

In Chapter 4 we used the map of meaning to conceptualize meaningful work, as it provides a means to explain how organizational practices, such as autonomy, create meaningful work in a dynamic interplay of multiple dimensions. The map of meaning identifies seven dimensions of meaningful work, divided into three components: 1) core dimensions, 2) Balancing Tensions and 3) Inspiration-Facing Reality (See Figure 1). The four core dimensions of meaningful work, the pathways through which individuals experience meaningfulness, are depicted in the centre of Figure 1. The four core dimensions are Integrity with Self, Unity with Others, Service to Others, and Expressing Full Potential. The second component of the model (i.e. Balancing Tensions) refers to the need to, over time, experience and balance all dimensions in order to experience the maximum of meaningful work. The second component is depicted in Figure 1 along the x and y axis of the model. The x axis depicts the tension between self and others. The y axis depicts the tension between being and doing. The third component Inspiration and Facing Reality refers to work that is hopeful and aligned to some form of ideal but also work that is grounded in reality (rather than being utopian).The third component is depicted in Figure 1 in the inner and outer circle of the model (Lips-Wiersma & Wright, 2012).

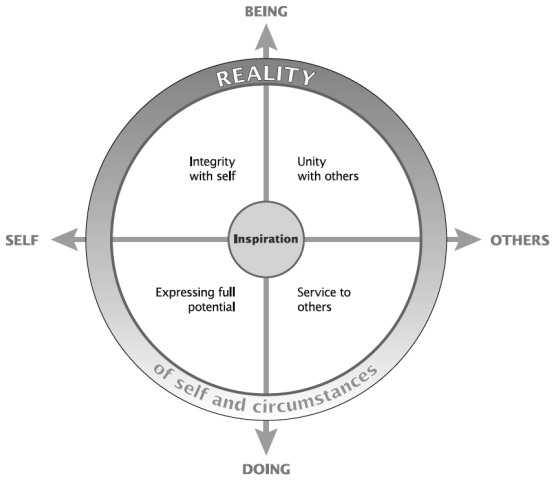

Figure 1. Map of meaning (Lips-Wiersma and Wright, 2012).

Theoretical propositions

Individual autonomy and meaningful work

When nurses have freedom in scheduling the work and decision authority over the procedures used (i.e. individual autonomy), they have the opportunity to choose certain modes of acting over other ones. When these modes of acting are in according to their interests and values they will experience self-concordance (i.e. the degree to which people believe they are behaving consistently with their interests and values; Rosso et al., 2010). Furthermore, as nurses have the freedom to schedule activities and set priorities, it promotes creativity and use of talents. In addition, as nurses have the freedom to schedule work and set priorities, they can match tasks to the specific needs of patients. The theoretical framework of autonomy-meaningful work posits that, therefore, when nurses experience freedom in scheduling the work and decision authority over procedures used, the dimensions Integrity with Self, Expressing Full Potential and Service to Others are fulfilled. In the current study we hypothesised, accordingly, that individual task-based autonomy is positively related to Integrity with Self, Expressing Full Potential and Service to Others (*hypothesis 1*).

Individual autonomy is associated with individualism and focus on oneself (Veltman, 2016). As high individual autonomy induces employees to focus on themselves, such focus on self may not necessarily be balanced with a focus on the needs of the group and this creates a tension between meeting the needs of individual team members (i.e. self) as well as those of the group (i.e. others). Accordingly, the autonomy-meaningful work framework proposes that individual freedom to schedule work and decide on procedure used induces nurses to focus on themselves rather than the group. Accordingly, in the current study, we hypothesize that individual autonomy is negatively related to Unity with Others and Balancing Tensions (*hypothesis 2*).

Perceived Group Autonomy and meaningful work

Group autonomy provides its team members the opportunity to take on extra responsibilities (Van Mierlo et al., 2006). In addition, group autonomy provides team members the opportunity to belong to a collective (Langfred, 2000). The theoretical framework of autonomy-meaningful work posits, therefore, that the freedom of the group to schedule work and decide on procedures used, fulfil the dimensions Expressing Full Potential and Unity with Others. Accordingly, we hypothesize that perceived group autonomy is positively related to Expressing Full Potential and Unity with Others (*hypothesis 3*). Studies have, however, also reported negative effects of group autonomy mainly where the needs of the individual are in tension with those of the group (Barker, 1993; Minssen, 1994; Wright &

Barker, 2000). We therefore hypothesize that perceived group autonomy is negatively related to Integrity with Self and Balancing Tensions *(hypothesis 4)*.

Professional autonomy and meaningful work

Professional nurse autonomy relates to the scope of practice for which nurses are accountable, for example, acting in emergency situations to save a patient's life, triaging and coordination of care and preventing harm or complications (Kramer & Schmalenberg, 2004). As nurses have the freedom to act on one's knowledge base without the need for permission of some authority, they can act on patients' behalf in accordance with their own values (Papathanassoglou, Karanikola, Kalafati, Giannakopoulou, Lemonidou & Albarran, 2012). In addition, as nurses have the freedom to act on one's own professional expertise, they have the opportunity to fully use their skill set. Furthermore, team working may be most effective when the staff involved have professional autonomy as they feel their practice is not restricted (Poghosvan & Liu, 2016). Also, Rao, Kumar, and McHugh (2017) show that there is a positive relation between professional autonomy and quality of patient care. As quality of patient care improves, the experience of the impact of the work increase. The autonomy – meaningful work framework posits, therefore, that professional autonomy fulfils all four core dimensions of meaningful work and, thus, has a positive relation with Balancing Tensions as well. Accordingly we hypothesis that professional autonomy is positively related to Integrity with Self, Expressing Full Potential, Unity with Others, Service to Others and Balancing Tensions (*hypothesis 5*).

Autonomy, Inspiration and Facing Reality

Inspiration within the context of healthcare, the context of this research, is related to healthcare organizations' reason of existence, as expressed in their organizational vision, which is essentially about the delivery of quality care to patients. As such, in order for Inspiration to be experienced, there needs to be a clear linkage between the work nurses do and the vision of the organization. Autonomy provides individuals the freedom to choose for themselves to connect to the organization's vision. The autonomy – meaningful work framework posits, therefore, that all three forms of autonomy are positively related to Inspiration. As such, we hypothesize that individual autonomy, group autonomy and professional autonomy are positively related to Inspiration (*hypothesis 6*).

Facing Reality means coming to terms with an imperfect self in an imperfect world (Lips-Wiersma & Morris, 2009). Autonomy within the nursing context means that nurses themselves can discuss and make decisions about how to use available resources to provide good quality of care. The very nature of autonomy is that one does not depend on a leader, but

rather is able to adjust goals in light of reality. The autonomy – meaningful work framework posits, therefore, that all three forms of autonomy are positively related to Facing Reality. As such, we hypothesize that individual autonomy, perceived group autonomy and professional autonomy are positively related to Facing Reality (*hypothesis 7*).

Method

Respondents and data collection

The present study involved health care workers working in four organizational units (home care or elderly care) from three health care organizations in the Netherlands. This study was part of a larger study on sustainable employability of nurses.[9] All health care workers working in the selected organizational units received a questionnaire.

Of the 559 individuals who filled in the questionnaire, for 14 respondents, two or more study variables were missing values and 35 respondents had other occupations than nurses (e.g. hostess, occupational therapist, intern, students). Since the sample was large enough and the pattern of missing values seem to be completely random, case deletion was therefore considered acceptable (Acock, 2005). We therefore removed the aforementioned respondents from the sample. Thus, the final sample consisted of 510 employees. Missing values on the control variables of working hours, occupational years, and age where replaced by the means (Working hours, N=1; occupational years N=8, Age N=4; Roth, 1994). The respondents' age ranged from 17 to 69 years (M = 47.1, SD = 11.6). The majority of respondents were female (93%). 16 percent had completed high school, 52 percent had completed college, 27 percent had a bachelor degree, and 1 percent had a master degree. Job descriptions varied from nurse assistants (4.7%, n = 24), care worker (14.3%, n = 73), personal care worker (5,7%, n=29), practical nurse (36,7%, n=187), second-level registered nurse (16,9%, n = 86) to first-level registered nurse (21,8%, n=111). On average, respondents worked 27 hours per week (SD = 6.5), and the number of years respondents worked for the organization in which they were currently employed ranged from 0 to 45 years (M = 11.3, SD = 9.8).

Three university students distributed the questionnaires. In three organizational units, respondents received an online questionnaire, in one organization, paper questionnaires were distributed. To stimulate employees to respond, we used the chance to win a gift card of 25 euro as an incentive. In addition, several reminders were sent by mail. The questionnaire had two parts. The first part addressed demographic characteristics: age, gender, number of years

[9] as part of this larger study we assessed work orientation, capabilities and job crafting. Data related to these variables will be discussed in the doctoral dissertation of the first author.

nursing experience, educational level, and working hours. The second part included scales on meaningful work and autonomy.

Measures

Individual autonomy was measured with the "work task-based autonomy" scale from the Dutch Questionnaire on the Experience and Evaluation of Work (VBBA). Previous research established the psychometric quality of this instrument (van Veldhoven, de Jonge, Broersen, Kompier, & Meijman, 2002). The scale included 11 items, asking respondents to indicate the extent to which they could control their work situation, for example "can you influence your work pace?". Items were answered on a 5-point scale, ranging from 1 ("never") to 5 ("all the time"). Cronbach's alpha for this scale was $\alpha = .94$.

Group autonomy as perceived by the individual group members was measured with an adapted version of the Dutch Questionnaire on the Experience and Evaluation of Work (VBBA). Following Van Mierlo, Rutte, Seinen & Kompier (2001), we replaced the "you" in the original items with "your team" in the team items, for example "can your team influence its work pace?". Cronbach's alpha for this scale was $\alpha = .92$.

Professional autonomy was measured with four items of the practice of clinical autonomy scale (Brouwer, Kaljouw, Kramer, Schmalenberg & Van Achterberg, 2014). The original scale contains 11 items. Previous research indicated that the original scale had an acceptable Cronbach Alpha of .70, but contained two to three factors (Brouwer et al., 2014; Brouwer, Kaljouw, Schoonhoven & Van Achterberg, 2017). The selected four items measure clinical autonomy in terms of perceived limited freedom to make care-related decisions. Items relate to limited freedom, in the sense that one knows what to do and wanted to do it but did not feel free to act until the action of some authority was obtained. These items fit our definition of professional autonomy– the freedom to act in accordance with one's professional knowledge base – best (but in reversed form). The other items were concerned with the perceived support of the management for professional autonomy. The four items we measured were: 1) Autonomy is risky – nurses fear getting into trouble; 2) Must get permission before independent or interdependent decisions; 3) Bureaucratic rules inhibits independent decisions and 4) Must do things against better judgment. Items were answered on a 5-point scale, ranging from 1 ("never") to 5 ("all the time"). The score was reversed coded to measure freedom instead of limited freedom. Cronbach's alpha for this scale was $\alpha = .71$.

Meaningful work was measured by 28-item using the Comprehensive Meaningful Work Scale, developed and validated by Lips-Wiersma and Wright (2012). The items were also rated on a Likert scale varying from 1 "strongly disagree" to 5 "strongly agree". See

Appendix 2 for the items. We used the seven dimensions of the scale. The Cronbach's alpha were for Integrity with Self α = .74, Unity with Others α = .90, Service to Others α = .82; Expressing Full Potential α = .78, Facing Reality α = .53, Inspiration α = .84, Balancing Tensions α = .81.

The original meaningful work scale has a 5 point response scale. The original three autonomy scales have four point response scale. Leung (2011), in his study on the differences among 4-, 5-, 6-, and 11-point Likert scales, found no differences among these scales in spite of some (the uneven scales) having a neutral point whereas others did not. Chyung, Roberts, Swanson and Hankinson (2017), on the other hand, recommend to use of a midpoint on the Likert Scale if respondents are familiar with the topic and should be allowed to express a neutral opinion. In our study, we expected the respondents to be familiar with the study topics and have opinions or feelings about it. Therefore, a 5-point Likert scale with a midpoint was perceived to be more suitable than 4 point Likert scale. Thus, we adapted the original four-point response scales for the three forms of autonomy scales to five-point response scales. All instruments were translated into Dutch. Linguistic validation of the final questionnaire encompassed forward-backward translation and evaluations of items by a small focus group.

Data analysis and preliminary analysis

Our data had a hierarchical structure with employees nested in teams. Statistically, data with these characteristics is described as non-independent; as employees are members of groups, common group membership could explain variance, and therefore, multilevel analyses are recommended (Klein & Kozlowski, 2000). In order to capture the potential group-level random effect in the intercepts and avoid potential bias in the estimated standard error, we established whether there was sufficient between-group variance to warrant the use of multilevel analyses. Following Muthén (1994), we used the intraclass correlation coefficient (ICC1) to determine group influence. We computed the ICCs of the dimensions of meaningful work and the three forms of autonomy according to the procedure suggested by Hofmann (1997). The ICC1 indicates the proportion of variability at the individual level that can be attributed to group membership. The ICC(1) index indicated that 16 percent of the variance in Integrity with Self, 4 percent of the variance in Expressing Full Potential, 17 percent of the variance in Unity with Others, 13 percent of the variances in Services to Others, 13 percent of the variance in Balancing Tensions, 7 percent of the variance in Inspiration, 2 percent of the variance in Facing Reality, 31 percent of the variance in group autonomy, 9 percent of the variance in individual autonomy, and 25 percent of the variance in professional autonomy occurred between teams. Multilevel modelling may provide few benefits when ICCs are less

than 5% (Dyer, Hanges & Hall, 2005). Although the ICC's of Expressing Full Potential and Facing Reality were below the 5%, since most of the ICC's where greater than 5%, we adopted hierarchical linear modelling for all analyses (HLM; also known as mixed model or multilevel random coefficient model). SPSS version 23 was used for HLM (IBM SPSS Statistics for Windows, Armonk, NY, USA: IBM Corp.). AMOS version 24 was used for CFA. A p-value of <0.05 was considered statistically significant.

In this study, all constructs were conceptualized and measured at the individual level as we were interested in how individual experiences of three types of autonomy were related to individual experiences of meaningful work. Although others studies (for example, Van Mierlo et al., 2006) consider group autonomy to be a team level construct, studies show that the experience of group autonomy may vary within groups, as it is possible that an informal group leader makes the decisions for the team and as a result not every individual group member experiences the same level of group autonomy (Karhatsu et al., 2010; Langfred & Rockmann, 2016). In this study we focused on group autonomy as perceived by the individual group members and therefore did not aggregate the individual perceptions. The ICC (1) score of only 31% of the variance in group autonomy occurring between groups provides further empirical support for this position.

Findings

Descriptive statistics

Table 1 reports the means, standard deviations, zero-order correlations for the main variables in the study and scale reliability statistics. Relationships and significance tests associated with these variables should be viewed with caution until properly modelled in the HLM analyses, because the correlation table does not account for the fact that individual-level relations might also be affected by the non-independent nature of the data (Bliese, 2000).

Confirmatory factor analysis

Because the three autonomy variables were significantly highly correlated (See Table 1), prior to testing our hypotheses, we verified whether respondents differentiated between perceived group, individual and professional autonomy by using confirmatory factor analysis (CFA) in AMOS 24. If perceived group, individual and professional autonomy are distinct constructs, a three-factor model (i.e. perceived group autonomy, individual autonomy and professional autonomy) would fit our data better than a one-factor model (i.e. where all autonomy indicators were combined into one factor). Following Van Mierlo et al. (2006), we allowed covariation between the first item for perceived group autonomy and the first item for individual autonomy, between the second items of both scales, and so on. The corresponding

items for group and individual autonomy were very similar, presenting a strong theoretical ground for allowing covariance between the error terms of corresponding items (Van Mierlo et al., 2006). The CFA results for the three-factor model demonstrated an acceptable model fit of the data, X^2 (285) = 1008,17, p <0.01, CFI = .91, RMSEA = .07, compared to the one-factor X^2 (288) = 2307,86, p <0.01, CFI = .75, RMSEA = .12. The correlation between the latent factors provides an additional indication of discriminant validity. If this correlation exceeds .85, constructs cannot be distinguished in a meaningful way (Kenny, 2014). The correlation between the latent factors perceived group autonomy and individual autonomy was .33, group autonomy and professional autonomy was .20 and between individual autonomy and professional autonomy .20, indicating satisfactory discriminant validity. The overall results of the CFA suggested that respondents were able to distinguish the three types of autonomy.

Table 1: correlations between variables, descriptive statistics and reliability coefficients

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
Control variables																			
1 Age (years)	47.12	11.64	(-)																
2 Gender	1.93	.26	-.01	(-)															
3 Educational level	4.11	1.07	-.15**	.02	(-)														
4 Occupation	2.80	1.36	.15**	-.07	-.48**	(-)													
5 Occupational years	11.33	9.84	.41**	-.00	-.18**	.06	(-)												
6 Work hours	27.04	6.53	-.03	-.10*	-.01	.01	-.03	(-)											
7 Organization	1.99	1.05	-.06	-.10*	-.13**	.28**	-.03	.10*	(-)										
Study variables																			
8 Perceived Group autonomy	3.55	.76	.04	-.01	.20**	-.21**	.00	-.12**	-.12**	(.92)									
9 Individual autonomy	3.40	.82	-.09*	-.01	.23**	-.21**	-.05	.11*	.02	.68**	(.94)								
10 Clinical autonomy	3.77	.68	.02	.07	.18**	-.30**	.-03	-.05	-.15**	.48**	.44**	(.71)							
11 Integrity with Self	4.05	.77	.09*	.01	.06	-.17**	.00	-.13**	-.13**	.35**	.29**	.43**	(.74)						
12 Expressing Full Potential	3.75	.57	-.02	-.02	.10*	-.14**	-.04	.08	-.05	.38**	.43**	.38**	.23**	(.78)					
13 Unity with Others	4.04	.58	.06	.04	.07	-.10*	-.00	-.06	-.05	.41**	.39**	.38**	.38**	.55**	(.90)				
14 Service to Others	4.31	.52	.08	.09	.09	-.12**	.03	-.04	-.10*	.34**	.29**	.34**	.34**	.58**	.53**	(.82)			
15 Balance	3.47	.68	.06	.00	-.00	.02	-.05	-.11*	-.03	.40**	.37**	.34**	.34**	.42**	.47**	.36**	(.81)		
16 Inspiration	3.60	.65	.07	.08	.05	-.08	-.03	-.07	-.02	.38**	.37**	.36**	.33**	.60**	.49**	.48**	.58**	(.84)	
17 Reality	3.66	.57	-.02	.07	.01	-.06	-.02	-.00	-.09*	.28**	.26**	.16**	.20**	.32**	.36**	.29**	.28**	.33**	(.53)

Notes

***. Correlation is significant at the 0.01 level (2-tailed).*

**. Correlation is significant at the 0.05 level (2-tailed).*

N=510

Hypotheses testing

Hierarchical linear models were estimated with the independent variables (group- , individual – and professional autonomy) relating to each of the seven dimensions of meaningful work (Integrity with Self, Expressing Full Potential, Unity with Others, Service to Others, Balancing Tensions, Inspiration, Facing Reality) in turn and are reported in Table 2. In our analyses, we controlled for the effects of gender, age, occupation, occupational years, working hours, educational level and organization.

As shown in Table 2, we found partial support for hypothesis 1, which stated that individual autonomy is positively related to Integrity with Self, Expressing Full Potential and Service to Others. Individual autonomy is only significantly positively related to Expressing Full Potential (b = .19, p <0.05) and Service to Others (b = .09, p <0.05). Hypothesis 2, which posited that individual autonomy is negatively related to Unity with Others and Balancing Tensions, was not supported. Individual autonomy was significantly positively related to Unity with Others (b = .15, p <0.01) and Balancing Tensions (b = .23, p <0.01). Hypothesis 3, which stipulated that perceived group autonomy is positively related to Expressing Full Potential, Unity with Others and Services to Others, was partially supported. Perceived group autonomy was only significantly positively related to Unity with Others (b = .11, p <0.05). Hypothesis 4 stipulated that perceived group autonomy is negatively related to Integrity with Self and Balancing Tension. As Table 2 indicates, this hypothesis was not supported as there were no significant relations between perceived group autonomy and Integrity with Self and Balancing Tensions. Hypothesis 5 stated that professional autonomy is positively related to Integrity with Self, Expressing Full Potential, Unity with Others, Service to Others and Balancing Tensions. The hypothesis was fully supported. Professional autonomy relates significantly and positively to Integrity with Self (b = .31, p <0.01), Expressing Full Potential (b = .16, p <0.01), Unity with Others (b = .16, p <0.01), Service to Others (b = .14, p <0.01) and Balancing Tensions (b = .17, p <0.01). Hypothesis 6, which stated that all three forms of autonomy would be positively related to Inspiration, was partially supported. Individual autonomy positively relates to Inspiration (b = .20, p <0.01), as well as professional autonomy (b = .16, p <0.01). There is no significant relation between perceived group autonomy and Inspiration. Finally, hypothesis 7, which stated that all three forms of autonomy are positively related to Facing Reality was partially supported. Perceived group autonomy relates positively to Facing Reality (b = .14, p <0.01) as well as individual autonomy (b = .11, p <0.05). There is

Table 2. Hierarchical linear modelling results.

	Integrity with Self		Expressing full potential		Unity with others		Service to Others		Balance		Inspiration		Reality	
	B	SD	B	SD	B	SD	B	SD	B	SD	B	SD	B	SD
Intercept	2.27**	(.40)	2.24**	(.30)	2.81**	(.30)	3.25**	(.28)	2.12**	(.35)	2.36**	(.34)	2.68**	(.32)
Control variables														
Age (years)	.01*	(.00)	-.00	(.00)	.00	(.00)	.00	(.00)	.00	(.00)	.00	(.00)	-.00	(.00)
Gender dummy	.13	(.11)	.09	(.08)	-.02	(.08)	-.09	(.08)	.08	(.10)	-.15	(.10)	-.13	(.09)
Educational level dummy 1	.67	(.70)	-.22	(.52)	-.04	(.52)	-.54	(.48)	-.16	(.60)	-.06	(.60)	.57	(.56)
Educational level dummy 2	.26	(.20)	.14	(.14)	.09	(.14)	-.06	(.14)	.09	(.17)	.08	(.17)	.18	(.16)
Educational level dummy 3	.19	(.22)	.19	(.16)	-.07	(.16)	-.21	(.15)	.02	(.19)	.19	(.19)	-.02	(.18)
Educational level dummy 4	.27	(.18)	.11	(.13)	.04	(.13)	-.02	(.12)	.08	(.15)	.01	(.15)	.08	(.14)
Educational level dummy 5	.08	(.18)	.05	(.13)	-.07	(.13)	-.13	(.12)	-.01	(.15)	-.06	(.15)	-.10	(.14)
Educational level dummy6	-.69*	(.30)	.24	(.23)	-.07	(.22)	.00	(.21)	.32	(.26)	.03	(.26)	.07	(.25)
Occupation dummy 1	.05	(.18)	-.08	(.13)	-.18	(.13)	-.03	(.12)	-.34*	(.15)	-.09	(.15)	.07	(.14)
Occupation dummy 2	.06	(.15)	-.11	(.11)	-.05	(.12)	.06	(.11)	-.01	(.13)	-.04	(.13)	-.03	(.13)
Occupation dummy 3	-.11	(.14)	-.09	(.11)	-.19	(.11)	.05	(.10)	-.05	(.12)	-.08	(.12)	-.05	(.12)
Occupation dummy 4	-.11	(.17)	-.03	(.12)	-.09	(.12)	.06	(.12)	.14	(.14)	.09	(.14)	.01	(.13)
Occupation dummy 5	-.18	(.20)	-.05	(.15)	-.14	(.15)	.11	(.14)	.22	(.17)	-.24	(.17)	-.03	(.16)
Occupational years	-.00	(.00)	-.00	(.00)	-.00	(.00)	.00	(.00)	-.01	(.00)	-.00	(.00)	-.00	(.00)
Work hours	-.01*	(.01)	.01*	(.00)	-.00	(.00)	.00	(.00)	-.00	(.00)	-.00	(.00)	.00	(.00)
Organization dummy 1	-.12	(.13)	-.14	.09	-.20	(.10)	-.14	(.09)	-.23*	(.11)	-.27*	(.11)	.14	(.10)

Organization dummy 2	-.14	(.16)	-.16	.12	-.07	(.13)	-.11	(.12)	-.41**	(.14)	-.44**	(.14)	.22	(.13)
Organization dummy 3	-.34*	(.15)	-.29*	.11	-.32*	(.12)	-.32**	(.11)	-.44**	(.14)	-.32*	(.13)	.04	(.12)
Hypothesized variables														
Individual autonomy	.09	(.05)	.19**	(.04)	.15**	(.04)	.09*	(.04)	.23**	(.05)	.20**	(.05)	.11*	(.04)
Perceived Group autonomy	.10	(.06)	.05	(.05)	.11*	(.05)	.07	(.04)	.09	(.05)	.07	(.05)	.14**	(.05)
Professional autonomy	.31**	(.06)	.16**	(.04)	.16**	(.04)	.14**	(.04)	.17**	(.05)	.16**	(.05)	.01	(.04)

N = 510 employees (level 1) in 107 teams (level 2). Unstandardized estimates (based on grand-mean-centring) are reported, with standard errors in parentheses

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

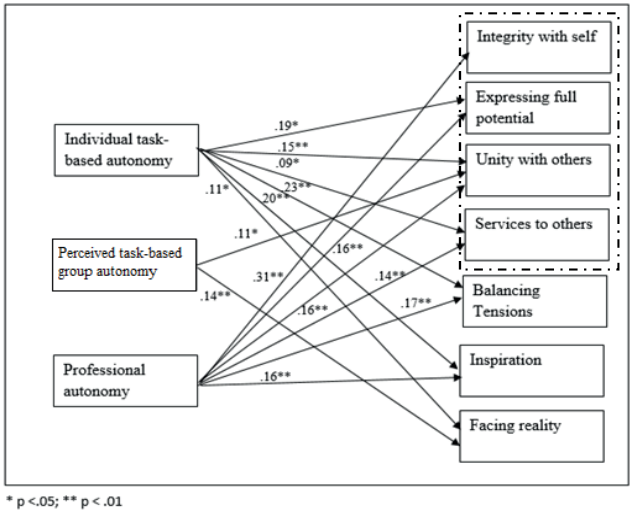

Figure 2: Path diagram with unstandardized estimates (based on grand-mean-centring). Only the significant relations are shown.

no significant relation between professional autonomy and Facing Reality. The above findings are summarized in Figure 2, showing that individual and professional autonomy have more significant and positive relations with meaningful work dimensions than perceived group autonomy.

To make sure that our results were robust (see Spector and Brannick, 2011 for a discussion of potential distortion through the inclusion of control variables), we also performed the analyses without the control variables. Our results remained largely stable in terms of magnitude, direction, and significance regardless of whether control variables were included or excluded, except for perceived group autonomy in relation with Integrity with Self, Services to Others, Balancing Tensions and Inspiration.

Discussion and Recommendations

The purpose of the current study was to increase understanding of the autonomy-meaningful work relation by empirically examining the seven propositions of the autonomy-meaningful work framework (See Chapter 4). We found that individual and professional autonomy have significant positive relations with six of the seven meaningful work dimensions (i.e. professional autonomy with all of the dimensions except with Facing Reality; individual autonomy with all of the dimensions except Integrity with Self). Perceived group autonomy has significant positive, though weak, relations with two dimensions of meaningful work: Unity with Others and Facing Reality. We, therefore, found partial support for the majority of the hypotheses (one hypothesis received full support, five received partial support, and one hypothesis was rejected), on the whole providing partial support for the framework. In the following sections, we discuss the theoretical implications and close by highlighting practical implications, limitations and future directions.

Contributions to the literature on autonomy and meaningful work

Our study makes several contributions to the literature. Our first contribution is that in using a multi-dimensional meaningful work construct we offer a more fine-tuned understanding of the impact of autonomy on meaningful work. While the original autonomy-meaningful work framework proposes that professional autonomy would relate to meaningful work in its entirety (as experienced through seven different dimensions) our study shows it is a combination of different types of autonomy that relate to the whole of meaningful work. Our results show that different forms of autonomy are related to the dimensions of meaningful work differently. For example, Integrity with Self, that is the ability to be true to oneself, develop morally and be authentic, has a strong positive relation with professional

autonomy but not with individual autonomy. This makes sense, as the ability to determine one's own schedules does not necessarily need an alignment of individual and organizational values. Professional autonomy, on the other hand, which includes using one's own judgement, clearly impacts on the extent to which one experiences Integrity with Self as a certain level of autonomy is required to be able to be responsible for one's actions (Yeoman, 2014). Whereas Facing Reality has a positive relation to individual autonomy and perceived group autonomy, this was not the case for professional autonomy. This too makes sense as individually or as a group, it is the act of planning and scheduling that makes one face the (limited) resources or other constraining realities. In addition, our results show that perceived group autonomy has few positive relations with any meaningful work dimension, but it does strengthen Unity with Others. An explanation for the low number of relations between perceived group autonomy and meaningful work dimensions can be found in research on group autonomy and psychological well-being, that found that group autonomy is positively related to psychological individual well- being but this relation is mediated by individual autonomy, individual task variety, individual workload, and social support (Van Mierlo et al. 2001; Mierlo, Rutte, Vermunt, Kompier, & Doorewaard, 2007). In addition, Van Mierlo et al. (2006) found that – in a study on the group-individual autonomy relation within hospitals – certain conditions moderated the relations between teams' and individuals' autonomy (Van Mierlo et al., 2006). Thus, group autonomy does not directly influence most of the dimensions of meaningful work but rather seems to works through mediated and moderated relations that involve individual autonomy, which was also indicated by the outcome of the robustness check we performed. Without control variables we found significant and positive relations between perceived group autonomy and Integrity with Self, Service to Others, Balancing Tensions and Inspiration. Although we found no positive or negative relations between perceived group autonomy and dimensions of meaningful work including the control variables, the mediated and moderated mechanisms suggest that group autonomy can have positive as well as indirect negative relations with dimensions of meaningful work. To test this assumption we conducted a post-hoc multilevel mediation analysis to assess if, for example, individual autonomy mediates the relation between perceived group autonomy and Unity with Others, after controlling for age, education, function, occupational years, working hours and organization. We followed Van Mierlo et al. (2007) to conduct the multi-level mediation analysis. Perceived group autonomy, without the other forms of autonomy, had a significant effect on Unity with Others ($b = .28$, $p < .01$). Adding individual autonomy into the equation reduced this effect ($b = .14$, $p < .01$). A Sobel test confirmed the significance of

the indirect path, Z = 3.83, p = .01. Our results suggest that perceived group autonomy is indeed (partially) related to Unity with Others through a relation with individual autonomy. These findings highlight that multiple forms of autonomy, specifically individual and professional autonomy, are needed to affect multiple dimensions of meaningful work in order to make up the meaningful work experience.

Our second contribution is that we show that it is important to take the hierarchical structure of the data (individuals in teams) into account when doing research on meaningful work. It has been suggested that co-workers influence individuals' interpretations of the meaning of their work through an interpersonal sense-making process whereby employees draw cues about the meaning and value of their work from other persons in the workplace (through observations, conversations, etc.; Wrzesniewski, Dutton & Debebe, 2003). As employees increasingly work in teams, team membership of any kind can play a critical role in the experience of meaningful work (i.e. employees who are members of the same team will frequently share important perceptions and behaviours). If not taken into account, an important basic assumption for many common statistical procedures is violated, because these procedures assume independence of observations. In some cases, this may lead to serious overestimation of parameters.

Implications for practice

Our study has significant implications for practice. First of all it helps healthcare organizations to prioritize autonomy practices that cultivate meaningful work and thereby increase job satisfaction. By studying the relation between three forms of autonomy, our research seems to indicate that, while autonomous teamwork seems to be gaining popularity and is generally assumed to increase workers' meaningfulness in work, healthcare organizations need to prioritize individual and professional autonomy over group autonomy. In other words, to achieve meaningful work, it is very important to provide individuals with the freedom to determine their own schedules and procedures for carrying out their tasks (individual autonomy) as well as put practices in place where individuals feel free to take risks, where they can get on with the job rather than getting permission for every single action, where they can use their own professional judgement and where they have to deal with bureaucratic interference as little as possible (professional autonomy).

Our results demonstrate that perceived group autonomy only promoted limited experiences of meaningfulness at the individual employee level. Case research by Barker (1993) illustrates that group members in autonomous groups can put undue pressure on each other to get their tasks accomplished. This may have negative effects for perceived individual

autonomy. This decreased individual autonomy could in turn lead to negative relation between group autonomy and dimensions of meaningful work in the sense that group restrictions may mean that other dimensions of meaningful work, such as Expressing Full Potential and Service to Others, are not experienced as a result of group autonomy.

Thus, healthcare organizations that want to cultivate meaningful work should not automatically implement autonomous teams but rather understand that a combination of autonomy practices supports meaningful work.

Limitations and Future directions

While this study has gone significantly beyond previous autonomy as well as meaningful work studies in reach and complexity, the results and conclusions from this study need to be considered in light of a number of limitations, each of which offer directions for future research. First and foremost, the data gathered for this study were cross-sectional, which precludes conclusions regarding causality. Although we developed our hypotheses based on existing theory and evidence, future studies should test our hypotheses experimentally, which would allow for causal conclusions. Additionally, extending current results with qualitative data (based on interviews with nurses, for example), could further increase our understanding of how nurses experience the meaning of their work in relation to autonomy (see for an example of this approach in Chapter 6).

Furthermore, although meaningful work has been related to heightened motivation, organizational commitment and job satisfaction (Rosso et al., 2012; Steger, Dik, & Duffy, 2012) we did not measure any of these outcome variables in this study. To better understand outcomes, future studies on autonomy and meaningful work in the field of nursing should include turnover and retention related variables.

Moreover, in this study data have been collected from home care and elderly care nursing teams, whose primary purpose is to deliver care. This could result in a positive effect of group autonomy on Service to Others. Our findings might have been different based on the groups' identified purpose. Future studies should examine this possible relation.

In addition, technically speaking we studied individual perceptions of group autonomy, not actual group autonomy. The ICC(1) score of 31% of the variance group autonomy is provided empirical support for this position. Therefore, we feel, in line with Van Mierlo et al., 2001, that group autonomy as perceived by the individual group members represents a better approximation of actual amount of group autonomy than mere aggregation of perceptions. Future research, however, could investigate the relation between group autonomy and meaningful work by comparing high and low autonomy teams. This could

provide answers to questions such as “Do members of teams with high levels of group autonomy feel more unity than their colleagues in teams with low levels of group autonomy?”, or “under which conditions do members of high-autonomy teams experience meaningful work?”

A final limitation of the study is the low Cronbach's alpha for the Facing Reality scale. The Cronbach's alpha of the original English version were higher and acceptable $\alpha = .79$ (Lips-Wiersma & Wright, 2012). Possibly, Dutch respondents used different definitions of reality which could have affected the way in which respondents answer the items. Alternatively, this may have to do with the sample being Dutch. A cultural stereotype about Dutch people is that they tend to be pragmatic. As such, there may be a restriction of range in our Dutch sample on the Facing Reality scale. Further research is necessary to test the reliability and validity of the translated version CMWS. Last but not least, further research is also required on cross-cultural differences in meaningful work antecedents and outcomes.

Conclusion

In conclusion, the present study provides evidence that different forms of autonomy affect the dimensions of meaningful work differently and found partial support for the autonomy-meaningful work framework. Our results indicate that healthcare organizations that want to stimulate meaningful work need to prioritize individual and professional autonomy over group autonomy. Healthcare organizations should therefor devote energy and resources to enhance individual and professional autonomy to affect multiple dimensions of meaningful work through which workers can experience meaningful work and its associated positive work outcomes.

CHAPTER 6

Meaningful Work and Self- Managing Healthcare Teams: a Qualitative Study of Work Experiences of Nurses[10]

Abstract
How did nurses, who have left or are planning to leave their organization, experience working in self-managing teams? In this study, nurses who have left, or are about to leave, the organization are asked about their experience of working in self-managing teams and their reasons for leaving. Work experience was examined from a meaningful work perspective. For this study, 15 former employees of one healthcare organization were interviewed. Seven participants indicated that working in self-managing teams was one of the reasons to leave. The results showed that for most participants not all dimensions of meaningful work were fulfilled by working in a self-managing team. This explorative study was not intended to demonstrate to what extent team self-managing teams causes the perceived meaningfulness of nursing work. Rather, this study is intended as a starting point for further research into the work experience of nurses in self-managing teams. Different future research directions are described in the discussion.

[10] A Dutch version of this chapter is in press as Both-Nwabuwe, J.M.C. Betekenisvol werk en zelforganiserende teams in de gezondheidszorg: een kwalitatief onderzoek naar de werkbeleving van zorgmedewerkers. Gedrag & organisatie. It was translated to English for this dissertation.

Nurses work increasingly in self-managing healthcare teams (Maurits, De Veer, Groenewegen & Francke, 2017). Self-managing healthcare teams can be described as teams of nurses who have a certain degree of freedom in organizing optimal care for clients as a group (De Groot, Maurits & Francke, 2018; Gray, Sarnak & Burgers, 2015; Maurits et al., 2017). Although self-managing teams are increasingly being introduced, research shows that experiences with working in self-managing teams are varied and contradictory (Stewart, Courtright & Manz, 2011; Van Mierlo, Rutte, Kompier & Doorewaard, 2005). For example, some studies that examined the relation between team self-management and work satisfaction found a positive relation (Batt & Appelbaum, 1995; Cohen & Ledford, 1994; Kemp, Wall, Clegg & Cordery, 1983; Pearson, 1992; Seers, Petty & Cashman, 1995; Wall, Kemp, Jackson & Clegg, 1986), whereas other studies found evidence for a negative relation (Mueller & Cordery, 1992) or no relation whatsoever (Boonstra, 1998; Cohen, Chang & Ledford 1997; Lemke & Knauth, 1997). The same applies to the relation between team self-management and absenteeism. According to various studies, working in self-managing teams is related to higher levels of absenteeism (Cordery, Mueller & Smith, 1991), but there are also studies that found that it is related to lower levels of absenteeism (Barker, 1993; Pearson, 1992; Seers et al., 1995) or not related to absenteeism at all (Cohen & Ledford, 1994; Lemke & Knauth, 1997). Likewise, both positive (Wall, Kemp, Jackson & Clegg, 1986) and negative (Seers et al., 1995) relations have been found between team self-management and turnover.

Research into the effects of specific characteristics of self-management, such as autonomy, task variation, task identity, task interest and feedback, also shows conflicting results (Van Mierlo et al., 2005). For example, research into the relation between autonomy, as the degree to which employee have the freedom to plan out the work and determine the procedures in the work, and job satisfaction within self-managing teams has either found positive (Janz, 1999; Nielsen & Randall, 2012; So, West & Dawson, 2011) or no relation (Campion, Medsker & Higgs, 1993; Campion, Papper & Medsker, 1996). Other research into the relation between team autonomy and individual well-being indicates that the effects of team autonomy on the well-being of team members appear to be positive but limited (Van Mierlo, Rutten, Vermunt, Kompier & Doorewaard, 2007). The relation between task variation, as the degree to which the work requires various activities, and job satisfaction appears to be clearer, with two studies suggesting a positive relation (Campion et al., 1993; Campion et al., 1996). A relation between task identity, as the degree to which the outcome is predicted or visible, and job satisfaction, has not been found (Campion et al., 1993). Both a positive (Spreitzer et al., 1999; Campion et al., 1993) and a negative relation have been found

between task interest, as the degree the work affects other people's lives, and job satisfaction (Campion et al., 1996). In short, the effects of self-managing teams on work experiences are not clearly established in the literature.

Given the labor shortages in the healthcare sector (see Chapter 2), it is important to gain insight into the relation between self-management and staff turnover. In practice, we see varying experiences with self-managing healthcare teams. In some organizations, employees do indeed experience greater motivation and satisfaction because they work in self-managing teams (Weerheim, Van Rossum & Ten Have, 2019; Gray et al., 2015). In other organizations, however, the introduction of self-managing teams is followed by increased absenteeism and the departure of employees (Skipr, 2016; 2018). The literature is unclear about the relation between self-management and turnover, and little is known about the reasons why some people leave the organization after self-management has been introduced.

This study, therefore, takes an in-depth look at the work experience of a group of employees who had recently left a care organization or were planning to leave after the introduction of some form of self-management, and the central contribution of this study is to shed light on this specific group of employees. The aim of this study is not to generalize the findings, but to initiate a discussion about what self-managing teams can contribute to the work experience of nurses. As team self-management is increasingly being implemented in the healthcare sector, this discussion is of increasing importance. Organizational change to self-management demands a lot from organizations and especially from those who have to work in self-managing teams (Boot, 2019). Investment in self-management, therefore, should provide work experience benefits.

To answer the question of what self-managing teams can contribute to the work experience of nurses, nurses who left or were about to leave the organization were interviewed. I specifically focused on those who left their organization or were planning to leave after the introduction of self-managing teams, in order to gain knowledge on reasons for turnover and work experiences after the introduction of self-managing teams. I found fifteen participants who were recruited from one healthcare organization in Randstad, a conurbation of big cities in the west of the Netherlands. The fifteen participating nurses were asked about their work experience and their reasons for leaving. In the organization in which the participants worked, self-managing teams did not have a direct team manager. The teams themselves were responsible for providing care, scheduling, selection of new employees, assessment interviews and the team atmosphere. There was a location manager at some distance, who was responsible for short-term sickness absence and performance trajectories.

The teams were also supported by team coaches and staff departments for long-term absenteeism, recruitment and employment conditions interviews. The term "self-managing teams" instead of "self-organizing" teams, therefore, is used in this article.

In this study, work experience is approached from the meaningful work perspective. Meaningful work is the subjective experience of a higher goal in life by fulfilling dimensions of meaning in or through the job (see Chapter 3). Meaningful work is a good predictor of desirable work attitudes, such as job satisfaction, dedication to work and organizational involvement. Meaningful work, moreover, is a better predictor of absenteeism than job satisfaction (Steger, Dik & Duffy, 2012).

Theoretical Framework

Self-managing teams and work experience

The theoretical basis for self-managing teams stems primarily from socio-technical system theory (STS) and the concept of self-management in teams (Parker, Wall & Cordery, 2001) derived from it. According to the STS, it is important that work is designed around groups of employees who have control and autonomy in their own work and who receive performance feedback. If work is organized in this way, this leads to better performance and greater employee satisfaction (Cummings, 1978).

The STS theory presupposes that a production system has both a technological and a social aspect. The technological aspect consists of the requirements and operating methods for products and services; the social aspect consists of the work structure that connects people to technology and to each other. If the technological and social aspects are aligned, work leads to optimal production and also gives satisfaction to employees (Cummings, 1978).

Map of meaning

In this study, the map of meaning is used as a theoretical framework to conceptualize meaningful work, see also Chapter 3. The map of meaning offers concrete tools and a language to conduct research into the relation between organizational factors and multiple dimensions of meaningful work (Lips-Wiersma & Morris, 2011). The map of meaning identifies the complex dynamics between the different dimensions of meaningful work. This offers in-depth insight into how meaningful work can be created under the influence of a combination of factors in work or in an organization (Lips-Wiersma, Haar & Wright, 2020; See Chapter 3).

The map of meaning identifies four key dimensions (for more elaborate information about the dimensions, please see Chapter 3):

1) Integrity with Self;

2) Unity with Others;

3) Expressing Full Potential;

4) Service to Others.

Integrity with Self refers to meaningfulness that comes from being authentic in one's work. This means that if a person's thinking and his / her actions in work fit together as much as possible, this contributes to meaningful work. If a person can act based on his / her own motives, norms and values, this also contributes to meaningful work. Unity with Others refers to the sense of meaningfulness that comes from feeling connected to other people in or during work. Expressing Full Potential refers to the sense of meaningfulness that arises when someone can develop and use his / her own unique and specific talents to achieve, create or influence something in or during work. In other words: if someone does what he / she is good at and what suits him or her, this contributes to meaningful work. Service to Others refers to the sense of purpose that comes from making a difference in other people's lives in or during work. All these four core dimensions must be experienced in order for work to be experienced as purposeful (Lips-Wiersma & Morris, 2011). See Figure 1.

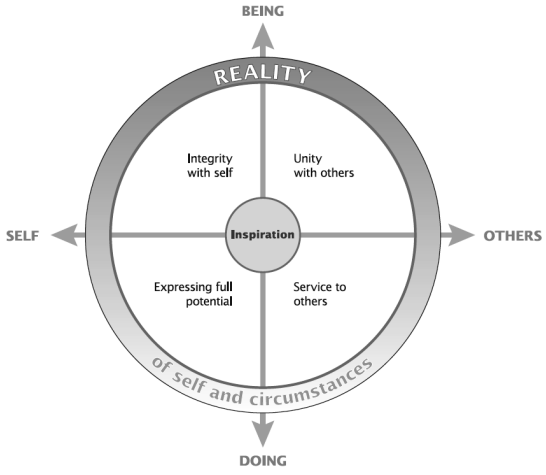

Figure 1. Map of meaning (Lips-Wiersma and Wright, 2012).

Method

A qualitative research design was used to gain insight into the reasons for the departure of healthcare workers in self-managing teams. Semi-structured interviews were used to investigate the experiences of fifteen nurses who had left the organization at their own request in the past year or would soon do so.

Context of the study

After years of going through spending cuts, new laws and funding flows, the divestment of locations and reorganizations, the healthcare organization in this study switched from traditional intramural teams with team leaders to self-managing teams within its nursing and care homes, in 2016. They used the Rijnland model for this transition (Peters & Weggeman, 2016). According to this model, the organization of work is shaped by a common goal. In elderly care, this common goal is the interest of the client. The organization started to introduce self-managing teams to improve quality of care for clients and quality of work for nurses. An additional aim was to improve the financial result. The teams were allowed to decide for themselves how they wanted to organize the introduction of the self-management system. This meant that the teams were allowed to decide for themselves what roles and tasks they would take on within the team and who was going to do this. This method of introduction has led to a great deal of variation in both the method of introduction and the degree of self-management.

With the introduction of the self-managing teams, the positions of team manager and planner were abolished. The planner prepared the rosters for the teams. After the introduction of self-management, the tasks of the team manager, such as absenteeism management, appraisal interviews, recruitment and selection and team cohesion, were allocated to various parties. After the organizational change had been implemented, the teams themselves became responsible for the provision of care, scheduling, selection of new employees, assessment interviews and the team atmosphere. There was a location manager at some distance, who was responsible for short-term sickness absence and performance trajectories. The teams were also supported by team coaches and staff departments for long-term absenteeism, recruitment and employment conditions interviews.

Selection and approach of participants

The increasing turnover among nurses was the reason for the organization to have this study carried out. Only nurses from intramural self-managing care teams were approached for the study. There were 78 nurses who had left the organization at their own request in the past

year or would soon do so. This target group was chosen because it allowed us to explore the relation between working in self-managing teams and reasons for employee turnover.

A letter was sent to the 78 potential participants with information about the study. This letter also mentioned that an interviewer might approach them by telephone. The interviewer randomly contacted fifteen potential participants by telephone to make an appointment for an interview. If someone refused to participate or no telephone contact had been established after three attempts, another potential participant from the list was approached. All in all 75 people were called to interview fifteen participants.

Of the 75 people, 29 people were not available because their telephone number was incorrect or they did not answer the phone. Two people were unable to participate because they were traveling during the research period. Twenty-nine people indicated that they did not want to participate, the main reasons for non-participation in the study being that they did not want to talk about their departure from the organization (n = 7) or that their only reason for leaving was that they had moved to another part of the country (n = 8). Eight people gave no reason. Six people mentioned other reasons (for example, they were too busy with their new job or only wanted to participate by telephone).

The study was conducted by interviewing fifteen participants: thirteen women and two men. The average age was 47.8 (SD 14.6 years), with a range of 23 to 65 years. Most of them worked as practical nurses (n = 8) or second-level registered nurses (n = 6). One participant worked as a first-level registered nurse. The average number of years of work experience in healthcare was 24.7 years (SD 13.6 years), with a range of 1 to 35 years. Six participants had been out of service for more than six months but less than one year, and nine had been out of service for less than six months or were eligible for early retirement. The participants were working in different teams at different locations.

Conducting interviews

The qualitative data were collected in semi-structured interviews. For each interview, the participants received all relevant information about the research. They were assured that their contribution to the study would be processed anonymously. After this introductory part, the interview was conducted.

During the interviews, the participants were first asked about their work experience and why they had left or wanted to leave the organization. They were also asked about their experiences with self-management. They were then invited to identify meaningful moments in their work (inductive manner; using no theoretical framework while asking the question). Subsequently, the map of meaning (Lips-Wiersma & Morris, 2011) was presented to them

(see Figure 1), and they were asked if they could give examples of meaningful moments in their work for each core dimension (deductive manner, using the map of meaning as theoretical framework while asking the question). In order not to miss any relevant information, the interviewer closed each interview with the question if the participant had anything else to add to the interview.

As this research is part of a larger study into sustainable employability, the last part of the interview guide also addressed questions about work values and sustainable employability (available from the researcher). The interviews lasted 60 to 90 minutes and took place at the participant's home or in a public place. The interviews were conducted by a professional interviewer, hired by the researcher to conduct the interviews. The professional interviewer was not associated with the study or the organization being investigated.

Analysis of the interviews

All interviews were recorded and transcribed verbatim with the participants' consent. The interviewer typed out the interviews. The data from the interviews were processed according to the step-by-step plan of Ritchie and Lewis (2003). A thematic framework was established based on prior knowledge and the study's objectives. In this study, the map of meaning as a conceptual model was the basis for the thematic framework. This framework was combined with themes that the participants raised.

Prior to data analysis and coding, the researcher carefully read the interview transcripts. The transcripts were first openly coded with an a priori approach, based on a code book. This code book contained all the characteristics that could influence the experience of meaningful work based on the map of meaning and that were included in the interview guide (deduction). On the basis of the interviews, the code book was adjusted and supplemented, resulting in a definitive code book (induction). The following codes were added: "experiences that do not contribute to meaningful work," including: "dissatisfaction with management / supervisor," "dissatisfaction with career opportunities by self-managing / self-managing teams," "dissatisfaction with the organization model" and "high work pressure by self-managing teams."

The researcher coded every interview. The findings were reported in the next step. Quotes were used to stay as close as possible to the participants' words. As the last step in the data analysis process, the data were interpreted. To increase interpretation reliability, the researcher discussed the coding and interpretation of the data with another researcher. In the discussion between these two researchers, coding and interpretation differences were resolved and new findings were discussed.

Results

Below I present the results from the interviews, first the turnover motives and then the results per dimension of the map of meaning.

Turnover motives

Participants were asked the open question why they had or would leave the organization. The answers to this question are given in Table 1, and explanations of these turnover motives are given in Table 2. The majority of participants (n = 11) indicated several reasons for leaving, with working in self-managing teams being the one most frequently reason participants reported for leaving the organization (n = 7). None of the participants indicated that working in a self-managing team was the only reason.

Table 1 *Why have you left or will you leave the organization?*

	Turnover motive	**N***
	Working in self-managing teams	7
	Work conditions	4
	Health	4
	Job dissatisfaction	4
	Travel distance	3
	Work pressure	2
	Dissatisfaction with higher management	2
	Career opportunities	2
	Job offer from other organization	2
	Administrative burden	1
	Appreciation	1
	Colleagues	1
	Overtime	1

***** Numbers do not add up to 15 because most participants (N = 11) had several reasons to leave.

Table 2 Quotes from the interviews explaining turnover motives

Turnover motive	**Quotes from the interviews**
Working in self-managing teams	At a certain point, a transition manager had been hired and this was supposed to help us to move towards self-directing, well, self-directing was weakened again. That became self-management ... It's impossible in an organization with management for teams to direct themselves. So it became self-managing again, but I got the idea that if we wanted to organize anything ourselves that they would say "wait a minute, all of this will cost money." That's how we have been saving for a year now. As a result, all people left and people got burned out. Sitting at home. (Participant #1) Then they started talking about those self-managing teams. You know what I mean, don't you? But that whole idea of self-management was actually outdated. Because if you read articles in magazines or listened to people on TV, then you heard that it was already very outdated in America. In healthcare I think it doesn't really work either. It has never been so bad as it has ever since ... well self-managing teams, it was all supposed to be more professional and bigger and yes wrong. I think that healthcare has also been crippled partly because of it. (Participant #3) That [the organization] implements self-management ... Which I am not against at all, not at all. But they want to do it on all locations ... they want to introduce self-managing teams in all locations in the same way. And uh ... yes I didn't think that was okay. I could not agree with that. (...) This self-management ... led me to give you my letter of resignation. (Participant #8)

	I lasted so long because it was always great fun. Due to all the changes towards self-managing teams ... that doesn't work. That just doesn't work. The people who work here have all worked here for 20 years or more and they are hospitalized just like the people who live there. So they don't like changes and they're not open to change. (Participant #12)
Work conditions	I started working, working, working and working at seven in the morning. No sitting and drinking some water in between. At one o'clock/ half past two, I could sit down for a moment, and it was like that not just one day but again the next day and then it turned out that I would be all alone at two in the afternoon. (Participant #5)
Health	My shoulder and neck bothered me, and the work in the nursing home became too heavy. (Participant #9)
Job dissatisfaction	Well so much was about to change. So much had already changed. I really didn't like that anymore. I couldn't agree with that anymore. (Participant #3)
Work pressure	Well, the work pressure. Yes, the workload, you can't work at your own pace as you'd like. When you start in the morning, you have to do everything right away. Then you can say I am doing it at my own pace, but then you run into that wall. You'll automatically increase your pace so that you're on time for those people. That was no longer fun. (Participant #6)
Travel distance	In the end, I decided how can I make sure that I get more energy out of my work by working closer again. (Participant #1)

Dissatisfaction with higher management	A new manager had also arrived by that time. I also indicated that to the location manager, but they thought it should be done ... and they didn't really listen. (Participant #9)
Administrative burden	It became just so much paperwork. There was so much that needed to be arranged. So much so ... (…). At one point I said, I don't want this ... I did like that paperwork, by the way. But not instead of …(Participant #3)
Career opportunities	I noticed, it was a self-managing team, but I noticed that after 30 years of experience, I am now 48 ... I wanted more and could do more. But well, that's not really possible in a self-managing team. (Participant #10)
Job offer from other organization	Because I was actually approached by that ex-colleague (...) I started at (.) Eight years ago and we are looking for staff, come and have a look. That phone went two to three times, also from a location manager. At one point I said you know what, I'll come and have a look. (Participant #10)
Appreciation	As a person, you need appreciation for what you do, but this is not always the case in healthcare; you also have to deal with a lot. If you know that people are behind you and are happy that you're there, then that'll make you feel good. At a certain point, that was no longer the case either. (Participant #12)
Colleagues	Because it didn't go well with colleagues ... Not nice to each other. (Participant #11)

Overtime	Yes, I found it annoying that I was included in the full schedule. I had a four-hour contract but had to work complete schedules every other weekend, also in the holidays. (Participant #13)

Dimensions of the map of meaning

Participants were asked to describe how they interpreted each dimension of the map of meaning. Subsequently, they were asked when during work they experienced the dimensions of the map of meaning. The answers given to these questions are reported below, with specific attention to the extent to which they experienced this in a self-managing team.

The Service to Others dimension

Participants indicated that working in healthcare is about serving others, and the Service to Others dimension, therefore, was experienced while providing care to clients.

"Participant: And, yes, serving others, yes that's just in me, that just lies at the basis of why you actually choose such a profession." - Participant # 5

"Interviewer: And then serving others ..."

"Participant: Yes, well, that's obvious. That's also your profession. You don't think about that. It goes without saying. You don't think about it, you just serve others. That's your profession." - Participant # 7

Nine participants indicated that working in self-managing teams meant that they could spend less time on care (see Tables 3 and 4) because, in addition to care tasks, they also had to perform tasks that were not related to care and had to meet and discuss more frequently. These additional non-care-related tasks, introduced by the self-management process, were experienced by them as a job enlargement. As a result, they had the feeling that this affected their actual work, which was taking care of clients. This led to a higher experienced workload. Six of these nine participants said they had left or were about to leave the organization because they were working in a self-managing team.

Table 3 *Factors that could inhibit Service to Others*

Factors	N*
Other/additional tasks	7
Additional meetings	4

* Numbers do not add up to nine because some participants gave multiple explanations.

Table 4 *Quotes from the interviews on factors inhibiting Service to Others*

Factors	Quotes from the interviews
Other/Additional tasks	And yes, self-management actually means that you cannot give your full 100% to the resident. Because yes, I also need this ... this window to order groceries and do the cleaning and ... everything. Everything at home ... If you live at home, you need to do everything to keep it going. [...] Interviewer: With the introduction of the self-managing team, did you immediately notice a change in your duties? Participant: Yes, yes ... then a lot more duties were added. Caretaker tasks ... the example I just mentioned, and making schedules ... (Participant # 8) You just get a task on top of it. A list was made for colleagues: who would like to do what? Yes, what do you like? Is the administration something for you? You want to do the finances? Then you get the responsibility for it. There's already a shortage of staff on the work floor and then you're given an even greater workload. (Participant # 6) ... until that team leader went out. People lost their motivation. They just didn't feel like doing it anymore. You notice that very quickly in the work. In addition to those things, you had to write down even more, more administration, even more [...] Well ... What time did you have to be with the patient? None ... none at all. You had no time at all for what you had actually chosen to do. (Participant # 12)

Meetings	... you get given a lot of extra tasks erm ... it takes up a lot of space and time to meet and think about how you should do it and how you want to do it. You take that time away from the people. Yes, I don't know. I don't know if it [ed. self-management] is useful. I wonder. (Participant # 14)

The Unity with Others dimension

For this dimension, participants were asked when they had experienced that they belonged to something. Belonging is one of the three sub-components of this dimension. The other sub-components, not examined in this study, are working together and shared values (Lips-Wiersma & Morris, 2011). Participants indicated that working in a team or in a department contributed to the feeling of belonging to or being part of something.

"You work in a team. In a team. Then you have to belong, if you want to feel happy about the work you do. "- Participant # 12

Five participants indicated that working in a self-managing team did not contribute to the team spirit because there was no good atmosphere within the team or because not everyone took their responsibility. Three of these five participants said they had left or were about to leave the organization because they were working in a self-managing team.

Table 5 Factors that inhibit Unity with Others

Factors	**N**
No good atmosphere	1
No shared responsibility	4

Table 6 Quotes from the interviews on inhibiting factors for Unity with Others

Factors	Quotes from the interviews
No good atmosphere	Interviewer: And that was in the same period when those self-managing teams were introduced? Participant: Yes yes yes ... it definitely didn't work [...], those girls ate each other. I really had two teams, they didn't go together at all. (…) But they had to become one team and it could not done otherwise. But they have destroyed a lot with it. I myself think it was not such a good idea at all. (Participant # 3)
No shared responsibility	So erm the self-managing team, I love it that everyone takes their own responsibilities. But it doesn't happen. It doesn't happen. Because there's nobody who actually watches over that. [...] I think that's the disadvantage of self-management. The strong will get on anyway and the weak actually get weaker because they think: dude, you will do that anyway. (Participant # 10)

The Integrity with Self dimension

Participants indicated that Integrity with Self means that you are yourself in your work, that you are honest about your care-providing abilities and that you indicate your limits.

"Integrity with Self: honesty and that you do not ignore what is important to you ... you often have to deal with burnout, nowadays. If you don't take good care of yourself, you can also take care of others less well. Honesty is that you can be open with each other. If you love yourself too, say, then you can also love others more. It's important that if you can't do something, you simply accept it. [...] And indicate your limits. In healthcare you often do things, or an activity, that you can't always keep up with, say, physically. That you have the opportunity to indicate your limits. You're often asked to do something ... also extra actions or extra things. That's why it's important to be able to indicate your limits." – Participant # 2

Four participants indicated that working in self-managing teams contributed to either them or their colleagues violating their boundaries. All four participants mentioned that they had left or were about to leave the organization because they were working in self-managing teams.

Table 7 Factor that inhibits Integrity with Self

Factor	**N**
Violating your own boundaries	4

Table 8 Quotes from interviews on factors inhibiting Integrity with Self

Factor	**Quotes from interviews**
Violating your own boundaries	Yes the first ten years [ed. before the self-managing teams] I was true to myself. Then I didn't go beyond my limits. Back then it wasn't a stressful job. Then it was a job that gave me satisfaction and that I really enjoyed. In recent years I went beyond those limits because there was no other way. When you disregard yourself, you're in the shit. (Participant # 12) Yeah well I never thought I'd leave there, never. I have just been faithful to myself by listening to myself; I no longer want to fight against something I can't bear [ed. self-management at all locations]. (Participant # 8)

The Expressing Full Potential dimension

Participants indicated that they could use and develop their talents in better ways if they could use and continue to develop their capacities and if they could move on to another position. The Expressing Full Potential dimension, therefore, was experienced in two ways: 1) utilizing capacities, or 2) promotion to another position.

"Encourage and compliment ... and encourage. Pass on new actions [...] Training is very important." - Participant # 2

Three participants felt they did not have the opportunity to develop and use their talents while working in self-managing teams, and also felt that they had fewer career opportunities and training options. Two of the three participants left or were about to leave the organization because they were working in self-managing teams.

Table 9 Factors that inhibit developing and using talents

Factors	N
Career opportunities	1
Free choice of training opportunities	2

Table 10 Quotes from the interviews on factors inhibiting the development and use of talents

Factors	Quotes from interviews
Fewer career opportunities	Participant: Because there are no ranks and positions in a self-managing team, so to speak. Interviewer: Yes, so you didn't see any room to move up, you're saying. Participant: Yes, exactly. (Participant # 10)
Less choice of education opportunities	It used to be a little easier before the idea of self-managing teams came in. Now you really have to check what your team needs. I used to be able to say: now I want to do specialized nursing psychiatry. If you look at what the people in the department have ... a team doesn't need a specialized nurse. So that's a bit limited now; now you really have to look together and see what you need and what the possibilities are for the team. (Participant # 9)

One participant saw self-management as an opportunity to use and develop his/her talents in self-managing teams. This participant reported travel distance and dissatisfaction with higher management as turnover motives.

Table 11 Factor that stimulates the development and use of talents

Factor	N
Capacities	1

Table 12 Quote from one interview on factor stimulating the development and use of talents

Factor	Quote from interview
Using capacities	I also think of a self-managing team. If you need to use and develop talent anywhere, then certainly in a self-managing team. I encourage it very much ... We were very skeptical because it is used a lot in healthcare and everyone says it doesn't work. It'll be chaos. I now work in a team that shows that it really works. That you will increasingly see that you want to develop each other. That you all use each other's capacities. With a team that doesn't have a self-managing team but that still has a departmental head on the team, then you no longer use them and they ebb away. I'm very much in favor of a self-managing team. [...] ensure that a self-managing team can prove itself. This doesn't mean that it works everywhere, but I'd definitely like to say to everyone: see if it works at all. If it collapses, it can always be picked up. There really are locations or departments where it really doesn't work. That also depends very much on the team. (Participant # 4)

In summary, it appears that, for seven of the fifteen participants, working in self-managing teams was a reason for turnover. Nine of the fifteen participants indicated that working in

self-managing teams led to additional tasks such as scheduling, caretaker tasks, budget management and meetings. As a result, these participants experienced that this affected their core work: nursing. Frustration about this and violating one's own boundaries get in the way of Service to Others and Integrity with Self. A few participants indicated that working in self-managing teams was an obstacle to their career and training ambitions, and, hence, to Expressing Full Potential. One participant indicated, on the other hand, that his/her capacities were being utilized within self-managing teams, which made Expressing Full Potential possible.

Conclusion and Discussion

This explorative qualitative study looked at how a specific group of nurses, namely those who left their organization or were planning to leave, experienced their work after the introduction of self-managing teams. This was done from a multidimensional meaningful work perspective. This explorative qualitative study contributes to our knowledge of turnover reasons, work experience after the introduction of self-managing teams and meaningful work. This research shows that a specific group of employees negatively relates self-management to various aspects of work experience, affecting their core work: nursing. They also experience a high workload. Some employees experience obstacles to achieving their career and training ambitions. These negative work experiences can make nurses decide to leave the organization. The findings in this study are in line with findings on self-management in teams and a higher turnover (Seers et al., 1995) and lower work satisfaction (Mueller & Cordery, 1992).

This research shows that fifteen participants did not experience multiple dimensions of meaningful work, which may be so because the form in which they experience the four universal dimensions of meaningful work differs from person to person (Lips-Wiersma & Morris, 2011). This is reflected in the results in the Expressing Full Potential dimension. While several participants indicated that there was no room in self-managing teams to grow into specialist positions or management positions, another participant indicated that one actually had the space to fully utilize your capacity in a self-managing team. This is in line with other studies that suggest that personality traits influence preference or dissatisfaction with work autonomy. Personality traits can influence people's willingness to take more responsibility and to work in autonomous or self-managing teams, and they can thus influence satisfaction with self-managing teams (Hackman & Lawler, 1971).

Another important finding is that self-managing teams are associated with higher workload. This is in line with findings in other studies of self-managing healthcare teams (De Veer, Brandt, Schellevis & Franke, 2008; Weerheim et al., 2019). According to the participants, such higher workload arises because they have to attend team meetings and perform additional non-care-related tasks, such as cleaning the coffee machine, mopping or caretaker tasks. The higher work pressure affected the nurses' experience of Service to Others and Integrity with Self.

Limitations and recommendations for future research

An important limitation of this study is that its empirical setting is specific. The majority of the specific group of participants in this study did not experience meaningful work in self-managing teams. This select group of employees from a single organization who voluntarily had or were intending to leave the organization does not allow us to make firm statements about the causal relation between self-management and meaningful work, as the results do not provide any insight into the experiences of employees who chose to stay after self-managing teams were introduced. The chosen form of self-management and its implementation process are specific to the studied healthcare organization. This study, therefore, is too limited to be able to demonstrate to what extent self-management is causally related to perceived meaningfulness in work.

The central contribution of this study is that it sheds new light on a specific group: employees who leave their organization after a form of self-management has been introduced, and the study's aim is to describe the experiences of employees who left the organization after the introduction of self-managing teams. This can give us more insight into potentially negative side-effects of self-managing teams, which can form a basis for future quantitative research into the effects of self-managing teams.

In particular, the study invites further research into the experience of meaningful work in self-managing teams. Many people today want their work to be more than just a way to make money: they want their work to matter (Steger et al., 2012). People are looking for meaningfulness in their work. A meta-analysis shows that meaningful work is related to work involvement and job satisfaction (Allan, Batz-Barbarich, Sterling & Tay, 2019). Given the increasing demand for meaningful work by employees and the related positive outcomes, future research into well-being and work experience in self-managing teams should at least use meaningful work as an outcome measure.

An obvious question is whether the observations from this research are unique to intramural care teams in this particular organization and for intramural care teams in general.

To what extent can these observations be generalized to other healthcare sectors? In addition, a pressing question is whether the outlined relation between self-managing teams and perception of work differs from that of employees who have continued to work in self-managing teams.

For further research, it is recommended, therefore, to conduct quantitative and longitudinal research in addition to interviews in various care sectors. By conducting quantitative research into the perception of working in self-managing teams among employees who stay and those who leave, the work experience between these two groups can be compared. Quantitative longitudinal research into the experience of working in self-managing teams may offer insight into the development of work experience within self-managing teams. This allows us to gain insight into who experiences meaningful work in self-managing teams.

Further research will also make it possible to interpret the total turnover of 78 people and the finding that seven of the participants left the organization in relation to self-management. Without more information, these numbers are difficult to interpret. Are these numbers high, low or comparable with the numbers that we see for other organizational changes? The Comprehensive Meaningful Work Scale (as an operationalization of the map of meaning; Lips-Wiersma & Wright, 2012) is the most applicable method for conducting quantitative follow-up research into meaningful work within different care sectors and groups of employees.

For the Unity with Others dimension, future research should question all three sub-themes (belonging, working together and shared values). In this study, only the experience of belonging was studied, which gives us only a limited insight into the experience of Unity with Others. It is possible that if employees experience no relation with the team, they can experience or find Unity with Others outside the team. Employees can, for example, feel connected to clients or colleagues outside their own team. If Unity with Others is not experienced inside but outside the team, what does this mean for working in self-managing teams? And what does it mean for the experience of meaningful work?

Follow-up research could also clarify whether there is task broadening (a larger number of executive tasks) or task enrichment (including regulatory tasks) in self-managing teams. And what does this mean for work experience? The quotes show that both changes can lead to resentment. The administrative tasks, the need to regulate who does what and domestic work are begrudged (Vermeerbergen, Van Hootegem & Benders, 2016**).** Another question is which changes in the range of tasks are due to the introduction of self-managing

teams and which ones are external, imposed by the government or health insurer, for instance.

This applies in particular to administrative work. Having employees arrange things themselves should reduce the administrative burden. Is it true that managers, because they have reduced control, start to check more strongly for results and demand written accountability? Or are the administrative requirements that were previously made upon managers and staff have now been shifted the self-managing teams? And what does this mean for experienced workload and meaningful work?

A related research question can focus on the optimal socio-technical structure. According to the STS, it is important that work is designed around groups of employees who have control and autonomy in their own work and who receive performance feedback. This raises questions such as "what is the optimal number of employees in a group?", "what is the optimal type and degree of freedom?" and "what type and how often should performance feedback be given?" Research by Nijholt and Benders (2005) shows that the focus in many studies has shifted from socio-technical structure to self-management in teams. As a result, the concept of self-management in teams has become increasingly detached from its socio-technical origins (Nijholt & Benders, 2005). The result is that assumptions about the effects of self-managing teams are based on the STS, without investigating whether there is an optimal alignment of technological and social aspects in the relevant working environment. This study also looked at the concept of self-management in teams rather than at the optimal socio-technical structure. In theory, self-management provides fulfilment of people's need for autonomy and control in the workplace, and cooperation in care teams can fulfil people's need for connectedness, which leads to optimum coordination of technical and social aspects.

Self-management in teams, however, is interpreted in different ways in the care sector (Heijkants, Prins & Willemse, 2018), which is expressed, among other things, in different degrees of autonomy between teams. Recent research into meaningful work has shown that autonomy in care provision and autonomy in work planning in particular contribute to meaningfulness in work (See Chapter 5). These forms of autonomy are about individual autonomy, which may be strengthened or weakened in teams. Employees can exert more influence on when they work, on the one hand, because they prepare the roster together with colleagues, but this influence may be limited, on the other hand, if a certain degree of social cohesion is lacking and empowered colleagues control the roster for the rest of the team. This raises the question what is the optimal balance between different forms and degrees of

individual autonomy in work and solidarity within teams? How does this relate to the concept of self-managing teams?

A fourth possible avenue for future research could focus on how self-managing teams are introduced within organizations. In the organization I examined, there was a lot of variation in the method of introduction and degree of self-management between teams. It is possible that the concept of self-management in the participants' teams was not implemented to the intended degree, such that the participants were unable to experience the positive aspects of self-managing teams. It is also possible, however, that employee participation in organizational change does not necessarily have a positive effect on the well-being of employees. Research findings regarding the effects of employee participation in organizational decisions on employee well-being are not straightforward. Employee participation, on the one hand, appears to have a positive effect on skills development and on greater support for experienced employees, which reduces work stress and increases well-being. On the other hand, employee participation seems to aggravate work stress, as workload, work pressure and lack of clarity increase (Boxall & Macky, 2014; Kalleberg, Nesheim & Olsen, 2009).

In this study, it emerged that team meetings contributed to a higher workload. This hampered the experience of Service to Others and Integrity with Self. From the frequency with which the experience of serving others was mentioned in the interviews, it can be deducde that this is an important source of meaningfulness in work. If Service to Others is an important source of meaningfulness and if work pressure hinders this experience, this raises the question how higher work pressure can be prevented when involving employees in organizational change. A possible solution for avoiding higher workloads could be that nurses are temporarily asked to do less nursing tasks. But if the experience of Service to Others comes from providing care to clients, what does this mean for meaningfulness in work? Studying organizations that have recently abandoned self-managing teams can help to answer these questions because this may help us understand the nature and frequency of self-managing implementation processes that have foundered.

A related research direction could focus on the long average work experience in the care sector, averaging almost 25 years in this study. What does it mean for how people experience work if they have to work in a different way after an average of over two decades? In addition, self-managing teams were introduced after the organization had had a few difficult years due to cuts and reorganizations. Is it unexpected and undesirable that people with a long average work experience leave after they have gone through radical

organizational change involving difficult years with spending cuts and reorganizations? Studying the turnover figures and the characteristics of employees who leave after a major organizational change can help to answer this question.

CHAPTER 7

Meaningful Work and Retention[11]

Abstract
Traditional HR instruments, such as compensation and reward programs cannot be expected to boost retention in the way that is needed to solve nursing shortages. As a large part of the employee population is motivated by meaningful work, the extent to which work is perceived as meaningful could be positively related to retention. In this quantitative explorative study we examine the meaningful work – retention relation. Retention is measured by willingness and ability to continue working. Explorative quantitative analyses using data from 514 nurses nested within four organizational divisions from three health care organizations were conducted. The Comprehensive Meaningful Work Scale was used to measure multiple dimensions of meaningful work. Our study demonstrated that meaningful work was related to willingness and ability to continue working. More specifically, it was demonstrated that Integrity with Self and Spirituality are positively related to willingness and ability to continue working, whereas Facing Reality is negatively related to willingness to continue working. Surprisingly, no relation between Service to Others and willingness or ability to continue working was found. Further research is necessary to further support this pattern of findings. We discuss the findings and possible directions for such research.

[11] Written by Both-Nwabuwe, J.M.C., Dijkstra, M.T.M. & Beersma, B.

Many organizations are facing a struggle to retain employees, particularly in the healthcare sector, due to today's tight labor market (Thibault Landry, Schweyer & Whillans, 2017; Campbell et al., 2013). Estimates from the World Health Organization (WHO) suggest that there will be a global shortage of 12.9 million healthcare workers by 2035 (Campbell et al., 2013). It is crucial, therefore, to retain nurses and make sure that they intend to stay in their present jobs throughout their careers (Mrayyan, 2005) as nurses comprise the largest part of the healthcare workforce (Buchan, Duffield & Jordan, 2015) and influence the quality of care in important ways (see Chapter 1; Both Nwabuwe, Dijkstra & Beersma, 2018). Boosting retention can have a significant and positive impact on reducing these shortages (see Chapter 1; see also Health Workforce Australia, 2012).

Traditional HR instruments, such as compensation and reward programs, cannot be expected to boost retention in the way that is needed because employees' attitudes towards work have changed, as have their expectations of what work should be providing them with (Langfred & Rockmann, 2016; Harpaz & Fu,. 2002): besides the obvious economic benefits of work, employees attach increasing importance to meaningfulness in their work across different professions (Gheaus & Herzorg, 2016; Harpaz & Fu, 2002; Thibault Landry et al., 2017). Meaningful work comprises tasks and activities on an occupational basis that contribute to the existential significance or purpose of one's life (See Chapter 3).

As many employees seek meaningfulness in work as much as, or even more than, financial rewards (Thibault Landry et al., 2017), traditional HR instruments that focus on monetary aspects of work are less effective in contemporary work environments than they used to be. Members of the "Millennial Generation" and "Generation Z" strive to work in organizations in which they will find skills training, social connections and company purpose. The newest generation of workers want to feel that their input makes a difference to customers, colleagues, peers and supervisors. At the same time, meta-analytical research has shown that, as employees age, they become more intrinsically motivated to seek a personal purpose in or through their work (Thibault Landry et al., 2017). If we consider that a large part of the employee population is motivated by meaningful work and that this continues to be the case throughout their careers, the extent to which work is perceived as meaningful could be positively related to retention.

Retention requires, first of all, that nurses should be *willing* to continue working in their jobs. In the Netherlands, less than half the nurses (39%) are currently willing to continue working until statutory retirement age (de Veer & Francke, 2011). Secondly, the context of nursing specifically requires that attention should be paid to their *ability* to continue working

(i.e., that they are physically and mentally able to conduct their work; Pak, Kooij, De Lange, Van Veldhoven, 2019). Nurses are exposed to many physical and psychosocial risks, such as high workload intensity and violent, abusive or demanding patients (Williams, Dale, Glucksman & Wellesley, 1997). Nurses in the elderly care sector, for example, are at increased risk of developing musculoskeletal disorders because of the physical demands of their job, and nurses with musculoskeletal complaints, in turn, may experience more difficulties in meeting the physical demands of their job. Due to their decreased physical ability, they may be unable to continue working in their job and may leave the profession. To gain insight into the relation between meaningful work and retention, we must, therefore, examine how meaningful work is related to both the willingness and the ability to continue working.

To our knowledge, there is only one qualitative study on nursing career trajectories that found that work that was perceived as meaningful and provided a sense of purpose in life actually contributed to willingness to continue working (Salminen, 2019). Other studies have demonstrated the relation between meaningful work and willingness and ability to continue working in more indirect ways. Research has demonstrated a positive relation between meaningful work and general health (Arnold & Walsh, 2015). Previous studies on working until retirement found that health plays an important role in willingness and ability to continue working (Geuskens et al., 2012; Nilsson, Hydbom, Rylander, 2011). In their meta-analysis of outcomes of meaningful work, Allen, Batz-Barbarich, Sterling and Tay (2019) found that meaningful work had a moderate relation with general health, as one's overall physical functioning (Allan et al., 2019). Meaningful work, therefore, has a positive relation with general health, and as such may have a positive relation with willingness and ability to continue working. The relation between meaningful work and willingness to continue working has also been examined indirectly by examining the relation between meaningful work and job satisfaction (Wrzesniewski, McCauley, Rozin, & Schwartz, 1997), work engagement (May, Gilson, & Harter, 2004) and work motivation (Hackman & Oldham, 1980). Allen et al. (2019) predicted and found large meta-analytic correlations between meaningful work on the one hand and work engagement, commitment and job satisfaction on the other.

Although previous research has shown that meaningful work correlates with outcome variables related to retention, and although it is therefore highly plausible for meaningful work to be positively related to retention, these studies have unfortunately tended to focus on meaningful work as an unidimensional construct. In these studies, that is, meaningful work

was conceptualized as a simple, single construct: either one finds work meaningful or not. Amongst researchers who have studied what makes work meaningful, however, the idea is now emerging that meaningful work is not a simple unidimensional construct but rather a multidimensional construct (see Chapter 3; Chalofsky, 2003; Lips-Wiersma & Morris, 2011; Rosso et al., 2010; Steger et al., 2012). According to this perspective, meaningful work is a combination of concepts such as "mastery," "unity," "authenticity" and "helping others" (Lips-Wiersma & Wright; Rosso et al. 2010; Steger et al., 2012). This means that several dimensions must be fulfilled to give people the feeling that what they do is significant and for their work to be perceived as meaningful (See Chapter 3).

Despite the emerging conceptualization of meaningful work as a multidimensional construct, the vast majority of current studies on meaningful work still use Spreitzer's 3-item scale to measure meaningful work (Lips-Wiersma, Haar & Wright, 2020). Items in this scale are "my job activities are personally meaningful to me"; "the work I do is very important to me" and "the work I do is meaningful to me." This scale captures people's overall judgement of whether their work is meaningful but does not specify the particular experiences that make it meaningful. If meaningful work is measured in this way, this makes it difficult to discriminate the precise relations between dimensions of meaningful work and outcomes. As a consequence, uncertainty remains over which dimensions of meaningfulness (for example, '"mastery," "unity," "authenticity" and "helping others") are most salient to people in relation to retention (Bailey, Yeoman, Madden, Thompson, & Kerridge, 2019).

To better understand the relation between meaningful work and retention, this study explores the relation between meaningful work and willingness and ability to continue working from a multidimensional perspective. To examine meaningful work from a multidimensional perspective, we used the map of meaning and its accompanying measurement instrument, the Comprehensive Meaningful Work Scale (CMWS; Lips-Wiersma & Wright, 2012) as a conceptual framework for meaningful work. A full description of the map of meaning is provided in Chapter 1.

The goal of this explorative study is to gain insight into the relation between the dimensions of meaningful work and retention, by examining which aspects of meaningful work are particularly relevant for nurses' willingness and ability to continue working. As such, this study addresses the call for studies to explore the usefulness of a multidimensional scale in explaining relations between particular dimensions of meaningful work and particular outcomes (Lips-Wiersma et al., 2020). Besides being relevant for theory development regarding the consequences of meaningful work, such understanding is also highly relevant

from a practical perspective, as it will help organizations to design policies that contribute to nurse retention.

Methods

Using a quantitative survey, we examined the relations between the meaningful work dimensions specified by the map of meaning and nurses' willingness and ability to continue working.

Data collection

This study involved healthcare workers from four departments in three healthcare organizations in the Netherlands and was part of a larger study on the sustainable employability of nurses.[12] All healthcare workers working in the selected departments received a questionnaire. The study was conducted in 2017.

Employees were informed that the purpose of the study was to examine the sustainable employability among nurses, that is nurses' capability to participate in present and future jobs while preserving good health and well-being as well as the necessary conditions for this to occur (Van der Klink et al., 2016) and that their responses would be anonymous and could not be traced back to them, personally. They were asked to provide their informed consent by indicating their agreement to the statement: "I hereby declare that I have taken note and understand that the data and results of the research will be treated confidentially and processed in research reports". To stimulate them to respond, the opportunity of winning a 25-euro cinema gift voucher was used as an incentive. In addition, several reminders were sent by e-mail. In one department, paper-and-pencil sessions were organized. The questionnaire consisted of two parts. The first part addressed demographic characteristics, such as gender, years of nursing experience, educational level and weekly working hours. The second part included scales on meaningful work, autonomy, work orientation, work capabilities and job crafting.

Of the 559 individuals who filled out the questionnaire (response rate: 35%), eight participants had two or more missing values for study variables, and 37 participants had occupations other than nurses (e.g., hostess, occupational therapist, intern, student). These participants were removed from the sample. The final sample consisted of 514 employees. The majority of participants were female (92%). On average, they were 46.98 years old (*SD* = 11.75). Sixteen percent had completed high school, 51 percent had completed college, 27 percent had a Bachelor's degree and one percent had a Master's degree. Job descriptions

[12] As part of this larger study, we also assessed work orientation, autonomy, job crafting and capabilities. Data related to these variables are available upon request.

varied from nurse assistants (4.9%, n=25), care workers (14.4%, n=74), personal care workers (5.8%, n=30), practical nurses (36.8%, n=189), second-level registered nurses (post-secondary college degree) (16.9%, n=87), to first-level registered nurses (Bachelor's degree) (21.2%, n=109). On average, they worked 27.11 hours per week (*SD* = 6.51), and on average they had worked in the same position for 11 years (*SD* = 10.09). Due to case-wise deletion (i.e., cases with one missing variable were removed), the sample for the various analyses varied between n=490 and n=509.

Measures

Meaningful work was measured by 28 items using the Comprehensive Meaningful Work Scale (CMWS), developed and validated by Lips-Wiersma and Wright (2012). This questionnaire represents an operationalization of meaningful work derived from the model of the map of meaning. This scale was translated into Dutch. Linguistic validation of the final questionnaire encompassed forward-backward translation and three focus groups with healthcare workers with different educational levels and positions. These healthcare workers were asked to give feedback on the questionnaire.[13] The items were rated on a Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree." See Appendix 2 for the items. The Cronbach's alphas were: Integrity with Self (3 items): α = .73, Unity with Others α = .90, Service to Others α = .82; Expressing Full Potential α = .78, Facing Reality α = .53, Spirituality α = .84 and Balancing Tensions α = .81. The reliability of almost all subscales, therefore, was adequate although the low reliability of the Facing Reality subscale is reason for caution. In addition, we aggregated meaningful work scores from all seven dimensions to examine the relation between the overall level of meaningful work and the willingness and ability to continue working. The Cronbach's alpha for the overall scale was .92, demonstrating adequate reliability.

Ability to continue working was assessed as self-perceived ability to continue working by means of one item: "All things taken together, I think I have enough opportunities to

[13] Focus group one consisted of two 24-year-old practical nurses. Focus group two consisted of two nursing students (19 years old). Focus group three consisted of a second-level registered male nurse (30 years old) and a first-level registered female nurse (24 years old). Items in the questionnaire were adjusted and clarified as a result of discussions with the focus groups. The informed consent question was moved to the top of the first substantive question and printed in bold as three people from the focus groups had failed to notice the question. Two items relating to clinical autonomy (not relevant for the purpose of the present chapter) were also adjusted because these items asked about freedom in acting as a nurse or carer. It was noted in one of the focus groups that respondents could interpret this question as one they did not have to address because, for example, they were working as nurse assistants or personal care workers. In addition, the question of level of education was clarified by asking respondents about their highest completed level of education instead of their highest level of education.

remain working until my retirement age" (Abma et al., 2016). The items were also rated on a Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree".

Willingness to continue working was assessed by means of one item from the Netherlands Working Conditions Survey (Van den Bossche, Koppes, Granzier, de Vroome & Smulders, 2008): "All things taken together, I would like to continue working until my retirement age." The items were also rated on a Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree".

Data analysis

Hierarchical linear regression analyses were performed in order to test the relations between the different dimensions of meaningful work and willingness and ability to continue working. Given the fact that we examined multiple relations, the Bonferroni correction was applied to meet a rigorous threshold to minimize spurious positive associations (Armstrong, 2014). We controlled for the effects of five control variables: gender, age (measured in years), occupational years, weekly working hours and educational level, where gender was coded as male = 1, female = 2. These control variables were chosen because research has shown that they could influence meaningful work (Steger et al., 2012). The control variables were first included in the regression models to control for their effects. To make sure that our results were robust, (see Spector and Brannick, 2011 for a discussion of potential distortion of findings through the inclusion of control variables), we also performed the analyses without the control variables.

Results

The results for the bivariate correlations between all study variables are presented in Table 1. Table 1 makes clear that meaningful work was significantly correlated with age ($r = 0.61$; $p < 0.05$), ability to continue working ($r = 0.34$; $p < 0.01$) and willingness to continue working ($r = 0.33$; $p < 0.01$). Furthermore, ability to continue working was significantly correlated with education ($r = 0.15$; $p < 0.01$). Ability to continue working was significantly correlated with willingness to continue working ($r = 0.61$; $p < 0.01$). Finally, all dimensions of the map of meaning, except Facing Reality, were significantly correlated with willingness and ability to continue working.

As shown in Table 2, we found that meaningful work as an overarching construct was significantly positively related to willingness to continue working ($b = .32$, $p < .01$) and to ability to continue working ($b = .33$, $p < .01$).

As shown in Table 3, we found that meaningful work subscales Integrity with Self and Spirituality were both positively related to willingness (b = .16, p <.007; b = .32, p <.007) and ability to continue working b = .15, p <.007; b = .23, p <.007). In addition, Facing Reality was negatively related to willingness to continue working. No other relations were found.

To make sure that our results were robust, we also performed the analyses without the control variables. Our results remained largely stable in terms of magnitude, direction and significance regardless of whether control variables were included or excluded.

Table 1. Correlations between ability and willingness to continue working and meaningful work. N=489.

	Mean	**SD**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**
Control variables																
1. Age	47.06	11.71	1													
2.Gender	1.92	.27	.01	1												
3.Education	4.13	1.07	-.14*	.03	1											
4.Weekly working hours	26.97	6.51	-.06	-.11**	.01	1										
5.Occupational years	11.37	10.17	.42*	.01	-.17*	-.02	1									
Study variables																
6. Ability to continue working	3.47	1.02	.04	.07	.15*	.01	-.00	1								
7. Willingness to continue working	3.48	1.08	.03	.05	.04	.05	-.02	.61*	1							
8. Meaningful work	3.86	.44	.09**	.04	.08	-.05	-.01	.35*	.32*	1						

9. Integrity with Self	4.06	.76	.12**	.00	.04	-.11**	.03	.26*	.25*	.59*	1				
10. Unity with Others	4.05	.58	.08	.04	.08	-.04	.00	.23*	.19*	.82*	.39*	1			
11. Service to Others	4.31	.51	.09**	.08	.10**	-.01	.04	.20*	.22*	.72*	.36*	.56*	1		
12. Expressing Full Potential	3.75	.57	-.01	-.04	.10**	.10**	-.05	.27*	.28*	.76*	.26*	.57*	.59*	1	
13. Facing Reality	3.66	.57	.00	.08	.03	-.01	.00	.05	.04	.54*	.24*	.39*	.31*	.31*	1
14. Spirituality	3.61	.66	.10**	.08	.05	-.04	-.02	.37*	.38*	.79*	.36*	.51*	.49*	.61*	.34**	1
15. Balancing Tensions	3.48	.68	.06	.00	.00	-.10**	-.05	.30*	.24*	.73*	.37*	.47*	.36*	.42*	.31**	.60*

Notes

* Significant at p <0.01

** Significant at p <0.05

Table 2. Multivariate linear regression of total score of meaningful work on willingness to continue working and ability to continue working until retirement age (N=493).

	Willingness to continue working				Ability to continue working			
	Mean	SD	*β*	SE	Mean	SD	*B*	SE
Control variable								
Age	47.07	11.69	.02	.00	47.13	11.68	.02	.00
Gender	1.92	.27	.05	.17	1.92	.27	.06	.16
Education	4.12	1.07	.01	.04	4.12	1.06	.04	.13*
Weekly working hours	26.93	6.50	.07	.01	26.98	6.51	.01	.04
Occupational years	11.42	10.17	-.02	.01	11.35	10.13	.01	.02
Study variable								
Meaningful Work	3.86	.44	.32*	.01	3.86	.44	.33*	.10

* p < .01

Table 3 Multivariate linear regression of dimensions of meaningful work on willingness to continue working and ability to continue working until retirement age. N=492

	Willingness to continue working				Ability to continue working			
	Mean	SD	*B*	SE	Mean	SE	*β*	SE
Control variables								
Age	47.04	11.69	-.01	.00	47.10	11.68	.00	.00
Gender	1.92	.27	.05	.17	1.92	.27	.07	.16
Education	4.12	1.07	.01	.04	4.13	1.06	.13*	.04
Weekly working hours	26.98	6.50	.07	.01	27.00	6.50	.05	.01
Occupational years	11.42	10.18	-.01	.01	11.35	10.14	.03	.01

Study variables								
Integrity with Self	4.06	.76	.16*	.07	4.06	.76	.15*	.06
Unity with Others	4.05	.58	-.04	.11	4.04	.58	.01	.10
Service to Others	4.31	.51	.01	.12	4.31	.51	-.04	.11
Expressing Full Potential	3.75	.57	.09	.11	3.75	.57	.07	.11
Balance	3.48	.68	.02	.09	3.48	.68	.12	.08
Facing reality	3.66	.57	-.14*	.09	3.66	.57	-.12	.08
Spirituality	3.61	.66	.32*	.10	3.60	.66	.23*	.09

* $p < .007$ (Bonferroni correction)

Conclusion and Discussion

In this study, we examined the relation between dimensions of meaningful work and willingness and ability to continue working. We found that meaningful work was related to willingness and ability to continue working. More specifically, we found that Integrity with Self and Spirituality are positively related to willingness and ability to continue working, whereas Facing Reality is negatively related to willingness to continue working. These findings highlight the usefulness of a multidimensional meaningful work scale in studies that examine the relation between meaningful work and retention. These findings also suggest that it is important for retention that nurses can be themselves in their work and that there is a hopeful vision and future; when nurses experience in their daily work that they cannot live up to such a hopeful vision, however, they tend to leave the nursing profession. Surprisingly, we found no relation between Service to Others and willingness or ability to continue working, which is surprising precisely because patient care, which is closely related to Service to Others, is at the heart of the nursing profession. An explanation here might be that the mean level of Service to Others was high and the variance was low (see Table 3); as such, the relation between Service to Others and willingness and ability to continue working could not be established.

Practical implications

Labor market shortages force organizations to reconsider their staff recruitment and retention strategies. As more and more employees want to find meaningful work, retention strategies should go beyond the traditional solutions of tuition reimbursement, competitive holiday benefits and competitive pay and focus more on fostering meaningful work. Our research shows that meaningful work − Integrity with Self and Spirituality in particular − are positively related to willingness and ability to continue working. For nurses' retention, furthermore, it is important that they should be able to focus on nursing activities and not be troubled with tasks that are unrelated to the job. This means that for healthcare organizations to retain nurses, they should create working conditions that allow nurses to be themselves in their work and that give them the freedom to work according to their professional judgement. Furthermore, healthcare organization should provide a hopeful vision on care delivery that is in line with the reality of human and financial resources.

Limitations and recommendations for future research

This explorative study has some limitations, each offering directions for future research. First and foremost, the quantitative data were cross-sectional, which precludes conclusions about causality of meaningful work and willingness and ability to continue work. As the research design was exploratory, furthermore, conclusions should be interpreted carefully. The central contribution of this study is that it shows that the relation between meaningful work and retention should be examined with a multidimensional meaningful work scale in future studies. This can give us more insight into how specific experiences that contribute to meaningful work (such as Service to Others) are related to willingness and ability to continue working.

In particular, the study invites further research into the relation between Service to Others and retention. We found no relation in this study. To understand this finding, therefore, we re-examined the qualitative data of Chapter 6, in which we focused on nurses who had left or were about to leave their organization (see Chapter 6 for a full description of the research method). We expected that one of their reasons for leaving would be that they did not experience Service to Others. Participants who continued to work as nurses after they had left the organization were willing and had the intention to continue working in the healthcare sector until they reached their statutory retirement age, saying that their main reason was that their work provided fulfilment. Meaningful moments were described in terms of contributing to patients' lives while performing their work. They did mention, however, that a high work load sometimes interfered with their ability to contribute to their patients'

lives in a way they considered satisfactory. Several participants indicated that job enlargement, by way of working in self-managing teams, kept them from doing their actual job. For seven participants, self-managing teams were one of the reasons for leaving (see Chapter 6).

These findings from the qualitative study suggest that Service to Others is related to retention. Future quantitative research should examine the relation between Service to Others and retention in a group of nurses with more variation in their experience of delivering Service to Others. This could be done, for example, after an institutional change in the healthcare sector, such as the one that occurred in the Dutch home care sector, where the call for self-reliance by means of informal caregiver support has become ever more prominent. This has caused some nurses to feel that care is not just about care anymore (Van Wieringen, 2019). It would be interesting to examine how these nurses experience Service to Others and how this relates to their intention to leave or stay in the nursing profession.

An obvious other research question is whether the observations from this study are unique to elderly care or whether our observations can be generalized to other healthcare sections. Nurses in the elderly care sector have an increased risk of developing musculoskeletal disorders due to the physical demands of the job, while nurses in the mental healthcare sector are exposed to psychosocial risks such as violent, abusive or demanding patients. These differences in physical and psychosocial risks may influence the generalizability of our findings. For future research, therefore, it is recommended to conduct research in various care sectors. Performing research in different care sectors may offer insight into the relation between physical and psychosocial risks in the nursing workplace and nurses' ability to continue working. Future studies could experimentally test the present conclusions on the relation between meaningful work and retention, which would allow for definite causal conclusions to be drawn. Future research could, for example, manipulate a meaningful task (such as Service to Others) in three conditions (e.g. physically demanding, psychosocially demanding and physically and psychosocially demanding) and investigate how challenging work influences willingness and ability to continue a purposeful task. This would enhance our understanding of how outcomes of meaningful work are influenced by work conditions.

Future research will also make it possible to interpret the low Cronbach's alpha for the Facing Reality scale ($\alpha = .53$). The Cronbach's alpha of the original English version, $\alpha = .79$, was higher and acceptable (Lips-Wiersma & Wright, 2012). Possibly, Dutch respondents used different definitions of Facing Reality that may have affected the way in which they

answered the items. Alternatively, this may be due to the sample being Dutch. A cultural stereotype about Dutch people is that they tend to be pragmatic. As such, there may be a restriction of range in our Dutch sample on the Facing Reality scale. Additional analysis of the data showed that there is indeed a restriction of range in our Dutch sample on the Facing Reality scale. Further research is necessary to test the reliability and validity of the Dutch translation of the CMWS.

Future research will also make it possible to examine whether multi-item scales are necessary to operationalize willingness and ability to continue working. In this study, both willingness and ability to continue working were operationalized by one-item measures, a practice that should not be rejected unequivocally (see Wanous and Reichers, 1996), being a less time-consuming effort that was assumed to have more face validity in this case (see Nagy, 2002). Future work using multi-item scales is called for, however, to enable us to compare psychometric qualities.

In addition, future research will also make it possible to examine the relation between self-perceived ability to continue working and actual retirement age. In this study, ability to continue working was measured as self-perceived ability to continue working. Although Oude Hengel (2013) showed that among older workers the willingness and ability to continue working until the age of 65 were predictive for early retirement, this relation has not been examined among younger workers. Younger workers may be less aware of the hazards that could alter their ability to continue working since retirement is a long-term issue for them.

In conclusion, this exploratory study improves our understanding of the relation between meaningful work and retention. We found that multiple but not all dimensions relate willingness and ability to continue working. This shows the usefulness of using a multidimensional meaningful work scale in studies that examine the relation between meaningful work and outcomes. Further research is necessary to provide further support for our findings and gain a deeper understanding of the influence of meaningful work on retention in different healthcare sectors.

CHAPTER 8

General Discussion

In this dissertation, I explored how meaningful work could contribute to nurse retention, and if this could help to reduce nursing shortages. To explore meaningful work as a potential antidote against nursing shortages, I first examined the causes of nursing shortages in the Netherlands. Secondly, I examined how and when nurses perceive their work to be of existential significance. Additionally, I examined the relation between meaningful work and retention. In doing so, the following five objectives were addressed (also mentioned in **Chapter 1**):

1. to provide insight into whether nursing shortages are the result of scarcity of nurses or maldistribution of nurses;
2. to develop an integrative definition of meaningful work and identify a corresponding scale;
3. to examine the relation between different types of autonomy and meaningful work;
4. to provide insight into the relation between working in self-managing teams and meaningful work;
5. to examine the relation between meaningful work and the ability and willingness to continue working.

In what follows, the main findings reported in the preceding chapters will be summarized in light of these objectives. Subsequently, the major implications and contributions of the findings are discussed. Finally, I discuss the general limitations of the studies in this dissertation and present recommendations for future research directions. The chapter ends with a concluding remark.

Summary of the main findings

First objective: scarcity of nurses or maldistribution of nurses?

Nursing shortages can be caused by scarcity of nurses in general or by maldistribution of nurses in the healthcare system. If there is scarcity of nurses in general, nursing shortages can be observed in all healthcare sectors. Maldistribution of nurses in the healthcare system, however, means that nurses are unequally distributed over the healthcare system. Scarcity of nurses in general requires different policy responses than maldistribution of nurses. To

implement effective policies, therefore, it is important to know the cause of nursing shortages. The first objective, therefore, was to provide insight into whether nursing shortages are the result of scarcity of nurses or maldistribution of nurses in the healthcare system.

In the literature review reported in **Chapter 2,** together with three co-authors, I examined the causes of nursing shortages in the Netherlands. Based on data of a national labor market research program and data from the Dutch Employed Persons' Insurance Administration Agency, we found that nursing shortages in the Netherlands are projected for practical as well as first-level registered nurses. Furthermore, the literature review showed that the predicted nursing shortages are unevenly distributed over the Dutch healthcare system and are caused by scarcity of nurses as well as maldistribution of nurses. Specifically, regarding shortages of practical nurses, our review showed that maldistribution appears to be responsible for these shortages; there is an expected excess of practical nurses in hospitals, whereas shortages are to be expected in long-term elderly care. Shortages are imminent for first-level registered nurses, although there are differences between healthcare sectors. A surplus of first-level registered nurses is expected in hospitals in the short run, followed by a shortage in the subsequent two years. In home care, shortages of first-level registered nurses already exist, and, depending on different scenarios, are expected to continue to exist and even to increase in subsequent years. The maldistribution of nurses is caused by the shift of healthcare services from hospitals towards home care and nursing homes. This shift increases the demand for nurses in home care and nursing homes and, as a result, increases nursing shortages in these healthcare sectors.

Our findings highlight the importance of examining nursing shortages across the different healthcare sectors. Policymakers should focus on a core set of solutions in order to maximize the impact of interventions intended to deal with nursing shortages. This means improving recruitment, retention and re-entry of nurses as well as using nursing resources effectively (Buchan & Aiken, 2008) and, to decrease maldistribution, to improve the transition of nurses from one healthcare sector to another.

As nursing shortages will be most prominent in long-term elderly care, the empirical studies in this dissertation were performed within long-term elderly care. In doing so, we deepened our understanding of how and when nurses in long-term elderly care experience their work as being of existential significance. Given the importance of retention, furthermore, I focused particularly on the potential of meaningful work as a means to retain nurses.

Second objective: an integrative definition of meaningful work and a measurement instrument that is suitable for measuring meaningful work

Addressing the second objective in **Chapter 3,** I wished to examine how and when nurses experience their work as purposeful. In order to do so, I needed to know what the concept of meaningful work entails. Research on meaningful work, however, has suffered from a lack of consensus regarding this question (Bailey et al., 2019; **Chapter 3**). Consequently, there is no consensus on how to operationalize the concept of meaningful work (**Chapter 3**). Establishing an integrative definition of meaningful work and identifying a measurement instrument that is suitable to measure the construct as defined, would enable us to examine how meaningful work can be enhanced in organizations and examine its relation with retention. The second objective, therefore, was to develop an integrative definition of meaningful work and to identify a corresponding measurement scale.

With the aid of the literature reviews reported in **Chapter 3**, together with two co-authors, I set out to develop such an integrative definition of meaningful work and to identify a corresponding meaningful work scale. First, we reviewed the literature on existing definitions of meaningful work**.** Based on recent findings, the idea emerged that meaningful work is a multidimensional construct (e.g., Lips-Wiersma & Morris, 2011; Rosso et al., 2010). Employees perceive their work as more significant if multiple dimensions are experienced and as less meaningful if this is not the case. Meaningfulness in work gets lost if one dimension is expressed to the exclusion of the other dimensions (Lips-Wiersma & Morris, 2011). Therefore, we focused on literature in which meaningful work is conceptualized as a multidimensional construct.

We found fourteen unique definitions of meaningful work. From these fourteen definitions, we extracted the following integrative and comprehensive definition of meaningful work: "Meaningful work is the subjective experience of existential significance resulting from the fit between the individual and their work. The 'subjective experience of existential significance' refers to the perception of work as contributing to, or making sense of, one's reason for being. 'The result of the fit' refers to the fulfilment of a number of particular dimensions – inherent in every human being – through or in work. These dimensions should be defined further by the underlying conceptual framework". Dimensions can be described as pathways through which work becomes meaningful. This means that, for work to be meaningful, several dimensions (such as mastery, unity and helping others) must be fulfilled to give people the feeling that what they are doing is meaningful.

Second, we reviewed the literature on existing meaningful work scales that aligned with our integrative definition of meaningful work and checked the identified scales for face validity. In addition, we examined the methodological quality of these scales by assessing the sample characteristics, reliability and measurement validity of each scale. Based on the evaluation of alignment and methodological quality, we identified two validated scales that aligned with the definition that our previous literature review led to and that had sufficient methodological quality: the Work And Meaning Inventory (WAMI) and the Comprehensive Meaningful Work Scale (CMWS).

The WAMI aims to capture the presence of meaningful work. It assesses three dimensions: 1) the degree to which people find their work to have significance and purpose; 2) the contribution work makes to finding broader meaning in life; and 3) the desire and means for their work to make a positive contribution to the greater good (Steger et al., 2012). We argued for using the WAMI in studies aiming to examine the relations between the presence of meaningful work and its antecedents and/or outcomes. It has been found, for example, that different leadership styles influence meaningful work (Bailey et al., 2019). There is some evidence that transformational leadership affects followers' organizational commitment and contextual performance, partially through the followers' perception of meaningful work (Pradhan & Pradhan, 2016). This evidence was based, however, on a one-dimensional scale of meaningful work (Pradhan & Pradhan, 2016), thus offering no insight into which particular dimensions of meaningful work play a role in this relation. The WAMI could be used to examine this relation further. It can help answer questions such as: Which dimensions of meaningful work (the degree to which people find their work to have significance and purpose, the contribution work makes to finding broader meaning in life, and the desire and means for their work to make a positive contribution to the greater good) are related to transformational leadership? Which of these three dimensions influences organizational commitment and contextual performance? This could help to explain the partial mediation effect of meaningful work on the relation between transformational leadership and work- related outcomes.

The CMWS was designed to capture the cause(s) of experienced purposefulness in work. In other words, when individuals say, "my work is meaningful because […]," they describe the reason(s) why their work is existentially significant (Lips-Wiersma & Morris, 2011). We argued for using the CMWS for studies aiming to improve our understanding of possible causes of meaningful work in terms of personal characteristics, task activities and organizational practices. Understanding these causes also enables us to recognize the

circumstances in which meaningfulness may get lost in work. Whereas the WAMI can shed light on the presence of meaningful work, the CMWS enables disclosing the ingredients that underlie it. For example, the CMWS can help answer research questions such as: Why does leadership that is inspirational but not grounded in reality lead to meaninglessness rather than meaningfulness in work? How does leadership influence meaningful work? (Lips-Wiersma & Morris, 2009).

Based on two literature reviews, in conclusion, we provided an integrative definition of meaningful work and identified two corresponding scales: the WAMI and the CMWS. In the empirical studies in this dissertation, I used the CMWS and its underlying framework map of meaning to conceptualize meaningful work (see **Chapter 1** for an elaborate discussion of the framework). Using the map of meaning, I subsequently examined what organizations could do to increase meaningful work for their employees. I focused specifically on two organizational practices that many healthcare organizations are considering or implementing and that are likely to be related to meaningful work: 1) granting autonomy and 2) working in self-managing teams. In the next section, I will first elaborate on the findings on the relation between autonomy and meaningful work. Then I will present the findings on the relation between self-managing teams and meaningful work.

Third objective: the relation between autonomy and meaningful work

The first organizational practice I examined was granting autonomy. In both organizational studies and the ethics literature, the concept of autonomy is often viewed as an important antecedent to meaningful work (Chalofsky & Krishna, 2009; Rosso et al., 2010; Bowie, 1998).

Autonomy can take many forms in today's work environment. It may, for example, be the freedom to schedule your own work or to decide what tasks to perform and how (Langfred & Rockmann, 2016). Autonomy, therefore, is a multidimensional construct. In **Chapter 3**, together with two co-authors, I had established that meaningful work is also a multidimensional construct, consisting of multiple dimensions that together constitute meaningful work. In **Chapter 4**, therefore, together with three co-authors, I argued that perhaps some types of autonomy could relate to some dimensions of meaningful work, but not, or even negatively, to other dimensions.

Insight into which types of autonomy are related to which dimensions of meaningful work is very helpful for organizations struggling with the question what forms of autonomy they should provide to employees. Such knowledge would make it possible for organizations

to direct resources specifically towards those types of autonomy that are most likely to increase multiple dimensions of meaningful work. Neither previous theorizing nor empirical research, however, had addressed the relations between different types of autonomy and different dimensions of meaningful work. The third objective of this dissertation, therefore, was to examine the relation between different types of autonomy and meaningful work.

In **Chapter 4**, based on the existing meaningful work literature, we proposed an autonomy-meaningful work framework. We proposed that professional autonomy, the freedom to make decisions about patient care, would relate to the seven dimensions of the map of meaning. In addition, we proposed that individual autonomy, the individual freedom to determine your own work schedule and procedures for carrying out tasks, would relate to five dimensions of the map of meaning. Furthermore, we proposed that perceived group autonomy, the extent to which group members perceive that the team has the freedom to schedule work and to determine the procedures that are to be used in carrying out team tasks, would relate to four dimensions of the map of meaning.

In the empirical quantitative study reported in **Chapter 5**, together with three co-authors, I examined the hypothesized relations between the three forms of autonomy (professional, individual and perceived group autonomy) and meaningful work, using quantitative data from 510 employees from three organizations. Hierarchical multilevel analyses were conducted to test hypotheses. Our study demonstrated that individual and professional autonomy had significant positive relations with six of the seven meaningful work dimensions. Perceived group autonomy had significant positive, though weak, relations with two dimensions of meaningful work. These findings partially supported our autonomy-meaningful work framework.

Our results showed that different forms of autonomy relate differently to the dimensions of meaningful work. The combination of individual and professional autonomy related to all of the seven dimensions. To achieve meaningful work, therefore, it is very important to provide individuals with the freedom to determine their own schedules and procedures for carrying out their tasks (individual autonomy) as well as put practices in place whereby individuals feel free to take risks in such a way that they can get on with the job rather than have to obtain permission for every single action, use their own professional judgement and have as little bureaucratic interference as possible (professional autonomy). Our results demonstrated that perceived group autonomy only promoted meaningful work to a limited extent, through the experience of Unity with Others and Facing Reality. Regarding the relation between the three forms of autonomy, our research appears to indicate that, while

granting group autonomy to employees appears to be gaining popularity, for example in the form of self-managing teams, healthcare organizations need to prioritize individual and professional autonomy over group autonomy if they want to enhance meaningful work for their nurses.

In the next section, I will describe the second organizational practice I examined to enhance meaningful work: the use of self-managing teams.

Fourth objective: the relation between self-managing teams and meaningful work

Self-managing teams are increasingly being implemented in the healthcare sector (Maurits et al., 2017). The literature on self-managing teams is ambiguous as to the effects this has on the well-being of employees (Van Mierlo et al., 2005). Some healthcare organizations' employees working in self-managing teams reported more motivation and happiness, but employees working in self-managing teams in some other healthcare organizations reported they were more demotivated and unhappy (Skipr, 2016; 2018). In order to improve our understanding of the relation between staff working in self-managing teams and their experience of work, I set out to examine how nurses who had left or were about to leave their organization experienced working in self-managing teams. In particular, I approached their work experience from the meaningful work perspective. This addressed the fourth objective: to provide insight into the relation between working in self-managing teams and meaningful work.

In **Chapter 3**, I had established that meaningful work is a construct that consists of multiple sub-dimensions that together constitute meaningful work. In the qualitative study reported in **Chapter 6**, therefore, I examined the relation between self-managing teams and meaningful work, using a multidimensional perspective of meaningful work. Other studies on self-managing teams and work experiences have used outcome measures such as job satisfaction (e.g., Batt & Appelbaum, 1995; Cohen & Ledford, 1994; Mueller & Cordery, 1992) or absenteeism (e.g., Cordery, Mueller & Smith, 1991). Meaningful work is a good predictor of desired work attitudes, such as job satisfaction, dedication to work and organizational involvement. Meaningful work, moreover, is a better predictor of absenteeism than job satisfaction (Steger et al., 2012). In addition, by using a multidimensional perspective of meaningful work, I was able to gain more insight into how meaningful work can be found through particular dimensions of meaningful work and perhaps be lost in self-managing teams.

Data from fifteen interviews with ex-workers of one healthcare organization were used to explore how nurses who had left or were about to leave their organization experienced working in self-managing teams. This study showed that, among these participants, multiple dimensions of meaningful work were not fulfilled when working in self-managing teams. This may possibly be explained by the fact that although the four core dimensions of meaningful work are universal, the way in which these dimensions are experienced may differ from person to person (Lips-Wiersma & Morris, 2011). Some people, for example, experience the expression of their full potential by using their talents to do additional tasks at work such as organizing the annual Christmas party, managing their team's finances or producing the department's monthly newsletter. Other people experience the expression of their full potential by using their talents to inspire others, offer guidance and set an example. At the heart of this dimension is the need to use our personal talents (Lips-Wiersma & Morris, 2011).

Furthermore, I found that high work pressure was universally experienced by the nurses in the sample when working in self-managing teams (this was also noted by De Veer et al., 2008; Weerheim et al., 2019). The experience of high work pressure was caused by having team meetings and doing additional tasks, such as cleaning, which hampered Service to Others and Integrity with Self.

In conclusion, this study shows how meaningfulness is found and lost while working in self-managing teams. The multidimensional perspective provided insight into how meaningfulness in work can get lost through high work pressure, which hampers Service to Others and Integrity with Self. Meaningfulness in working in self-managing teams can be found by doing team tasks, thereby experiencing Expressing Full Potential. The study sample, ex-employees from one healthcare organization, was quite specific, and arguably the results are not generalizable to other contexts. My aim was not to generalize the results of this study to other contexts but rather to contribute to the discussion and the research agenda on what working in self-managing teams may mean for employees in terms of meaningful work and well-being.

The results show that granting autonomy and working in self-managing teams do not automatically foster meaningful work (**Chapters 4, 5 and 6**). A multidimensional perspective of meaningful work helps us understand how work becomes meaningful or meaningless. In addition to examining these two organizational practices, autonomy and working in self-managing teams, I also examined two outcomes of meaningful work, namely the willingness and ability to continue working.

Fifth objective: the relation between meaningful work and retention

I proposed in this dissertation that meaningful work is related to nurse retention. Nurse retention was defined conceptually as the extent to which nurses stay in their profession (Cowin, Johnson, Craven, & Marsh, 2008). The operationalization of this construct is challenging, as it would require us to follow up on nurses throughout their careers. This could take up as much as 46 years and was, therefore, not feasible within this dissertation project. In order to work around this, other researchers have used self-reports of intent to quit or intent to stay to measure retention indirectly (Ellenbecker, Poreel, Samia, Byleckie, & Millburn, 2008).

I argued in **Chapter 1**, however, that, from an organizational perspective, retention is not merely about nurses staying in the nursing workforce. Rather, healthcare organizations want their nurses to stay *and* to be motivated and able to practice nursing. I operationalized retention, therefore, by asking nurses if they expected to be willing and able to continue working until their retirement. Using self-reports of willingness and ability to continue working, together with two co-authors, I examined the relation between meaningful work and the willingness and ability to continue working, this being the fifth and last objective of this dissertation.

Using quantitative data, we explorative examined the relation between dimensions of meaningful work and the willingness and ability to continue working (**Chapter 7)**. We found that meaningful work was related to willingness and ability to continue working. Furthermore, we found that Integrity with Self and Inspiration are positively related to willingness and ability to continue working, whereas Facing Reality is negatively related to willingness to continue working. This suggests that the dimensions of meaningful work are each uniquely related to willingness and ability to continue working. This finding highlights the usefulness of a multidimensional meaningful work scale in studies that examine the relations of meaningful work to outcomes. These findings also suggest that for nurses' retention it is important that nurses can be themselves in their work and that there is a hopeful vision and future. A hopeful vision could be, for example, to deliver excellent care. However, when nurses experience in daily work that they can not live up to this hopeful vision, for example due to work pressure, they tend to leave the nursing profession.

The third component, Inspiration-Facing Reality, refers to work that is hopeful and aligned with an ideal but also work that is grounded in reality rather than utopian. The third component is depicted in the inner and outer circle of the model in Figure 1 (Lips-Wiersma &

Wright, 2012). To illustrate this component, Lips-Wiersma & Morris (2011, pp. 45) quoted a research participant as saying: "There is nothing wrong with all of this mission and vision and values stuff in itself. However, if we are not allowed to articulate where we do not and cannot live up to this, it feels as if we mock something that is really quite profound; when I read some of our ads, or value statements I think, this is partly true; this is a good company. But every time we overstate, we also lose a little of ourselves in the process. It has to be grounded."

We, surprisingly, found no relation between Service to Others and willingness or ability to continue working. This may be due to restriction of range on this variable (the nurses in our sample almost all saw Service to others as a very important aspect of their jobs), which warrants further research.

Overall Conclusion

Taken together, the studies reported in this dissertation demonstrate that (1) nursing shortages in the Netherlands are caused by scarcity of nurses as well as maldistribution of nurses (**Chapter 2)**; (2) meaningful work is a path worth pursuing to enhance the number of nurses who continue working (**Chapters 1 and 7**); (3) fostering meaningful work requires the fulfillment of all dimensions of meaningful work (**Chapter 3**); (4) therefore, to foster meaningful work, organizations should apply a package of multiple practices to enhance meaningful work for nurses (**Chapter 4, 5, 6 and 7)**; (5) such a package of practices could include, for example, granting individual and professional autonomy (**Chapter 5)**; (6) the practice of self-managing teams, however, does not automatically lead to meaningful work (**Chapter 4, Chapter 5 and Chapter 6)**. In the next section, I will address the implications of these findings for theory development and practice.

Implications and contributions

The implications and contributions of the different studies have been described in the previous chapters. Below, I will address the key implications and contributions of the findings. The theoretical implications and contributions will be discussed first, followed by the practical implications of the findings.

Theoretical implications and contributions

These findings make several theoretical contributions. The first contribution is that, in order to develop a theory of meaningful work, I argue that researchers need to start using more

fine-grained measures of meaningful work. In **Chapter 3**, together with two co-authors, I specifically argue for using the WAMI for studies aiming to examine the relations between meaningful work and certain antecedents or outcomes. The WAMI was specifically developed to capture when work becomes meaningful. We argue for using the CMWS for studies aiming to improve our understanding of the way in which personal characteristics, task activities and organizational practices create meaningful work. The CMWS has three additional subscales (Facing Reality, Inspiration and Balancing Tensions) to capture the dynamic interplay between the dimensions. As such, the CMWS is most suitable for explaining the complex interplay between the dimensions and relations to antecedents and outcomes. In **Chapter 5,** for example, through the use of the CMWS, together with three co-authors, I show the complex interplay of how various forms of autonomy relate uniquely to various dimensions of meaningful work, highlighting the importance of exploring meaningful work as a multi-dimensional construct. In **Chapter 7,** through the use of the CMWS, together with two co-authors, I show that particular dimensions of meaningful work each relate uniquely to ability and willingness to continue working. These findings highlights the usefulness of a multidimensional meaningful work scale in studies that examine the relations of meaningful work to antecedents and outcomes. By using a more fine-grained measure of meaningful work in our empirical studies, we offer a fine-tuned understanding of how and when nurses experience their work to be of existential significance and the benefits of these experiences.

The second contribution is that, in **Chapter 4 and Chapter 5**, together with three co-authors, I extend the literature on the relation between autonomy and meaningful work. In **Chapter 4,** we proposed an autonomy-meaningful work framework for the relation between three forms of autonomy: individual, professional and group autonomy, and meaningful work. In **Chapter 5**, we reported an empirical study on the relation between these three forms of autonomy and meaningful work. We found that these types of autonomy each related uniquely to different dimensions of meaningful work. As such, our findings add to the literature on autonomy and meaningful work that different forms of autonomy, while related to each other, have a unique predictive validity for each dimension of meaningful work. In other words, not all forms or autonomy are created equally, and our findings contribute to a theory that specifies more precisely which types of autonomy are related to which dimensions of meaningful work.

A third contribution is that I add to the scarce evidence that multiple antecedents make up meaningful work (Lips-Wiersma et al., 2020). In **Chapter 5**, together with three co-

authors, I show that granting individual and professional autonomy are both required to experience the seven dimensions of the map of meaning. As such, our findings confirm that multiple antecedents, in our case individual as well as professional autonomy, are required for meaningful work.

A fourth contribution is that, in **Chapter 6**, I found that the dimensions of meaningful work are not always fulfilled in working in self-managing teams (as a practice of group autonomy). The relation between working in self-managing teams and meaningful work appears to be influenced by personal characteristics and by the experience of increased work pressure due to additional tasks assigned to nurses when working in self-managing teams.

A fifth contribution is of a methodological nature; I address the multilevel character and related multilevel issues of the concept of meaningful work (**Chapter 5**). Organizations are multilevel systems in which every construct is tied to one or more organizational levels, ranging from the individual employee to teams and organizations. Individuals who are members of the same team will frequently share important perceptions and behaviors, and as a result, their responses to individual survey items may not be truly independent but may be colored by their group membership. In such a case, an important basic assumption for many common statistical procedures is violated because these procedures assume independence of observations. In some cases, this may lead to serious overestimation of parameters (Van Mierlo et al., 2005).

It has been suggested that co-workers influence individual interpretations of the meaningfulness of their work through an interpersonal sense-making process whereby employees draw cues about the meaning and value of their work from in the workplace (through observations, conversations, etc.; Wrzesniewski, Dutton and Debebe, 2003). As perceptions of meaningful work are shaped by others (Rosso et al., 2010), I plead for the incorporation of multilevel theory and analysis techniques into the field of meaningful work. Even if researchers are not particularly interested in the multilevel character of meaningful work, they are almost obliged to take it into account as it may distort results and, if they fail to take it into account, risk making misplaced generalizations (Van Mierlo et al., 2005).

As far as I know, no other studies within the meaningful work field have explicitly addressed the multilevel approach in studies on meaningful work in organizations. As such, I believe that the empirical study on the relation between autonomy and meaningful work (**Chapter 5)** is the first to take the hierarchical structure of the data (individuals in teams) explicitly into account while doing research on meaningful work in organizations. I hope this study will, therefore, convince future researchers to consider the multilevel approach in doing

research on the relation between organizational practices and meaningful work. By doing so, a multilevel theoretical framework of the relation between organizational practices and meaningful work can be established in the future.

Practical implications and contributions

While I conducted the research for this dissertation, nursing shortages gained an increasingly prominent place in the Dutch political and public debate. During the years spent preparing this dissertation, the predicted nursing shortages turned into a reality. This resulted in many permanent vacancies for nurses, which are vacancies that are open for at least six months. In 2018, there were more than ten thousand permanent vacancies for practical nurses in long-term elderly care. For first- and second level-registered nurses, there were more than three thousand permanent vacancies in different healthcare sectors (Van der Werff, Kok, Vervliet, & Luiten, 2019). In 2019, the main problem in home care was the large nursing shortage of especially first-level registered nurses and practical nurses (Rijken & Welling, 2019). In 2019, there was a nursing shortages at all educational levels in long-term elderly care (IJland & Welling, 2019), whereas in hospital care nursing shortages were mainly found among first- and second level registered nurses (IJland & Pet, 2019). The findings of this dissertation offer policymakers and healthcare organizations insight into policies that can contribute to solving nursing shortages by boosting retention.

First, in **Chapter 2**, together with three co-authors, I demonstrate that nursing shortages are caused by scarcity as well as maldistribution of nurses to different sectors in the healthcare systems. This finding highlights that nursing shortages are not only about scarcity but also about unequal distribution of nurses in the healthcare system. The latter, however, is not often addressed in studies examining causes for nursing shortages and forecasting models (e.g., Duffield & O-Brien-Pallas, 2003; Dumpe, Herman & Young, 1998; Buchan et al., 2015). Maldistribution of nurses often refers to geographical maldistribution of nurses in urban areas with exacerbated shortages or in rural and disadvantaged urban areas (MacLean, Hassmiller, Shaffer, Rohrbaugh, Collier, & Fairman, 2014). Our findings indicate that maldistribution also occurs within the healthcare system itself, with exacerbated nursing shortages in home care and nursing homes. Aggregated numbers alone, therefore, are not a sufficient means to determine the demand for nurses. To implement efficient policies, the demand and supply of nurses should be specified per healthcare sector. Based on this information, policymakers can allocate resources to meet the demands per healthcare sector.

In **Chapter 2**, furthermore, we found there is an increased demand for practical nurses in home care and nursing homes due to the shift of hospital services to home care and nursing

homes. At the same time, there is be a surplus of practical nurses in hospitals. Based on an overview of global scarcity of nurses, Buchan and Aiken (2008) argue that policymakers should focus on a core set of solutions in order to deal with nursing shortages and that this core set should contain supply-side as well as demand-side interventions, such as improving recruitment, retention and re-entry of nurses (supply side) as well as using nursing resources effectively (demand side; Buchan and Aiken, 2008). Our finding (see Chapter 2) that shortages are also caused by maldistribution of nurses in the healthcare system suggests that, in addition to the above-mentioned solutions, policymakers should also focus on developing nurse transitioning programs to help nurses to make the transition from hospital care to home care. In their study with online focus groups involving a total of 38 Dutch home care nurses, De Groot, Maurits and Francke (2018) found that an attractive aspect of being a homecare nurse is that they were the leading professional and that the patient is at the center of care. Furthermore, homecare nurses experience a lot of autonomy in decision-making about care, freedom in work scheduling and often work in a self-managing team (De Groot et al., 2018). As reported in **Chapter 4** and **Chapter 5**, these types of autonomy are associated with meaningful work. As such, working in home care can bring a lot of meaningfulness to nurses. A transitioning program should emphasize these attractive aspects of working in home care.

Our findings in **Chapter 2**, furthermore, also suggest that the shift of hospital services to home care and nursing homes will only be possible if care is delivered more effectively. If it is not, there will be an increasing demand for practical and first-level registered nurses in home care and nursing homes, and, consequently, increasing nursing shortages in these healthcare sectors. It is primarily patient-centered care that contributes to a decreased demand for healthcare services and, as such, to a decreased demand for nurses. Pilot tests endorsed by a healthcare insurance company show reductions of 15% to 20% in surgical procedures at hospitals that implement patient-centered care delivery. Patient-centered care delivery means informing patients about the benefits and risks of surgical procedures; when patients receive thorough information on a surgical procedure, they will often refrain from treatments that are hardly useful, expensive or risky (Van Dulmen, Heus, Kool & Verkerk, 2019). Not only does this lead to cost-saving and decreased demand for nurses, but it is also in the patients' best interest, as care provided to patients improves if they do not receive unnecessary treatment that could harm them. Research is needed, however, to examine how patient-centered care delivery influences the experience of purpose in work for different healthcare professionals as it may change the nature of their work. For example, it could lead to surgeons doing fewer

surgical procedures and more patient consultations, or to nurses doing more patient consultations and less postoperative care.

Another major contribution of this dissertation to practice is that it offers a new perspective on ways of enhancing nurse retention. Strategies to improve retention have mainly focused on leadership and the working environment (Hariyati & Nurdiana, 2018; Ritter, 2011; Twigg & McCullough, 2014). Although these strategies have contributed to retention, there is still room for improvement. The findings, in **Chapter 7,** show that meaningful work is related to nurses' ability and willingness to continue working. This suggests that, to boost retention, providing meaningful work is a worthwhile path to pursue. Organizations that aim to retain nurses should focus on organizational practices that produce meaningfulness in work. Although lack of resources or the latest management fads may encourage organizations to concentrate on one practice (such as group autonomy) to the exclusion of another (such as individual autonomy), I offer organizations an explanation for why focusing on single solutions without paying attention to all the dimensions of meaningful work may have unintended consequences and may ultimately be ineffective. Meaningfulness in work is lost if one dimension is expressed to the exclusion of other dimensions. By highlighting that meaningful work consists of a combination of dimensions, this research shows that organizations need to consider a package of multiple practices to enhance meaningful work. Together with three co-authors, I showed that the combination of individual autonomy and professional autonomy contributes to experiencing the seven dimensions of the map of meaning (**Chapter 5).** Group autonomy or introducing self-managing teams, in contrast, do not contribute to all of the seven dimensions (**Chapter 5** and **Chapter 6)**. By studying the relation between three types of autonomy, self-managing teams and meaningful work, our research indicates that – while group autonomy and self-managing teams appear to be gaining popularity and are generally assumed to increase workers' meaningfulness in work – healthcare organizations need to prioritize individual and professional autonomy over group autonomy if they want to foster meaningfulness in work.

As the participants in the empirical studies were nurses from healthcare organizations, the contribution to practice is mostly relevant for healthcare organizations. The findings are specific and context-dependent to the elderly care sector. The relevance of collecting data from one occupational group lies in its ability to provide a rich and detailed understanding of the context and its related mechanisms. However, I would argue that the findings are generalizable to other fields and similar occupational groups, such as for example teachers.

With regard to the generalizability of the findings to other occupational groups, nurses share some interesting similarities with teachers. Teachers and nurses alike have the opportunity to have an important impact on the lives of individuals they encounter in the performance of their jobs and, as such, are likely to experience Service to Others. Both occupational groups are facing staff shortages and, consequently, high work pressure (Van Droogenbroeck & Spruyt, 2015). In **Chapter 6**, I found that high work pressure negatively affects Service to Others. It is likely that teachers who are unable to give students the attention they want to give due to high work pressure, and do not experience Service to Others, lose meaningfulness in their work.

The theoretical and practical contributions and implications mentioned above should be considered in light of some shortcomings which will be addressed in the next section.

Limitations and recommendations for future research

Some specific limitations of the studies have already been noted and discussed in the previous **Chapters 2 to 7**. In my opinion, the following limitations are particularly important and should be taken into account. In the section that follows, I also make general recommendations for future research.

Limitations

One of the major limitations is the cross-sectional character of the empirical studies. A well-known limitation of cross-sectional data is that they do not allow the researcher to demonstrate causal relations. This usually justifies the preference for experimental or longitudinal studies over cross-sectional ones because the former two types of studies are better able to rule out threats to internal validity than the latter. Experimental studies, however, also have their limitations. Experiments are often performed over a short period of time (e.g., a day or two weeks) and under laboratory or otherwise contrived conditions. These settings may differ from real-world settings, and experimental studies under laboratory or otherwise contrived conditions may not be ecologically valid (Allan, Duffy & Collisson, 2018).

In their article *Do we necessarily need longitudinal data to infer causal relations?*, Wunsch, Russo and Mouchart (2010) argue that longitudinal approaches face important problems that jeopardize causal inference. Prospective longitudinal studies, for example, are affected, among other things, by sample selection and by loss to follow up, regardless of whether the study is experimental or observational (Imai, King, & Stuart., 2008). Another major difficulty in longitudinal studies regards following observational units, which, if they

cease to exist, divide or form new units, leads to problems in making casual inferences that can hardly be solved. Wunsch et al. (2010) give the following example: "families or households may split up over time and constitute new families and households. Follow-up of the family or household units per se (and not the individuals themselves) is impossible in this case." The same can be said for teams in organizations, as teams often change over time, with team members leaving and entering the team. Follow-up of the team units per se (and not the individuals themselves) is impossible in this case. A cross-sectional study, such as described in **Chapter 5**, does not suffer from these limitations in ecological validity or changes in observational units.

Wunsch et al. (2010) argue that to establish causal relations for cross-sectional data, background knowledge of the causal mechanism should be added to the cross-sectional analysis. Such background knowledge could include information on other variables that influence the dependent variable or historical or time information instead of the time series commonly used for longitudinal analyses. It is widely agreed both in philosophy and in the social sciences that causes precede effects in time. A pure cross-sectional study, therefore, can give information on the relation between cause and effect if existing knowledge supports causal and temporal ordering.

With regard to the findings in this dissertation, existing theory and previous empirical research on meaningful work supports the causal ordering of the relation between autonomy and meaningful work. Autonomy has been modelled and empirically found to be an antecedent of meaningful work (Bailey & Madden, 2017; Bowie, 1998; Fried & Ferris, 1987; Humphrey et al., 2007; Hodson, 2001; Isaksen, 2000; Michaelson, 2005; Michaelson et al., 2014; Schwartz, 1982). With regard to the influence of meaningful work on people's decision to continue working, research on retirement decisions supports the causal ordering. Studies on retirement decisions show that older employees are inclined to postpone their retirement (i.e. continue working) when they expect their job to be meaningful (Kooij, De Lange, Jansen & Dikkers, 2008; Schalk, & Desmette, 2015; Van Dam, Van der Vorst, Van der Heijden, 2009; Van den Berg, 2011; Van Solinge & Henkens, 2011). Following Wunsch et al.'s (2010) argument that cross-sectional data can give information on a causal relation by providing background knowledge of the causal mechanism, therefore, I argue that existing theory and previous empirical research supports the causal ordering of relations. I believe, therefore, that the established relations are indeed in the predicted direction. Still, I cannot entirely rule out that reverse causation does not occur through the so-called "halo and horn effects," a cognitive bias that causes one belief − either good (halo) or bad (horns) − to

overshadow other beliefs (Thorndike, 1920). This bias may inhibit objective perceptions. Those who experience more purpose in work may possibly also perceive more autonomy, whereas those who experience less purpose in work may also perceive less autonomy. I believe this cognitive bias may not have been a severe problem in the studies as I found no positive relation between group autonomy and meaningful work in **Chapter 5**. Still, it is impossible to entirely rule out the possibility that the results are affected by the halo and horn effect.

To avoid possible halo and horn effects in future research, an assessment of the degree and type of autonomy of teams and employees should be obtained from supervisors or team coaches. Individuals in such roles are often in close contact with teams and employees and, as such, can make accurate assessments of the degree and type of autonomy they have. Building on our studies, the next step in establishing causation is finding evidence in real-world settings. Conducting field experiments, therefore, would be a logical next step. Field experiments, or the application of experimental methods outside a traditional lab, do not suffer from the limitations in ecological validity or changes in observational unit and can demonstrate causal relations. In the Directions for future research section, I will elaborate further on the advantages of doing field experiments.

A second major limitation is the use of self-reports in two studies (**Chapter 5** and **Chapter 7)** in this dissertation. Although this a commonly used approach in organization and meaningful work research, method variance, described as variance attributable to measurement method rather than to the variable of interest (Campbell & Fiske, 1959), is a potential problem. It is possible that acquiescence and social desirability, the most frequently found sources of method variance in self-reports (Spector, 2006), accounted for the method variance for the perceptual constructs in our studies.

A number of factors in the design of the questionnaire and in the structure of the data, however, reduce the risk of common method bias undermining the study results. First, all measures were derived from established instruments with good psychometric properties. Furthermore, we assured respondents that the study was anonymous and confidential, that there were no right or wrong answers and that they should answer as honestly as possible. Second, the questionnaires were distributed by e-mail or by students to avoid anonymity breach. Podsakoff, MacKenzie, Lee and Podsakoff (2003, p. 888) observe that "these procedures should reduce people's evaluation apprehension and make them less likely to edit their responses to be more socially desirable, lenient, acquiescent and consistent with how the researcher wants them to respond." Third, the data of the study on autonomy and meaningful

work also suggest that common method bias may be limited. The results of the CFA suggest that team and individual autonomy represented distinct constructs. In the case of pronounced common method bias, I would expect CFA to have yielded a "common method factor." Results did not in any way suggest the existence of such common method factor. Fourth, the relations between the constructs in all the studies varied considerably in strength, a finding that would have been unlikely if a large proportion of variance had been attributable to a stable method factor. Therefore, I believe common method bias may not have been a severe problem in the studies. Still, it is impossible to entirely rule out the possibility that the results are affected by sources of method variance.

As suggested, to avoid halo and horn effects and to avoid the effects of common method variance in future research, an assessment of team and employee degree and type of autonomy should be obtained from supervisors or team coaches. Other recommendations for future research will be described in the next section.

Recommendations for future research

The findings as well as the limitations of the studies suggest several directions for future research. First, in the quantitative studies I did not control for individual differences that could have influenced the individual perception of meaningful work.[14] It seems, however, that certain people draw much more meaningfulness out their work than others with the same work role (Wrzesniewski et al., 2003). Work orientation could be one of the explanatory variables for such individual differences in people's experience of purpose in work (Rosso et al., 2010). Work orientation is the orientation towards work in general. People with a calling orientation towards work see work as a strong provider of personal meaning and as a central part of their identity, inseparable from life and an important source of satisfaction, whereas people with a job orientation towards work see work primarily as a way of earning a living (Wrzesniewski et al., 2003). Work orientation is believed to be stable over time, and it has

[14] Initially, we measured work orientation in two quantitative studies using the "University of Pennsylvania Work-Life Questionnaire" (Wrzesniewski et al., 1997). Data from one study were used for Chapter 5 and Chapter 6. Data from the other study were not used in this dissertation. Following Van Zyl, Deacon and Rothmann (2010), we created a job/calling orientation scale using the 18 items which asked about specific aspects of relations to work. The scale turned out to have a Cronbach's Alpha $\alpha = .68$ in one study and a Cronbach's Alpha $\alpha = .61$ in another study. A principal component analysis was additionally conducted. The scree plot indicated that four factors (with eigenvalues of 3.51, 1.96, 1.44 and 1.09 respectively) could be extracted. This was not in line with the assumption that job/calling are one factor on the same continuum. The scale was, therefore, considered not reliable and we decided not to use it in this dissertation. Other researchers have also noted the low reliability of this scale (e.g., Beukes & Botha, 2013; Seco & Pereira Lopes, 2013). Future research should either develop a more reliable scale for the identification of these work orientations or only use the three separate sections describing the different work orientations. This method seems to be more reliable (e.g., Duffy & Sedlacek, 2007; Peterson, Park, Hall, & Seligman, 2009).

been suggested to have behavioral, attitudinal and emotional effects (Wrzesniewski, 2003; Berg, Grant, & Johnson, 2010). These behavioral, attitudinal and emotional effects of different work orientations could influence the frequency and importance of meaningful work. Individuals with a calling orientation, for example, are known to attach greater importance to work than individuals with a job orientation (Wrzesniewski et al., 2003). It could be the case, therefore, that people with a calling orientation towards work experience more purpose in work if they are granted more autonomy because it offers them the freedom to do their work according to their own beliefs and skills. People with a job orientation towards work, however, would most likely feel overburdened by more autonomy because of the opportunities and associated responsibilities this creates. As a consequence, they might try to avoid taking up such responsibilities and will not derive personal meaningfulness if required to take up these responsibilities. Work orientation, therefore, could moderate the relation between autonomy and meaningful work as well as the relation between self-managing teams and meaningful work. To test this hypothesis, future research should include this variable.

A second direction for future research is to further examine the influence of meaningful work on the decision to continue working. In **Chapter 7**, together with two co-authors, I did not take into account other factors which may also influence the decision to continue working. In the sustainable employability literature, for example, it is recognized that the intention to continue working is influenced by other variables such as health and skills (Fleuren, Van Amelsvoort, De Grip, Zijlstra & Kant, 2018; Van Dam, Van Vuuren & Kemps, 2017; Van der Klink et al., 2016). Oude Hengel, Blatter, Geuskens, Koppes and Bongers (2012) found, in their study on factors associated with the ability and willingness to continue working until the age of 65 in construction worker, that the occurrence of musculoskeletal symptoms were negatively related to ability and willingness to continue working. This has also been demonstrated in studies on the intention to retire (Heponiemi et al. 2008; Von Bonsdorff, Huuhtanen, Tuomi, & Seitsamo, 2010) and actual early retirement (Van den Berg, Elders, & Burdorf, 2010). In retirement decision studies, in addition, financial factors, such as financial stimuli and a worker's financial situation, have been found to play a role in extending working lives. Social factors, furthermore, such as support from your partner, lifestyle aspects and subjective life expectancy also appear to influence the retirement decision (Oude Hengel, 2013; Schalk & Desmette, 2015).

Future research could, for example, examine more deeply the influence of occupational diseases, such as musculoskeletal disorders, on the relation of meaningful work

and ability to continue working. Employees working in physical demanding jobs are at risk for developing musculoskeletal disorders, which reduce their ability to continue working (Oude Hengel et al., 2012). To gain some insight how musculoskeletal disorders influence the relation between meaningful work and retention, I explorative examined the qualitative data of **Chapter 6**. In Chapter 6 I focused on nurses who have left or are about to leave their organization (See Chapter 6 for a full description of the research method). I found a difference in turnover motives between participants who stayed in the nursing profession (N=11) and participants who left the nursing profession (N=4). Turnover motives of those who left the nursing profession were all related to mental and physical health problems, but musculoskeletal disorders was not mentioned, whereas those who left the organization but stayed in the nursing profession where mostly related to working in self-managing teams, working conditions and job dissatisfaction. Those participants who continued working in the nursing profession after leaving the organization said that they continued working as a nurse because their work provided fulfillment. Meaningful moments were described in terms of contributing to patients' lives while performing work (i.e. service to others). This suggests that relation between meaningful work and retention is influenced by health problems and turnover of nurses (leaving the organization but staying in the profession) is influenced by organizational factors. These interesting, but explorative findings, should be examined further to enhance our understanding of the conditions under which working lives are enhanced.

A third direction for future research is to attempt to replicate the findings in experimental studies. In this dissertation, together with two co-authors, I found that meaningful work positively relates to the ability and willingness to continue working (**Chapter 7**). Our findings highlight the need to approach nurse retention programs from a meaningful work perspective. We did not, however, experimentally test our findings. The next step would be to develop and test a nursing retention program that includes interventions aiming to enhance meaningful work, in a field experiment. The meaningful work perspective can be incorporated into the program by enhancing the degree of freedom nurses have in performing their core tasks (professional autonomy) as well as in arranging their work schedules (individual autonomy). In **Chapter 5**, we found that professional and individual autonomy together relate to meaningful work in its entirety.

For each perspective, intervention materials should be developed and combined into a retention program, which should be evaluated in a cluster randomized controlled trial among nurses from different organizations. Healthcare organizations could be randomly assigned to one of the several components of a three-month retention program, with one healthcare

organization having a three-month retention program focusing on professional autonomy, another healthcare organization having a three-month retention program focusing on individual autonomy and a third healthcare organization having a three-month retention program that includes interventions for both types of autonomy. The intention to stay should then be measured among the participating nurses before and after three months. Ideally, such a field experiment should be conducted for each of the sectors in the healthcare system (hospitals, home care, nursing homes, etc.). In doing so, we would gain insight into the effectiveness of such a retention program and in the specific main and interaction effects of the proposed interventions. We could answer research questions such as: are both types of autonomy necessary to retain nurses? Are both types of autonomy necessary for each type of nurse (i.e. first-level registered nurses, practical nurse etc.)? Are both types of autonomy necessary for each sector in the healthcare system? This knowledge can be used by employers and policymakers to make decisions about whether they should invest in an autonomy-driven work retention program or not. As investment decisions are based not only on whether the program is evidence-based but also on insight into cost-benefit aspects, such an evaluation study should include cost-benefit findings (Oude Hengel, 2013).

Another direction for future research is to examine how interventions at the healthcare system level and the human resource level influence meaningful work for individual nurses. As argued in **Chapter 2**, a combination of policy interventions at the healthcare system level and the human resource level will be required to solve nursing shortages. This will require, among other things, the implementation of new models of care, which should focus on reducing the need and demand for health services. This can be realized by focusing on disease prevention, such as reducing risky behaviors and promoting healthy lifestyles. In addition, communicating to patients their options for care other than the typical intensive services during terminal illness or last phase of life could reduce the need and demand for health services. Furthermore, teaching patients to manage their own care and to use services efficiently, through telecare (i.e. offering remote care that allows patients to remain living in their own homes by using technology such as sensors), for example, could also reduce the need and demand for health services (Pols & Willems, 2011). By reducing the need and demand for health services, the demand for nurses is also decreased. It is vital, however, to examine how these strategies would influence meaningful work.

As I found in **Chapter 6** on self-managing teams, not all new organizational models lead to meaningful work for every nurse. This could also be true for the focus on promotion of disease prevention or the use of telecare. Instead of performing nursing procedures, such as

wound care, or see patients face-to-face, these changes require nurses to focus more on patient consultations and offering remote care. These types of changes affect the nature of the nursing work itself, which could influence its meaningfulness. Nurses may feel, for example, that they are not providing the type of care they want when they offer remote care. This could negatively influence their experience of Service to Others. Further research is needed, therefore, to examine how interventions at the health care system level and the human resource level influence meaningful work for individual nurses.

A final path for future research I would like to explore is the potential "dark side" of meaningful work (Bailey et al., 2019; Thory, 2016), which I did not address in this dissertation. Allan et al. (2018) found that contributing to the greater good and having a purpose but being overqualified for the job was associated with increased underemployment and negative affect, stress and depression. This suggests that nurses contributing to the greater good and having a purpose but being unable to fully employ their skills and abilities is associated with poor outcomes. Meaningful work outcomes, furthermore, are not necessarily always positive for employers (Thory, 2016). Thory (2016) found that increased awareness of meaningfulness may cause employees to focus more on family life (unity with others outside work), which led to decreased productivity/hours at work. In addition, not everyone requires meaningful work. Some people search for meaningfulness outside their work domain (e.g., family life, volunteering). Promoting organizational practices that enhance meaningful work (such as autonomy), therefore, could have a negative effect on people who look for meaningfulness outside their work. Following Bailey et al. (2019), I suggest that further empirical research into the potentially harmful effects of meaningful work and organizational practices aiming to enhance meaningful work is necessary to gain insights into the tradeoffs and tensions involved in increasing meaningful work in organizations.

Concluding remark

This dissertation explored how meaningful work could contribute to nurse retention. I showed that meaningful work is a worthwhile path to pursue for nurse retention. I hope and trust that the theoretical implications of the studies reported in this dissertation will help to further develop the field of meaningful work. I hope (even more) that the practical recommendations and suggestions will help healthcare organizations to improve their nursing environments towards more meaningful work. Overall, I hope this dissertation will inspire managers, policymakers, nurses' unions and other practitioners to put the topic of meaningful work higher on the agenda in order to significantly decrease nursing shortage.

Summary

Healthcare organizations in the Netherlands and other countries are already facing nursing shortages, and will continue to do so in the future (see also Sermeus et al., 2011). In **Chapter 1** the consequences of nursing shortages on patient outcomes are described. Nursing shortages have been recognized as having a negative influence on patient safety and quality of care (Buchan & Aiken, 2008; Duffield & O'Brien-Pallas, 2003). Solving nursing shortages is, therefore, of uttermost importance.

Nursing shortages can be caused by scarcity of nurses in general or/and maldistribution of nurses. Scarcity of nurses means the number of nurses is below a minimum density threshold of nurses to accomplish specific health targets (Joint Learning Initiative 2004; World Health Organization 2006). Maldistribution of nurses is the imbalanced distribution of nurses in the healthcare system. Imbalanced distribution refers to particular inequities in the allocation of nurses as to a standard or social norm of a certain staff density (Dussault & Franceschini 2006; Munga & Mæstad 2009). Maldistribution of nurses require different policy responses than scarcity of nurses in general. Solution to maldistribution of nurses are related to nurse transitioning programs (i.e., helping nurses who work in one type of care to transition to another type of care), whereas solutions to scarcity of nurses are related to increasing supply and/or decreasing demand for nurses (i.e., training more nurses in general, motivating nurses to continue working, or organizing care in a more efficient way). Therefore, in order to implement appropriate policy responses to nursing workforce challenges, we need to know if nursing shortages are a result of scarcity of nurses in general or by maldistribution across the various healthcare sectors. The extent to which nursing shortages are a result of scarcity of nurses in general or maldistribution of nurses in the healthcare system are, however, not well examined. In **Chapter 2** I identify, together with three co-authors, the different causes of nursing shortages and associated solutions to decrease these shortages. We found that nursing shortages in the Netherlands are caused by maldistribution as well as scarcity of nurses. This implies that there is no single "magic bullet" policy that will solve nursing shortages, which has also been noted by others (e.g. Buchan & Aiken, 2008). To address nursing shortages a coordinated package of policies focused on reducing maldistribution as well as scarcity of nurses is necessary.

Influencing nurses' decision to continue working (i.e. retention) is one of the pathways to solve nursing shortages. In **Chapter 1** I explain my rationale for focusing on

retention. Strategies to improve retention have mainly focused on leadership and nursing working environment. It has been found, however, that nursing staff are less committed to a specific organization but seek an environment where they can experience optimal meaningfulness in their work (Shacklock & Brunetto, 2012). Finding meaningfulness in work has progressively become important for employees (Gheaus & Herzorg, 2016; Harpas & Fu, 2002). Considering that employees nowadays are seeking meaningful work and continue to do so throughout their career, enhancing meaningful work could be an important and worthwhile pursuit to stimulate the retention of nurses. Before we can look into strategies to enhance meaningful work, we must first understand how work becomes meaningful. Research on meaningful work, however, has suffered from a lack of consensus regarding what the experience of meaningful work is like (e.g. Steger et al., 2012). In **Chapter 3** I describe, together with two co-authors, the execution of two literature reviews to define and measure meaningful work. First, we reviewed the literature on the existing definitions of meaningful work. We found 14 definitions of meaningful work. Based on these definitions, we identified four categories of definitions, which led us to provide the following integrative and comprehensive definition of meaningful work: "Meaningful work is the subjective experience of existential significance resulting from the fit between the individual and work". The "subjective experience of existential significance" refers to the process of personally perceiving work as contributing to, or making sense of, one's reason for existence in the world. The "result of the fit" refers to the fulfilment of dimensions – inherent in every human being – through or in work. These dimensions should be defined further by the underlying conceptual framework."

Second, we reviewed the literature on existing meaningful work scales that aligned with our integrative meaningful work definition. Based on the results of the second literature study we have identified two validated scales that align with this definition and have been validated: the Work And Meaning Inventory (WAMI) (Steger et al., 2012) and the Comprehensive Meaningful Work Scale (CMWS) (Lips-Wiersma & Wright, 2012).

An integrative definition of meaningful work and a corresponding scale opened the way to examine how meaningful work can be enhanced in organizations. I focused specifically on two organizational practices that many healthcare organizations are considering or implementing and that are likely to be related to meaningful work: 1) granting autonomy and 2) working in self-managing teams.

First, I focused on granting autonomy. In **Chapter 4**, based on the existing meaningful work literature, I proposed, together with three co-authors, an autonomy-

meaningful work framework. In **Chapter 5** I report, together with three co-authors, a study on the relation between three forms of autonomy (group autonomy, individual autonomy and professional autonomy) and meaningful work using quantitative data from 510 employees from three organizations. Based on the existing meaningful work literature we hypothesized that the different forms of autonomy each relate uniquely to the seven dimensions of meaningful work. Hierarchical multilevel analyses were conducted to test hypotheses. Our study demonstrated that individual and professional autonomy have significant positive relations with six of the seven meaningful work dimensions. Perceived group autonomy has significant positive, though weak, relations with two dimensions of meaningful work. Thus, our results show that different forms of autonomy relate differently to the dimensions of meaningful work and as such demonstrate that the relation between autonomy and meaningful work is not a simple input-output relation. Our findings imply that for healthcare organizations that aim to increase experiences of meaningful work in their nurses and see providing more autonomy as a viable option to do so, need to prioritize individual and professional autonomy over group autonomy. In other words, to achieve meaningful work, it is very important to provide the individual with the freedom to determine one's own schedules and procedures for carrying out her or his tasks (individual autonomy) as well as put practices in place where individuals feel free to take risks, where they can get on with the job rather than getting permission for every single action, where they can use their own professional judgement and where they have as little as possible bureaucratic interference (professional autonomy).

Second, I focused on meaningful work while working in self-managing teams. In the qualitative study reported in **Chapter 6**, I examined the self-managing teams – meaningful work relation, using a multidimensional perspective of meaningful work. Data from 15 interviews from ex-workers of one healthcare organization were used to explore how working in self-managing teams influences different dimensions of meaningful work. The study showed that among these participants multiple dimensions of meaningful work were not fulfilled when working in self-managing teams. This may possibly be explained by the fact that although the dimensions of meaningful work are universal for every person, the form in which they are fulfilled may differ from person to person. Furthermore, I found that working in self-managing teams is related to high work pressure (also noted by De Veer et al., 2008; Weerheim et al., 2019). The high work pressure hampered the fulfilment of two dimensions of meaningful work, and as such hampered meaningful work.

Finally, in **Chapter 7** using the map of meaning I tested, together with two co-authors, the proposition that meaningful work is positively related to retention. In this dissertation I viewed retention from an organizational perspective. Retention, from an organizational perspective, is not merely about nurses staying in the nursing workforce. Rather, healthcare organizations want their nurses to stay *and* be motivated and able to practice nursing. Retention was, therefore, operationalized in a straightforward way by asking nurses if they expect to be willing and able to continue working until their retirement. We used a survey among 514 employees from three healthcare organizations to examine how dimensions of meaningful work are related to continue working. We found that Integrity with Self and Inspiration are positively related to willingness and ability to continue working. Facing Reality was negatively related to willingness to continue working. We, surprisingly, found no relation between Service to others and willingness and ability to continue working.

Chapter 8, the general discussion, started with presenting the main findings in the light of the objectives, followed by theoretical and practical contributions. The first theoretical contribution is that, in order to further develop a theory on meaningful work, I argue, in **Chapter 3 and Chapter 7**, that researchers need to start utilizing more complex measures of meaningful work. The second theoretical contribution is that, in **Chapter 4, Chapter 5** and **Chapter 6**, I extend the literature on the relation between autonomy and meaningful work. Another theoretical contribution to the meaningful work literature is that I address the multilevel character and related multilevel issues that are important to the field of organizational practices and meaningful work (**See Chapter 5**).

These findings offer policymakers and healthcare organizations insight into policies that can contribute to solving nursing shortages. The first practical contribution is that I, in **Chapter 2**, demonstrate that nursing shortages are caused by scarcity as well as maldistribution of nurses to different sectors in the healthcare systems. Furthermore, the findings in **Chapter 2** also suggest that the shift of hospital services to home care and nursing homes can only be possible if care is delivered more effectively. Without this, there is an increased demand for practical and first-level registered nurses in home care and nursing homes, and, consequently, increased nursing shortages in these healthcare sectors. Another major contribution of this dissertation to practice is that it offers a new perspective on how to enhance retention. The findings, in **Chapter 7,** show that meaningful work is related to ability and willingness to continue working. Retention strategies focused on meaningful work could be a worthwhile pursuit. By highlighting that meaningful work is not a straight forward input–output relation but that a combination of practices make up the whole experience of

meaningful work (as through the fulfilment of all dimensions), this research shows that organizations need to consider a package of multiple practices to enhance meaningful work. I showed that the combination of individual autonomy and professional autonomy contributes to the whole experience of meaningful work (**Chapter 4**). In contrast, group autonomy or introducing self-managing teams do not lead automatically to meaningful work (**Chapter 4, Chapter 5 and Chapter 6)**.

One of the major limitations is the cross-sectional character of the studies. A second major limitation is the use of self-reports in two studies (**Chapter 5 and Chapter 7**) in this dissertation. The results of the studies should be interpreted in light of these limitations.

Taken together, the studies reported in this dissertation demonstrate that (1) nursing shortages in the Netherlands are caused by scarcity of nurses as well as maldistribution of nurses (**Chapter 2**); (2) meaningful work is a path worth pursuing to enhance the number of nurses who continue working (**Chapters 1 and 7**); (3) fostering meaningful work requires the fulfillment of all dimensions of meaningful work (**Chapter 3**); (4) so as to foster meaningful work, organizations should apply a package of multiple practices to enhance meaningful work for nurses (**Chapter 4, 5, 6 and 7**); (5) such a package of practices could include, for example, granting individual and professional autonomy (**Chapter 5**); (6) the practice of self-managing teams, however, does not automatically lead to meaningful work (**Chapter 4, Chapter 5 and Chapter 6**).

Samenvatting

Gezondheidszorgorganisaties in Nederland en andere landen zullen in de toekomst te maken krijgen met een tekort aan verpleegkundigen en verzorgenden (Sermeus et al., 2011). In hoofdstuk 1 van dit proefschrift worden de gevolgen van deze tekorten op de patiënten beschreven. Een tekort aan zorgmedewerkers heeft een negatieve invloed op de veiligheid van de patiënt en de kwaliteit van de zorg (Buchan & Aiken, 2008; Duffield & O'Brien-Pallas, 2003). Het oplossen van tekorten in de zorg is daarom van het grootste belang.

Tekorten aan verpleegkundigen en verzorgenden kunnen worden veroorzaakt door een schaarste van verpleegkundigen en verzorgenden in het algemeen en/of door een onevenwichtige verdeling van zorgmedewerkers over verschillende specifieke sectoren in de zorg. Schaarste aan zorgmedewerkers betekent dat het aantal verpleegkundigen en verzorgenden onder een minimale dichtheidsdrempel ligt die nodig is om specifieke gezondheidsdoelen te bereiken (Joint Learning Initiative 2004; World Health Organization 2006). Bij een onevenwichtige verdeling is er sprake van een scheve verdeling van verpleegkundigen en verzorgenden binnen het gezondheidszorgsysteem. (Dussault & Franceschini 2006; Munga & Mæstad 2009). Het aantal verpleegkundigen en verzorgenden werkzaam in de ziekenhuiszorg is bijvoorbeeld vele malen hoger dan het aantal verpleegkundigen en verzorgenden in de thuiszorg, wat niet in verhouding is met het aantal patiënten in de beide sectoren.

Een onevenwichtige verdeling van zorgmedewerkers in het gezondheidszorgsysteem vereist andere beleidsreacties dan schaarste van zorgmedewerkers. Oplossingen voor een onevenwichtige verdeling van zorgmedewerkers zijn gerelateerd aan overgangsprogramma's. Dat zijn programma’s die erop gericht zijn verpleegkundigen en verzorgenden te ondersteunen die in de ene zorgsector werken en overstappen naar een andere zorgsector, bijvoorbeeld de overstap van ziekenhuiszorg naar thuiszorg. Oplossingen voor de schaarste van verpleegkundigen en verzorgenden zijn gerelateerd aan een toenemend aanbod van deze zorgmedewerkers en/of een afnemende vraag. Voorbeelden zijn het opleiden van meer zorgmedewerkers, het motiveren van zorgmedewerkers om te blijven werken, of het op een efficiëntere manier organiseren van de zorg.

Vanwege de verschillende oplossingsrichtingen is het belangrijk om te weten of de tekorten het gevolg zijn van schaarste aan zorgmedewerkers in het algemeen of van een onevenwichtige verdeling van zorgmedewerkers over de verschillende zorgsectoren. Dit is

echter tot nu toe onvoldoende onderzocht. In hoofdstuk 2 identificeer ik daarom de verschillende oorzaken van tekorten aan verpleegkundigen en verzorgenden en bijbehorende oplossingen om deze tekorten te verminderen. Ik constateer in dit hoofdstuk dat tekorten aan zorgmedewerkers in Nederland worden veroorzaakt door zowel schaarste als onevenwichtige verdeling van verpleegkundigen en verzorgenden. Om de tekorten van verpleegkundigen en verzorgenden aan te pakken, is dan ook een gecoördineerd pakket van beleid noodzakelijk dat erop gericht is schaarste en onevenwichtige verdeling van verpleegkundigen en verpleegkundigen terug te dringen.

Eén van de manieren om de tekorten op te lossen is het beïnvloeden van de beslissing van zorgmedewerkers om te blijven werken (retentie van medewerkers). In hoofdstuk 1 licht ik toe waarom het belangrijk is om ons hierop te richten. Strategieën om retentie te verbeteren zijn vooral gericht op leiderschap en de werkomgeving waarin zorgmedewerkers zorg leveren. Het is echter gebleken dat zorgmedewerkers niet zozeer betrokken zijn bij een specifieke organisatie, maar dat zij een omgeving zoeken waar zij betekenis in hun werk kunnen ervaren (Shacklock & Brunetto, 2012). Het vinden van betekenisvol werk is voor werknemers steeds belangrijker geworden (Gheaus & Herzorg, 2016; Harpas & Fu, 2002). Aangezien werknemers tegenwoordig op zoek zijn naar betekenisvol werk en dit gedurende hun hele carrière blijven doen, kan het vergroten van de mate waarin werk als betekenisvol wordt ervaren, het behoud van verpleegkundigen en verzorgenden stimuleren.

Voordat we strategieën kunnen onderzoeken om betekenisvol werk te verbeteren, moeten we eerst begrijpen hoe werk betekenisvol wordt. Onderzoek naar betekenisvol werk heeft tot nu toe echter geleden onder een gebrek aan consensus over wat betekenisvol werk inhoudt (Steger et al., 2012). In hoofdstuk 3 beschrijf ik om die reden de uitvoering van twee literatuuronderzoeken om betekenisvol werk te definiëren en te meten.

Eerst heb ik, samen met twee coauteurs, in de literatuur gezocht naar bestaande definities van betekenisvol werk. We hebben veertien definities gevonden. Op basis daarvan hebben we vier categorieën definities geïdentificeerd, die ons ertoe hebben gebracht de volgende integratieve, uitgebreide definitie van betekenisvol werk te geven: “Betekenisvol werk is de subjectieve ervaring van existentiële betekenis die voortvloeit uit de fit tussen individu en het werk”. De “subjectieve ervaring van existentiële betekenis” verwijst naar het proces van persoonlijk waarnemen dat werk bijdraagt aan, of zinvol is voor, iemands bestaansreden in de wereld. Het “resultaat van de fit” verwijst naar de vervulling van zingevingsdimensies – die aanwezig zijn in ieder mens – door of in het werk. Deze dimensies moeten verder worden gedefinieerd door het onderliggende conceptuele kader.

Ten tweede hebben we de literatuur beoordeeld op bestaande betekenisvolwerk-schalen die aansluiten bij onze integratieve definitie van betekenisvol werk. Op basis van de resultaten van de tweede literatuurstudie hebben we twee gevalideerde schalen geïdentificeerd die overeenkomen met deze definitie en zijn gevalideerd: de Work And Meaning Inventory (WAMI; Steger et al., 2012) en de Comprehensive Meaningful Work Scale (CMWS; Lips-Wiersma & Wright, 2012).

Een integratieve definitie van betekenisvol werk en een bijbehorende schaal openden de weg om te onderzoeken hoe betekenisvol werk in organisaties kan worden verbeterd. In hoofdstuk 4 stel ik, samen met drie coauteurs, op basis van de bestaande literatuur over betekenisvol werk, een theorie voor over de relatie tussen autonomie en betekenisvol werk. In hoofdstuk 5 rapporteer ik, samen met drie coauteurs, vervolgens over een onderzoek naar de relatie tussen drie vormen van autonomie (groepsautonomie, individuele autonomie en professionele autonomie) en betekenisvol werk met behulp van kwantitatieve gegevens van 510 werknemers van drie organisaties. Op basis van bestaande literatuur over betekenisvol werk hebben we hypotheses opgesteld hoe verschillende vormen van autonomie verband houden met de zeven dimensies van betekenisvol werk. Hiërarchische analyses op meerdere niveaus werden uitgevoerd om de hypotheses te testen.

Onze studie toonde aan dat individuele en professionele autonomie significante positieve relaties hebben met zes van de zeven dimensies van betekenisvol werk. Daarnaast heeft groepsautonomie significante positieve, hoewel zwakke, relaties met twee dimensies van betekenisvol werk. Onze resultaten tonen dus aan dat verschillende vormen van autonomie verschillend verband houden met de dimensies van betekenisvol werk. Onze bevindingen hebben implicaties voor gezondheidszorgorganisaties die gericht zijn op het vergroten van betekenisvol werk en die het bieden van meer autonomie als een haalbare optie zien: zij moeten prioriteit geven aan het vergroten van individuele en professionele autonomie boven groepsautonomie. Met andere woorden: om betekenisvol werk te vergroten, is het erg belangrijk om het individu de vrijheid te geven om zijn eigen schema's en procedures te laten bepalen voor het uitvoeren van zijn taken (individuele autonomie) en ervoor te zorgen dat individuen zich vrij voelen om risico's te nemen, waarbij ze hun eigen professionele oordeel gebruiken en ze zo min mogelijk bureaucratische inmenging ondervinden (professionele autonomie).

In hoofdstuk 5 stel ik vast dat groepsautonomie slechts in beperkte mate betekenisvol werk bevordert. In hoofdstuk 6 heb ik, daarom, nader gekeken naar de relatie tussen taakgebonden autonomie van de groep in de vorm van zelforganiserende teams en

betekenisvol werk. Via zelforganiserende teams kunnen organisaties groepsautonomie verlenen aan hun verpleegkundigen en verzorgenden. In sommige organisaties rapporteerden verpleegkundigen en verzorgenden die in zelforganiserende teams werkten, inderdaad meer motivatie en geluk (Weerheim et al., 2019). In andere organisaties echter meldden verpleegkundigen en verzorgenden die in zelforganiserende teams werkten, dat ze juist meer gedemotiveerd en ongelukkig zijn (Skipr, 2016; 2018).

In de kwalitatieve studie waarover ik rapporteer in hoofdstuk 6, heb ik exploratief de relatie onderzocht tussen zelforganiserende teams en betekenisvol werk, vanuit een multidimensionaal perspectief op betekenisvol werk. Gegevens uit vijftien interviews van ex-werknemers van één zorgorganisatie werden gebruikt om te onderzoeken hoe werken in zelforganiserende teams verschillende dimensies van betekenisvol werk beïnvloedt. Deze studie toonde aan dat bij deze deelnemers aan meerdere dimensies van betekenisvol werk niet werd voldaan bij het werken in zelforganiserende teams. Dit kan mogelijk worden verklaard doordat de dimensies van betekenisvol werk weliswaar universeel zijn voor elke persoon, maar dat de vorm waarin ze worden vervuld van persoon tot persoon kan verschillen. De bevindingen suggereren met name dat het werken in zelforganiserende teams één kerndimensie van betekenisvol werk niet universeel vervult, namelijk het ontwikkelen en gebruiken van talenten. Bovendien is werken in zelforganiserende teams gerelateerd aan hoge werkdruk (ook opgemerkt door De Veer et al., 2008; Weerheim et al., 2019). De hoge werkdruk belemmerde betekenisvol werk bij de onderzochte groep. Overigens was de empirische setting van de kwalitatieve studie vrij specifiek en daardoor zijn de resultaten niet generaliseerbaar naar andere contexten. Mijn doel is echter niet om de resultaten van de studie te generaliseren, maar de studie is bedoeld om een discussie- en onderzoeksagenda te starten over wat werken in zelforganiserende teams voor werknemers kan betekenen in termen van betekenisvol werk en welzijn.

Ten slotte heb ik ook in hoofdstuk 7, samen met twee coauteurs, de stelling getest dat betekenisvol werk positief gerelateerd is aan retentie. In dit proefschrift bezie ik retentie vanuit een organisatorisch perspectief. Retentie, vanuit organisatorisch perspectief, gaat niet alleen over verpleegkundigen en verzorgenden die in de zorg blijven werken. Zorgorganisaties willen ook dat hun verpleegkundigen en verzorgenden op langere termijn willen en kunnen blijven werken. Retentie werd daarom op een eenvoudige manier geoperationaliseerd door verpleegkundigen en verzorgenden te vragen of zij verwachten te kunnen en willen blijven werken tot hun pensioen. We hebben een enquête onder 514 werknemers van drie zorgorganisaties gebruikt om te onderzoeken hoe betekenisvol werk

gerelateerd is aan doorgaan met werken. Op basis van de antwoorden stelden we vast dat trouw zijn aan jezelf en inspiratie een positieve relatie hebben met kunnen en willen blijven werken. De realiteit onder ogen zien daarentegen heeft een negatieve relatie met willen blijven werken. Deze bevindingen suggereren dat het voor zorgmedewerkers het belangrijkst is dat zij zichzelf kunnen zijn in hun werk en dat er een hoopvolle visie en toekomst is. Wanneer zorgmedewerkers echter in het dagelijkse werk ervaren dat zij niet kunnen voldoen aan de visie, dan verliezen zij hun motivatie om te blijven werken.

Hoofdstuk 8, de algemene discussie, begint met de presentatie van de belangrijkste bevindingen in het licht van de doelstellingen, gevolgd door theoretische en praktische bijdragen. De eerste theoretische bijdrage is dat ik, om een theorie over betekenisvol werk verder te ontwikkelen, in hoofdstuk 3 en hoofdstuk 7 betoog dat onderzoekers complexere meetinstrumenten voor betekenisvol werk moeten gaan gebruiken. De tweede theoretische bijdrage is dat ik in hoofdstuk 4, hoofdstuk 5 en hoofdstuk 6 de literatuur uitbreidt over de relatie tussen autonomie en betekenisvol werk. Een andere theoretische bijdrage aan de literatuur over betekenisvol werk is dat ik het multilevelkarakter, in dit proefschrift teams in organisaties, en gerelateerde multilevelkwesties behandel die belangrijk zijn voor het veld van organisatorische praktijken en betekenisvol werk (zie hoofdstuk 5).

Mijn bevindingen bieden beleidsmakers en zorgorganisaties inzicht in beleid dat kan bijdragen aan het oplossen van tekorten in de zorg. De eerste praktische bijdrage is dat ik, in hoofdstuk 2, aantoon dat tekorten in de zorg worden veroorzaakt door schaarste en onevenwichtige verdeling van verpleegkundigen en verzorgenden over de verschillende sectoren in de gezondheidszorg. Bovendien suggereren de bevindingen in hoofdstuk 2 dat de verschuiving van ziekenhuisdiensten naar thuiszorg en verpleeghuizen alleen mogelijk kan zijn als de zorg effectiever wordt verleend. Als dat niet gebeurt, is er een toenemende vraag naar mbo- en hbo-verpleegkundigen in de thuiszorg en verpleeghuizen, en als gevolg een groter tekort aan deze verpleegkundigen in deze zorgsectoren. Een andere belangrijke bijdrage van dit proefschrift aan de praktijk is dat het een nieuw perspectief biedt op het verbeteren van behoud van zorgmedewerkers. De bevindingen in hoofdstuk 7 laten zien dat betekenisvol werk gerelateerd is aan het vermogen en de bereidheid om te blijven werken. Als zodanig kunnen retentiestrategieën die zijn gericht op betekenisvol werk een waardevol streven zijn. Door te benadrukken dat betekenisvol werk bestaat uit zeven dimensies, laat dit onderzoek zien dat organisaties een pakket van meerdere werkwijzen moeten overwegen om betekenisvol werk te verbeteren. Ik heb laten zien dat de combinatie van individuele autonomie en professionele autonomie bijdraagt aan de zeven dimensies van betekenisvol

werk (hoofdstuk 4). Groepsautonomie of de introductie van zelforganiserende teams leiden daarentegen niet automatisch tot betekenisvol werk (hoofdstuk 4, hoofdstuk 5 en hoofdstuk 6).

Eén van de belangrijkste beperkingen van de studies is dat ze gebruikmaken van cross-sectionele data, waardoor er geen uitspraken gedaan kunnen worden over causaliteit. Een tweede belangrijke beperking is het gebruik van zelfrapportage in de twee studies (hoofdstuk 5 en hoofdstuk 7) in dit proefschrift, wat gepaard gaat met mogelijke sociaalwenselijke antwoorden en common method variance. De resultaten van de onderzoeken moeten worden geïnterpreteerd in het licht van deze beperkingen.

De studies in dit proefschrift laten zien: 1) dat betekenisvol werk een waardevol pad is om te volgen voor het behoud van zorgmedewerkers (hoofdstuk 1 en 7); 2) dat bevorderen van betekenisvol werk de vervulling vereist van meerdere dimensies (hoofdstuk 3); en 3) dat organisaties om betekenisvol werk te bevorderen, een pakket van meerdere werkwijzen moeten toepassen om betekenisvol werk te verbeteren (hoofdstuk 4, 5 en 7). Een voorbeeld daarvan is het verlenen van individuele en professionele autonomie (hoofdstuk 5). Ook is echter duidelijk geworden dat zelforganiserende teams niet automatisch moeten worden geïmplementeerd (hoofdstuk 4, hoofdstuk 5 en hoofdstuk 6). Kortom, willen we zorgmedewerkers behouden voor de zorg dan is het bevorderen van betekenisvol werk een zinvolle investering.

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Appendix 1 Information on the Collaborative Research Project

This study was carried out as part of a five-year collaborative research project between the Organization Sciences at the VU University and Stichting Cordaan. Stichting Cordaan is a healthcare organization, in the Western part of the Netherlands, with 5,500 employees and 20,000 patients.

The goal of this dissertation was to gain insights into the nurse retention and associated solution of meaningful work. These insights were translated into two types of products:

1. Academic publications to further develop scientific knowledge on the subject of meaningful work;
2. Specific resources that can be used directly by Stichting Cordaan to improve nurse retention, such as research reports and presentations.

The research project was fully financed by Stichting Cordaan. The author, however, carried out the data analyses and interpretations independently. Moreover, all conclusions and recommendations in this study are those of the author and co-authors.

Appendix 2 Comprehensive Meaningful Work Scale (CMWS)

Integrity with Self

At work my sense of what is right and wrong gets blurred (reverse scored)

I don't like who I am becoming at work (reverse scored)

At work I feel divorced from myself (reverse scored)

Unity with Others

I have a sense of belonging

I can talk openly about my values when we are making decisions

We talk about what matters to us

We support each other

We reassure each other

We enjoy working together

Serving Others

I feel I truly help our customers/clients

We contribute to products and services that enhance human well-being and/or the environment

What we do is worthwhile

We spend a lot of time on things that are truly important

Expressing Full Potential

I create and apply new ideas or concepts

I make a difference that matters to others

I experience a sense of achievement

I am excited by the available opportunities for me

Facing Reality

At work we face up to reality

We are tolerant of being human

We recognise that life is messy and that is OK

Inspiration

I feel inspired at work

The work we are doing makes me feel hopeful about the future

The vision we collectively work towards inspires me

I experience a sense of spiritual connection with my work

Balancing Tensions

In this work I have the time and space to think

We have a good balance between focusing on getting things done and noticing how people are feeling

I create enough space for me

I have a good balance between the needs of others and my own needs