UPPSALA
UNIVERSITET

Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine 1553

Working Life Among First-Line Managers and Their Subordinates in Elderly Care

an Empowerment Perspective

HEIDI HAGERMAN

ACTA
UNIVERSITATIS
UPSALIENSIS
UPPSALA
2019

ISSN 1651-6206
ISBN 978-91-513-0600-1
urn:nbn:se:uu:diva-379307

Dissertation presented at Uppsala University to be publicly examined in Sal IX, Universitetshuset, Biskopsgatan 3, Uppsala, Tuesday, 7 May 2019 at 09:00 for the degree of Doctor of Philosophy (Faculty of Medicine). The examination will be conducted in Swedish. Faculty examiner: Professor Lotta Dellve (Göteborgs Universitet, Institutionen för Sociologi och Arbetsvetenskap).

Abstract

Hagerman, H. 2019. Working Life Among First-Line Managers and Their Subordinates in Elderly Care. an Empowerment Perspective. *Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine* 1553. 80 pp. Uppsala: Acta Universitatis Upsaliensis. ISBN 978-91-513-0600-1.

Aim: The aim of this thesis was to study the working life of first-line managers and their subordinates in elderly care from an empowerment perspective. *Methods:* Paper I and II used a qualitative approach, and semi-structured interviews were conducted with 14 male and 14 female first-line managers. Data were analyzed using qualitative content analysis. Paper III and IV used a quantitative approach with a longitudinal, correlational and multilevel design. 78 first-line managers and 1398 subordinates filled in the questionnaire at T1 and 56 first-line managers and 769 subordinates at T2. Data were analyzed using descriptive statistics, multivariate analyses (III & IV) and multilevel modelling (IV). *Results:* In Paper I and II, the first-line managers reported having a challenging and complex work situation. Although the first-line managers sometimes expressed a need for better access to structural empowerment in terms of information, resources and support, they experienced psychological empowerment in their work. In Paper III, the results indicated that the more access the first-line managers had to structural empowerment over time, the more likely they were to feel psychologically empowered over time, resulting in lower ratings of their stress symptoms and higher ratings of their own self-rated leadership-management performance over time. Another finding in Paper III was the influence the number of subordinates per first-line manager had on the first-line managers' ratings of structural empowerment and the subordinates' ratings of structural empowerment and stress symptoms. In Paper IV, the results indicate that the more access the first-line managers had to structural empowerment at T1, the more access the subordinates had to structural empowerment at T2, and the higher the subordinates rated their first-line manager's leadership-management performance at T2, when controlling for psychological empowerment. *Conclusions:* The working life of first-line managers in elderly care is complex and challenging, and they seem to need better access to structural empowerment (Paper I-IV). However, although deficiencies in access to structural empowerment were reported, the first-line managers experienced their work as a positive challenge (Paper 1) and felt that, though the work was not easy, it was worth it (Paper II).

Keywords: Elderly Care, First-Line Manager, Structural and Psychological Empowerment, Subordinate, Working Life

Heidi Hagerman, Department of Public Health and Caring Sciences, Caring Sciences, Box 564, Uppsala University, SE-751 22 Uppsala, Sweden.

© Heidi Hagerman 2019

ISSN 1651-6206
ISBN 978-91-513-0600-1
urn:nbn:se:uu:diva-379307 (http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-379307)

To my beloved family

List of Papers

This thesis is based on the following papers, which are referred to in the text by their Roman numerals.

I	Hagerman, H., Engström, M., Häggström, E., Wadensten, B., Skytt, B. (2015) Male first-line managers' experiences of the work situation in elderly care: an empowerment perspective. *Journal of Nursing Management,* 23:695-704
II	Hagerman, H., Engström, M., Wadensten, B., Skytt, B. (2018) How do female first-line managers in elderly care experience their work situation? – an interview study. (Re-submitted)
III	Hagerman, H., Skytt, B., Wadensten, B., Högberg, H., Engström, M. (2016) A longitudinal study of working life among first-line managers in the care of older adults. *Applied Nursing Research,* 32:7-13
IV	Hagerman, H., Högberg, H., Skytt, B., Wadensten, B., Engström, M. (2017) Empowerment and performance of managers and subordinates in elderly care: A longitudinal and multilevel study. *Journal of Nursing Management,* 25:647-656

Reprints were made with kind permission from the respective publishers.

Contents

Introduction 11

Background 12
- Elderly care organization in Sweden 12
- First-line managers in elderly care 14
- Staff in elderly care 15
- The work and care environment 16
- Theoretical framework 18
  - Structural empowerment 18
  - Psychological empowerment 20
- Working life in elderly care 21

Rationale 26

Overall aim and specific aims 27

Methods 29
- Design 29
- Setting 30
- Sample and procedure 30
  - Interview studies 30
  - The longitudinal questionnaire study 32
- Data collection 33
  - Semi-structured interviews 33
  - The questionnaires 34
- Data analysis 36
  - Qualitative content analysis 36
  - Statistical analyses 36

Ethical considerations 40

Results 42
- Qualitative papers 42
  - Paper I 43
  - Paper II 44

Quantitative papers 45
Paper III 45
Paper IV 47

Discussion 52
Summary of main results 52
Working life in elderly care 53
Access to empowerment 53
Stress symptoms 56
Leadership and management performance 57
The work and care environment 58

Methodological considerations 60
Trustworthiness 60
Validity 62
The theoretical framework in the thesis 65

Conclusions 66

Clinical implications 67

Svensk sammanfattning (Swedish summary) 69

Acknowledgements 71

References 74

Abbreviations

CI	Confidence Interval
CWEQ-II	The Conditions of Work Effectiveness Questionnaire-II
GEE	Generalized Estimating Equations
FLM	First-Line Manager
LaMI	The Leadership and Management Inventory
RN	Registered Nurse
SOC	Span Of Control
T1	Time 1 data collection
T2	Time 2 data collection

Preface

Elderly care has always interested me. In 1996, at the age of 16, my first real work was as a nurse's aide at a municipal nursing home for persons with dementia. After graduating from gymnasium, I worked as an assistant nurse at nursing homes and home-help services in different municipalities. After a while I applied to nursing studies at the university. Having enjoyed working with older persons, I went back to work as a registered nurse in elderly care after finishing my studies. During my years in elderly care, I worked with many first-line managers (FLMs) in different organizations and in different municipalities. Their leadership and management varied. Some of them were really inspiring, whereas others were more distanced and invisible to me. Especially one manager made a strong impression. She was also a registered nurse and had worked in elderly care before becoming an FLM. She understood our work situation, and she supported and listened to us. Although she sometimes had to make difficult decisions, she could always explain the situation and make us feel part of the decision-making process. She gave me the opportunity to work with an EU-project on education and supervision of healthcare staff. She inspired me and sparked my interest in leadership and management, and made me think that someday I might become a FLM.

When I started work on my Master's thesis, I got the opportunity to write about the work situation for staff in elderly care. I enjoyed deepening my understanding of the area, and I started working as a research assistant in a project about working life in elderly care. Later on, I applied for, and received, a postgraduate position in the same project. Now, at the end of my doctoral studies, when I think back on my early clinical work in elderly care, I have a much deeper understanding of how structural conditions affect not only the FLMs themselves, but also everyone around them. I still think of that one manager as the best FLM I have ever worked with, because she was able to empower me in my work as a registered nurse.

Introduction

During the past decades, elderly care has undergone several changes. The clients now have more complex care needs, which, in turn, has led to higher demands on management of elderly care.[1] Managers in elderly care have reported poorer structural conditions and poorer health than managers in other municipal departments,[2] and high turnover rates have been reported both among first-line managers (FLMs) and staff.[1] This is problematic, because while the older population is increasing, the need for FLMs and staff is increasing as well.[3,4] Research has shown that the staffs perception of the work environment are significantly related to outcomes for both staff and patients.[5–9] The work environment needs to enable employees by offering them good structural conditions/structural empowerment and sharing power with them.[10] However, the working life of FLMs and their subordinates in Swedish elderly care has not been particularly well studied from an empowerment perspective. This thesis focuses primarily on working life among FLMs in elderly care, but also in relation to their subordinates.

Background

Elderly care organization in Sweden

In the beginning of the 1950s, modern Swedish elderly care began with the introduction of home-help services. In 1992, the Elderly Reform was introduced, making the municipalities responsible for all care and social services for older persons. Elderly care in Sweden has been subjected to many organizational changes during recent decades,[11] which, for example, has made it possible for private care providers to enter the care sector.[12]

The care and services provided in elderly care can be offered by municipal or private care providers. Still, all elderly care and social services, both municipally and privately run facilities, are tax financed and the municipalities have the overall responsibility.[1,12] A private care provider can be an individual, a company, a corporation, a co-operative, a non-profit association or a foundation.[1,13] Private care providers can offer care and services according to the Freedom of Choice Act (2008:962),[14] or the Public Procurement Act (2016:1145).[15] However, it is up to the municipalities to decide whether any aspect of freedom of choice should be implemented, and up to the older persons themselves to decide whether they want to use a municipal or private care provider.[16] Although a majority of the municipalities have adopted the freedom of choice system (especially the bigger ones), there are still municipalities that have not.[1] In 2015, private care providers were responsible for 24% of all home-help services and 19% of all nursing homes in elderly care in Sweden.[1] However, there is great variation across municipalities in the number of private care providers.[17] There is also variation across municipalities in the number of older persons who receive elderly care, and the quality as well as different kinds of services the municipalities provide.[18] The services and the organization are managed differently depending on whether they are municipal or private. The managerial structure can vary regarding the managerial responsibilities associated with the various positions, and the hierarchical levels can also vary.[12] In municipal services, the local board, with members from different political parties, is in charge.[19] In private elderly care, the services are run by a board of white-collar employees and specialists.[12] In 2016, the cost for elderly care was 117 billion SEK, which was 19.1% of the municipalities' total costs.[4]

The municipalities are obligated to provide older persons with home-help services or special forms of housing for individuals who are in need of special

support, according to the Social Services Act (2001:453), which regulates elderly care in Sweden. However, according to the Social Services Act (2001:453), older persons must wait for a decision made by a case manager before they can apply for home-help services or a place at a nursing home.[20] The home-help services provide individuals, most of whom are 65 years or older, with assistance around the clock in terms of services or personal care in the individuals' own homes. The nursing homes are special forms of housing that should meet older persons' varied and special needs for care and services around the clock. The National Board of Health and Welfare defines services as practical help with house cleaning, laundry, errands, grocery shopping and serving meals, and they define care as help with daily activities in terms of hygiene, nutrition, ambulation and psychosocial health.[1] In this thesis, the home-help services and the nursing homes are in focus, although the elderly care system does provide more forms of services to older persons. Furthermore, the definition of older persons as the chronological age of 65 years old or older[21] will be used in the thesis.

According to §1 Chapter 4 of the Social Services Act (2001:453), "An individual who cannot provide for his/her own needs or have them provided for in another way has the right to assistance from the social welfare board for his/her maintenance (maintenance support) and for his/her life in general".[20] In October 2017, 231,324 individuals were receiving home-help services and 88,208 individuals were living at nursing homes, most of them 80 years or older.[3] In 2015, 37% of older persons who were 80 years or older received elderly care, and a majority of them were women.[1] Many of the clients have impaired physical and mental health and often several chronic illnesses.[1,3] A Swedish cross-sectional study[22] examined the prevalence of dependency in activities of daily living (ADL), cognitive impairment, neuropsychiatric symptoms and pain among 4,831 clients at 188 Swedish nursing homes. They found that 56% of clients were ADL dependent, 67% had cognitive impairment, 92% exhibited neuropsychiatric symptoms and 48% exhibited pain.[22] Dahlkvist et al.[23] and Roos et al.[24] have also reported anxiety/depression, pain symptoms and problems performing ADL activities among clients at nursing homes in Sweden. The number of rooms at nursing homes has decreased during recent years, and only clients with extensive care needs are offered a room there. Older persons with lesser needs instead stay in their own homes with assistance from the home-help services.[1,3,17] In Sweden, the special forms of housing have been given a variety of names over the years: service apartments, old people's homes, nursing homes, sheltered housing and temporary housing.[1] In this thesis, they will be called nursing homes because many of the clients have impaired health with extensive care needs, and a case manager has made a decision allowing them to stay at a nursing home.

However, there are differences in what the municipalities can offer their older population in terms of home-help services and nursing homes.[1,17,18]

By mid-2040, the number of persons who are 80 years or older is expected to have doubled compared to now, from 500,000 to one million persons.[1] Elderly care is tasked with meeting the needs of this growing group of older persons, customizing the care and letting older persons participate actively in their own care.[1,3,4] However, as the trend is toward more older persons staying in their own homes and receiving more advanced healthcare at home, the pressure on elderly care will increase.[1,3,17]

Elderly care is imbued with the fundamental values of self-determination and participation.[1] These values are the basis of the Social Services Act (2001:453).[20] The values of self-determination and participation entail that the individual has the right to make decisions about him-/herself and the care or services being provided. As far as possible, the individual and the staff should jointly decide on how and when the care or services should be provided.[1] In 2011, the national fundamental values were legislated in the Social Services Act (2001:453), saying that ”The elderly care provided by the social services shall aim at older persons being able to live a life of dignity and experience well-being (fundamental values)”, §4 Chapter 5.[20] The national fundamental values are imbued with the values of self-determination, security, purpose, respect for privacy and integrity, adaptation to and participation of the individual, good treatment and work of high quality.[25] Roos et al.[24] conducted a Swedish intervention study that put the national fundamental values into practice. The results showed that, at nursing homes where the national fundamental values were put into practice, the clients gave higher ratings on person-centered climate, empowerment and quality of everyday activities.[24]

First-line managers in elderly care

In Sweden, the FLMs go by many different names: head of unit, head of section, senior administrator,[26] department head, area manager, home-help manager and head of housing.[27] In this thesis, however, they will all be defined as FLMs. FLMs work close to the daily operations at their units and are responsible for leadership and performance of work tasks, as well as for staff and finances.[27,28] They are also responsible for the quality of care, patient safety and the social services provided to older persons at their units. Moreover, they have a responsibility for their subordinates as well as their subordinates' work environment.[27] Their responsibility is delegated, however, and can vary from organization to organization. FLMs are both managers (by virtue of their formal position in the organization) and leaders (by virtue of their ability to influence and lead others). Leadership is one of many tasks included in the managerial work.[29,30] However, in FLMs' daily work, administrative tasks take most of their time.[30] FLMs are positioned in between their subordinates and upper level management. The managers support subordinates who work directly with the care and social services provided to older persons: therefore,

these FLMs are differentiated from managers in other positions in the organizational structure, as they are the only managers who work directly with the staff.[28,30] The average number of subordinates per manager varies in different reports. According to Regnö,[31] in 2016, FLMs in elderly care had an average of 30 subordinates each. However, according to an SOU report,[1] the average number of subordinates has increased from 54 in 2009 to 60 in 2015, although there is great variation within and between both municipalities and private care providers.[1]

Also, the average number of FLMs in elderly care varies in different reports. In their report,[27] the labor union Vision stated that about 5,000 FLMs work in elderly care, while a SOU report[1] states that about 4,100 FLMs work in municipally financed elderly care. In 2015, about 90% of FLMs were women and almost half of FLMs were between 50-66 years of age.[1] In 2016, managers in elderly care were the fifth most common female work group in the overall labor market, with 87% female and 13% male managers.[32] Many of the FLMs had a university degree in nursing or social work.[1] Today, there are no formal educational requirements for FLMs,[1,33] but in 2020, a regulation concerning FLMs' education will be added to the proposition of social care.[1,13] Effective 2020, to the extent possible, only managers with a suitable education will be able to work at nursing homes, home-help services and daycare centers. The turnover rate among FLMs in Sweden has been found to be high: of the FLMs working in November 2014, 73% remained in their positions one year later.[1]

Staff in elderly care

In 2015, about 250,000 individuals worked in municipally financed elderly care; 90% of them were women, 20% were foreign born, and 90% were assistant nurses, nurse's aides and orderlies. However, registered nurses (RNs), physiotherapists and occupational therapists work in elderly care as well. In 2015, about 60% of the nursing staff were assistant nurses.[1] During the past decade, elderly care has undergone changes as clients have become older with more complex needs, leading to higher demands for competence among staff.[3,4] In 2015, home-help services staff helped 12 clients during a work day, compared to in 2005, when they helped 9 clients.[34]

While the older population is increasing, the need for staff is increasing as well.[1,3] Before 2026, 136,000 assistant nurses and nurses' aides need to be recruited in order to meet the care needs of the increasing older population as well as replace staff approaching retirement age.[35] Meanwhile, there is a great need to recruit staff to elderly care, as elderly care staff have high rates of sick leave, almost twice as high as the overall labor market.[3] Moreover, the number of temporary and part-time employments is high in elderly care. In 2017, the percentage of temporary employees in municipal elderly care was 27%, and

among private care providers 37%; compared to 16% in the overall labor market. Furthermore, the percentage of part-time employees in municipal elderly care was 61%, and among private care providers 72% of the employees had part-time employments.[36] Moreover, the turnover rates and change of workplace among nursing staff in Sweden has been found to be high, and of the assistant nurses who worked in 2014, 82% remained in the same position one year later. Among the nurses' aides, 61% remained in the same position one year later.[1] According to the NORDCARE study[34] conducted in 2015, about half of the nursing staff in the study had seriously thought about quitting their work, compared to 34% in Norway and 43% in Denmark.

The work and care environment

The theoretical concept of environment is described in different disciplines. For example, in the nursing metaparadigm, environment is one of four concepts that should be considered when performing nursing duties.[37] According to Fawcett[38] p. 95, “”environment” refers to the person's significant others and physical surroundings, as well as to the setting in which nursing occurs, which can range from the person's home to clinical agencies to society as a whole”. In the person-centered practice framework,[39] the care environment is one of four constructs that should be considered when performing person-centered care. According to McCormack et al.[39] p.105-106. “The care environment is a key influencing factor on the way that person-centeredness is experienced by both patients/residents, families and care teams.” In the framework, the care environment, i.e. the context in which care is delivered, focuses on shared decision-making, staff relationships, supportive organizational systems, sharing of power and innovation. According to Kanter,[10] this is similar to what occurs when employees have access to structural empowerment in their work. Kanter's theory[10] proposes that employees need access to structural empowerment in terms of opportunities, information, support and resources to empower them to accomplish their work in a meaningful way. But they also need to feel that their work environment supports them in their professional practice.[8,40] Kanter's theory[10] of structural empowerment has been studied to a great extent in nursing settings in North America by the late distinguished university professor, Heather Spence Laschinger and colleagues. Laschinger argued that, when nurses have access to structural empowerment, they have better preconditions to provide care according to professional standards, which in the end, should result in higher quality of care for patients.[8] In their comprehensive theory of nurse/patient empowerment, Laschinger and colleagues proposed a model suggesting that when nurses are empowered, they are more likely to empower their patients, resulting in better patient and system outcomes.[41] Purdy et al.[7] tested the effects of structural empowerment on nurse and patient outcomes. They

found that when nurses had access to structural empowerment, this had positive effects on their empowered behavior, their job satisfaction as well as on nurse-assessed quality of care and patient safety.[7]

In sum, the theoretical approaches described above share the notion that the environment needs to be supportive and to involve employees in decision-making when it comes to their own work context and care of clients.[10,39] Therefore, FLMs' leadership should provide their staff with empowering structures. But before they can provide their staff with access to structural empowerment, the FLMs themselves must first have access to empowerment structures.[42] Laschinger et al.[43] investigated whether managers' leadership behaviors have an impact on how empowerment at work is experienced by staff. They found that when the managers were empowered, their leadership behavior influenced staff empowerment by providing even greater access to structural empowerment, which in turn resulted in increased work effectiveness.[43] When studying the work environment in elderly care in Sweden, Engström et al.[44] (unpublished work from the present research project) found significant relationships between staff assessment of empowerment, staff job satisfaction and client satisfaction with care. Furthermore, Silén et al.[9] found positive associations between empowerment and staff ratings of thriving and ability to work in a more person-centered manner and improved person-centered climate. Many studies conducted in hospital settings have stressed that the work environment has significant effects on nursing and patient outcomes.[5–8,45] For example, a work environment that supports professional nursing practice is important to nurses' job satisfaction[5,7,8] and nurses' perceptions of quality of care[5–8] and patient safety.[6,7] Studies have also described associations between the quality of nurses' work environments and patient satisfaction with hospital care[6] and the mortality risk among patients.[5] Results from the above studies are all in line with magnet hospital research. In the Magnet® model,[46] the focus is on the working life of registered nurses, as well as on the standard of care for patients. Structural empowerment[10] is one of five key parts of the Magnet® model.

In sum, the above studies have shown that a satisfying work environment promotes positive outcomes for employees as well as high-quality care for clients/patients.[5–9] The work environment needs to enable structural empowerment and sharing of power to create positive practice environments that increase employees' job satisfaction,[5,7,8] the quality of nursing working life[45] and that positively affect the quality of care they can provide in these work settings.[5–8] Satisfying work settings can also encourage staff to work in a more person-centered manner,[9] which may lead to positive outcomes for patients.[47]

Theoretical framework

The word empowerment is used frequently in many disciplines, within different contexts, and has various definitions.[48] This thesis focuses on two perspectives on empowerment; the organizational perspective of structural empowerment as described by Kanter,[10] and the psychological perspective of psychological empowerment as described by Spreitzer.[49] Structural empowerment focuses on the structural conditions in the workplace, whereas psychological empowerment focuses on the individual's psychological response to these structural conditions.

Structural empowerment

Kanter's[10] theory of structural empowerment focuses on the structural conditions that are essential to individuals' well-being and organizational effectiveness. According to the theory, it is access to structural empowerment that influences the individual's work attitudes and behaviors rather than their personality or predispositions. Employees are empowered by having access to the following structures: *opportunity* (to learn and develop knowledge and to advance within the organization), *information* (to have knowledge about the work and the organization in order to be able to work in a meaningful way), *support* (to have guidance and feedback from superiors, colleagues and subordinates) and *resources* (to have the time, materials, supplies and money necessary to meet work demands).

However, access to these empowerment structures is facilitated by the individual's access to *formal power* (by having a visible job that is important to the organization and characterized by flexibility and discretion in decision-making) and *informal power* (by having positive work-related networks and alliances in the organization) (Figure 1). Power is described as "the ability to get things done, to mobilize resources, to get and use whatever it is that a person needs for the goals he or she is attempting to meet"[10] (p 166). When individuals are empowered, more gets done.

According to Kanter,[10] having access to structural empowerment is the most important factor influencing individuals' work, as it creates a feeling of having control, which leads to increased organizational effectiveness and commitment. But it also results in feelings of autonomy and better self-efficacy. Individuals with high access to structural empowerment are highly motivated and have the ability to empower and motivate others. However, access to empowerment structures and power varies according to the level in the hierarchy at which the individual finds him-/herself. The higher up in the organization, the more access the individual has to structural empowerment.[10] Laschinger and colleagues have investigated structural empowerment among managers in hospitals in Canada.[50,51] They found that senior managers rated higher access to structural empowerment than middle managers,[50] who in turn,

rated higher access to structural empowerment than first-line managers.[50,51] When managers have high access to structural empowerment, they are more likely to give their subordinates access to structural empowerment. Furthermore, Kanter argued that management can make sure that subordinates have access to structural empowerment.[10]

In her theory, Kanter[10] also described proportions, referring to the individuals in the organization. Belonging to a minority group that makes up less than 15% of the working group is defined as being a token. When Kanter described tokens, it was the proportions that were in focus. For example, minority groups can be based on gender, age, and culture. According to the theory, being a token is more difficult as it entails getting more attention owing to tokens' higher visibility. Other possible consequences are being kept slightly outside the dominant group and being stereotyped.[10] For example, in elderly care, many male FLMs become tokens as they usually are a minority in the working group.[1] No difference in access to structural empowerment has been reported between male token nurses and their female colleagues.[52] Other studies have found the male token status to be associated with positive benefits.[53–55] Male tokens have experienced positive visibility,[55] benefits based on differential treatment, entailing assumed leadership ability as well as assumptions that men are more interested in making a career,[54] which help men ride the "glass escalator" into positions of authority.[53] In her thesis, Keisu[56] studied Kanter's[10] structures of proportions, tokens, among female FLMs in a male-dominated manufacturing industry and among male FLMs in a female-dominated elderly care organization. She found that both the female and male FLMs who were tokens were more visible than the majority groups. For the female FLMs, being a token was mostly negative as the demands and expectations on them were higher than on the men in the majority group. Their competence was called into question, and they were sexually harassed. However, the male FLMs described no negative consequences of being tokens in a female-dominated organization.[56]

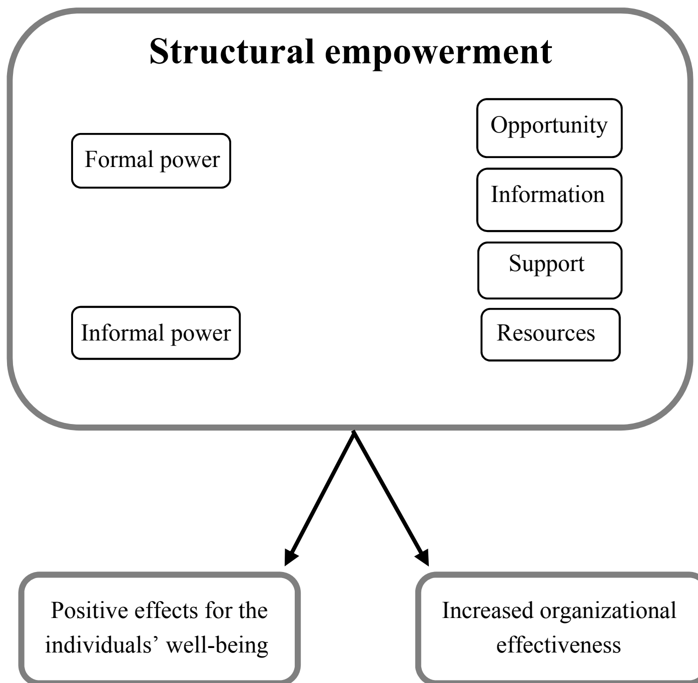

Figure 1. Adaption of concepts of structural empowerment in Kanter's theory.[10]

Psychological empowerment

Psychological empowerment is conceived of as the individual's response to working in a structurally empowered workplace. According to Spreitzer,[49] if the individual is to assume an active orientation to his or her work role and to influence the role and context, it is important that all dimensions of psychological empowerment be fulfilled. The four cognitive dimensions are: *meaning* (the value of the workplace's goals in relation to the individual's values and ideals): *competence* (the individual's confidence in his/her ability to perform job activities with skill and mastery): *self-determination* (the individual's sense of having autonomy and of controlling the work process) and *impact* (the individual's sense of being able to influence administrative, strategic or operating outcomes at work). If one of the dimensions is not fulfilled, the overall degree of feeling psychologically empowered will be diminished.[49]

Earlier research

Kanter's theory[10] of structural empowerment and Spreitzer's[49] concept of psychological empowerment have been used in many cross-sectional studies focused on different caring contexts, primarily to describe nurses' and nurse managers' working life.[57–61] Especially Laschinger and her research group

have studied empowerment among nurses and managers, though mainly in hospital contexts in Canada.[50,51,62–65] According to a systematic review of relationships between structural empowerment and psychological empowerment for RNs,[66] positive relationships have been reported between structural and psychological empowerment and positive relationships have been reported between all the structures of structural empowerment (i.e., opportunity, information, resources and support) and overall psychological empowerment. Also, the dimensions of psychological empowerment (i.e., self-determination, impact and meaning) have been reported to have positive relationships with overall structural empowerment.[66] Psychological empowerment as a mediator between structural empowerment and working life outcomes has been reported in several studies as well.[57–59,67] For example, psychological empowerment mediates the relationship between structural empowerment and outcomes such as increased job satisfaction, decreased job strain,[57] decreased burnout[58,67], and increased innovative behavior.[59]

Furthermore, in some longitudinal studies, structural empowerment and psychological empowerment have been linked to nurses' job satisfaction[62] and burnout.[58] Regarding FLMs working in a caring context, cross-sectional studies have reported moderate ratings of structural empowerment[51] and psychological empowerment.[68] However, studies using a longitudinal design to describe individuals' working life in terms of empowerment are scarce. Nevertheless, the empowerment perspective is limited in studies conducted in an elderly care context, although studies have reported positive relationships between structural empowerment and psychological empowerment among FLMs[68] and staff.[69]

Working life in elderly care

When describing an individual's work, feelings and actions in relation to that work, many different concepts are being used in the literature, for example, the concepts of work environment, work situation and working life. Because there are so many different concepts, it is important to clarify what the concept used in this thesis means. In the thesis, the concept of working life focuses on structural[10] and psychological empowerment[49] as well as on structural and psychological empowerment in relation to working life outcomes of stress symptoms[70] and leadership-management performance.[71]

In a recently published report from the Swedish work environment authority,[26] the working life of FLMs in Swedish elderly care and at hospitals was investigated. The report stressed that the FLMs were engaged and passionate about their work and about working with their subordinates and the clients/patients. Meanwhile, the FLMs reported working under time pressure, with great areas of responsibility, a high number of subordinates and high staff turnover.

The area of responsibility was great and included the core activities of responsibility for staff, clients, work environment and finances, as well as more illegitimate tasks (tasks that are not core activities in the work or the core in the professional identity) such as responsibility for arranging flowers, changing light bulbs and for the cars. Many of the managers described their work as psychologically heavy, which negatively affected their mental health; they also discussed how many of the managers had left their work. Although the FLMs felt support from their colleagues and most often from their managers, it was not enough to improve their work situation, as the senior management were often unaware of their work situation.[26] In her thesis, Regnö[72] studied managers at different hierarchical levels in the female-dominated municipal care for older persons and the disabled. She found that the managers were "made invisible". Although the managers' work tasks corresponded to the work tasks of many business managers, the status of the work and the salary were lower. This was, according to Regnö, because the managers' work was in a female-dominated sector.[72]

According to a study of working life in Sweden[2] that investigated managers at different levels in different municipal departments (i.e., care, education and technical departments) and used the job-demands-resources model in a cluster analysis, FLMs working in elderly care were most prevalent in the unhealthy cluster: *The pressed*. This cluster was characterized by being pressed between staff problems and upper level management problems. This reflected experiences of being pressed by high demands while receiving low support from management and subordinates, combined with being burdened by staff-related problems, conflict of logics and lack of resources. Moreover, in this cluster, the managers reported higher stress, poorer health, lower work ability and motivation as well as lower goal achievement than managers in the healthy clusters.[2] According to another study from the same research project,[73] the number of subordinates, defined in the study as span of control (SOC), varied across departments; for instance, the department of elderly care had a wider SOC compared with the technical department. This is noticeable because job demands were found to increase with wider SOC, not only for the individual manager, but also by being a member of a management team where one's colleagues had wider SOC. Furthermore, a wider SOC made it more difficult for managers to balance different tasks in the managerial role (i.e., strategic, administrative and personnel-related) and led to increasing problems with the group of subordinates.[73] Also, wider SOC was related to more illegitimate tasks.[74] In the municipal organization, deficits in the organizational structure were positively associated with illegitimate tasks for managers. Female managers performed more illegitimate work tasks than male managers did. Illegitimate tasks were associated with stress and satisfaction with work performance for managers.[74] Another Swedish study[75] investigated how municipal middle managers perceived their working life in different municipal departments; it showed that the department of elderly care had a tendency toward

lower values for psychosocial work environment factors and more psychosomatic reactions than did other departments (i.e., production and maintenance).[75]

Staff in elderly care have described their work as meaningful to them, although they have also described deficiencies in their work conditions. For example, Josefsson and Peltonen reported that district nurses experienced work satisfaction and enjoyed working with older patients.[76] However, registered nurses (RNs) have reported perceiving great time-related and emotional pressure at work. The RNs also reported work-related health problems, mentioning both physical and emotional symptoms.[77] In her thesis, Orrung Wallin[78] reported that assistant nurses working in residential care for older people in Sweden experienced job satisfaction in their encounters with the residents and their next of kin. Moreover, in her thesis, Stranz[79] found that encounters with the clients were meaningful for Swedish and Danish eldercare workers. However, she also reported that these workers had limited opportunities for training and development, lack of support from managers and insufficient resources in terms of staff and time to perform the tasks. According to the NORDCARE study,[34] the workload in elderly care has increased between 2005 and 2015. Meanwhile, the possibilities to have an impact on the daily work had decreased, especially in the home-help services. This might be due to the increased control exercised by upper management. When the staff rated the support they received from their FLMs, less than 1/3 of them experienced they were being supported. As for access to opportunities to acquire new knowledge and to grow in one's work, only 1/6 of the staff in home-help services and 1/5 of the staff in nursing homes reported having such opportunities in their work. Compared to the other Nordic countries, elderly care in Sweden provided staff with fewer opportunities, less support from their FLMs and the staff met their FLMs less often. However, although working life in elderly care is difficult for the staff and they often feel insufficient, this study as well pointed out that the relationships between staff and clients were meaningful and that this positively affected staff job satisfaction.[34]

In sum, managers and staff in elderly care have described their working life as meaningful, although they have stressed deficiencies in their access to structural empowerment. The difficult situation for the managers – with great pressures, great areas of responsibility, large number of subordinates, lack of support and resources – has affected them negatively. Many managers in elderly care have reported psychosomatic reactions including high stress. The difficult work conditions might also affect their leadership-management performance negatively, as managers have reported lower work ability and motivation as well as lower goal achievement. However, earlier research conducted in elderly care has emphasized the positive effects of structural and psychological empowerment on stress.[69,80] Moreover, positive associations have been found between structural empowerment and managers' leadership quality.[8] Macphee and colleagues[81] interviewed managers who had attended a

leadership program focusing on structural and psychological empowerment to see whether they connected empowerment strategies to practice and whether this would empower their staff. They found that when the managers were structurally empowered, they became more psychologically empowered. The managers reported increased self-confidence in their roles and in relation to their responsibilities. The managers also reported positive changes in their leadership styles, in that they were better able to involve their staff in decision-making and to provide their staff with access to structural empowerment.[81] As mentioned previously, psychological empowerment has been stressed as a mediator between structural empowerment and working life outcomes as well.[57–59,67] However, none of the previous studies has focused on FLMs and their subordinates in elderly care.

Therefore, it is of interest to study relationships between structural empowerment and the FLMs' stress symptoms and leadership-management performance in elderly care. Is it also relevant to investigate whether psychological empowerment serves as a mediator between structural empowerment and outcomes in this setting. Furthermore, according to Kanter's theory[10] of structural empowerment, access to empowerment structures and power varies according to the level in the hierarchy at which the individual finds him-/herself. The higher up in the organization, the more access the individual has to structural empowerment.[10] Laschinger stressed that when nurses perceived their workplace to be empowering, they felt that their managers were good leaders.[8]

However, no studies have been found that have investigated access to empowerment structures at different hierarchical levels in elderly care. Therefore, it is of interest to investigate relationships between FLMs' ratings of structural and psychological empowerment, and the subordinates' ratings of structural empowerment, as well as their ratings of their FLM's leadership-management performance in elderly care. The relationships between the variables that will be investigated in the thesis are illustrated in the figure below (Figure 2).

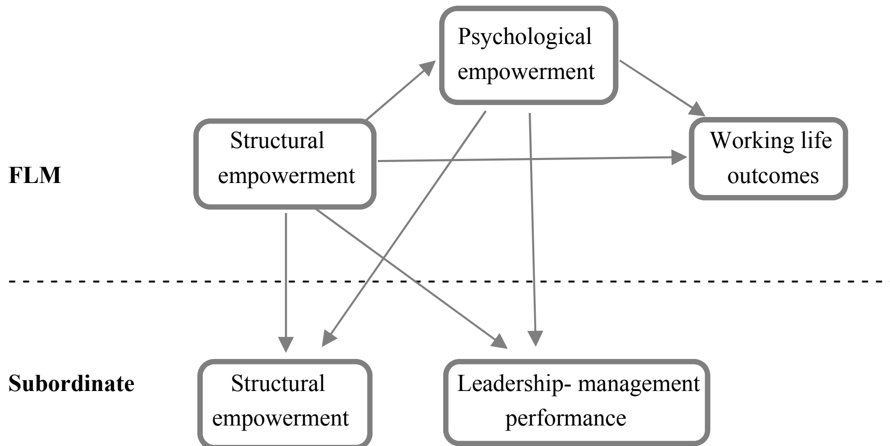

Figure 2. An illustration of the relationships between the FLMs' structural empowerment and their working life outcomes; stress symptoms and leadership-management performance, mediated by psychological empowerment is shown in the upper panel. In both panels, an illustration of a multilevel model of relationships between FLMs' structural and psychological empowerment, and the subordinates' structural empowerment, as well as their ratings of their FLM's leadership-management performance is shown.

Rationale

FLMs and staff working in Swedish elderly care, who already today are facing great challenges, will be facing even greater challenges in the future when the proportion of older persons increases. Research has shown that managers in elderly care report poorer structural conditions and poorer health than managers in other municipal departments do. The nursing staff have reported high rates of sick leave and the turnover rate among FLMs and staff has been found to be high. Most studies in the municipalities have focused on the working life of managers at different levels or levels other than the first-line managerial level. While this research is important, there is a risk of reducing these studies to generalizations for all managerial levels. Therefore, it would be useful to understand more about working life at the first-line managerial level. Furthermore, most of the studies have described working life using a cross-sectional design and can therefore not study relationships in FLMs and their subordinates working life over time. Moreover, because elderly care is a female-dominated organization and because diversity in working life is of significance, it is important to study the relatively unknown situation of both male and female FLMs separately, to deepen our knowledge and understanding about the working life of these groups. Finally, the working life of FLMs and their subordinates in elderly care has not been particularly well studied from an empowerment perspective. Therefore, if FLMs and their subordinates are to have the best possible conditions enabling them to meet future challenges, it is important to deepen our understanding of their working life.

Overall aim and specific aims

The overall aim of this thesis was to study the working life of FLMs and their subordinates in elderly care from an empowerment perspective.

The specific aims of the included papers were:

To describe male (Paper I) and female (Paper II) first-line managers' experiences of their work situation in elderly care.

To study relationships between FLMs' self-rated structural empowerment and psychological empowerment with their outcomes; stress symptoms and leadership-management performance. Another aim was to investigate whether the number of subordinates plays a role in first-line managers' and subordinates' ratings of their structural empowerment, psychological empowerment, stress symptoms, and leadership-management performance. Four hypothesized models were tested, adjusting for number of subordinates (Paper III).

> **H1** Higher ratings of structural empowerment are related to lower ratings of stress symptoms and the effect is mediated by psychological empowerment.
> **H2** Higher ratings of structural empowerment are related to higher ratings of leadership-management performance, and the effect is mediated by psychological empowerment.
> **H3** Changes in structural empowerment over time are related to changes in stress symptoms, and the effect is mediated by changes in psychological empowerment.
> **H4** Changes in structural empowerment over time are related to changes in leadership-management performance, and the effect is mediated by changes in psychological empowerment.

To investigate relationships between FLMs' ratings of structural and psychological empowerment, and the subordinates' ratings of structural empowerment, as well as their ratings of the managers' leadership-management performance (Paper IV).

H1 The effect of FLMs' structural and psychological empowerment at one point in time would affect subordinates' self-rated structural empowerment at a later time.
H2 The effect of FLMs' structural and psychological empowerment at one point in time would affect subordinates' ratings of their managers' leadership-management performance at a later time.
H3 With change in the FLMs' structural and psychological empowerment over time, a similar change would also occur in the subordinates' access to structural empowerment, and that subordinates would thereby change the rating of their structural empowerment accordingly, in the same direction.
H4 With change in the FLMs' structural and psychological empowerment over time, a similar change would also occur in the subordinates' rating of their managers' leadership-management performance accordingly, in the same direction.

Methods

Design

In this thesis, all papers (I-IV) were focused on structural empowerment[10] and psychological empowerment.[49] Paper I and II used a qualitative approach to describe male and female FLMs' experiences of their work situation in elderly care to get a deeper understanding of their work situation from an empowerment perspective. Elderly care is a female-dominated organization and male FLMs are usually a minority in the working group, making them a token, as described by Kanter.[10] Therefore, it was relevant to study the work situation of male and female FLMs separately.

Paper III and IV used quantitative approaches to test the hypotheses based on the theories of structural and psychological empowerment, and the papers were based on a longitudinal, correlational and multilevel study. Paper III had a longitudinal and correlative design and studied relationships between FLMs' structural and psychological empowerment and their perceived stress symptoms and leadership-management performance. By using a longitudinal design, FLMs' perceptions of empowerment in relation to the outcomes could be studied over time. Paper IV employed a correlative, longitudinal and multilevel design to further investigate relationships between the FLMs' structural and psychological empowerment and the subordinates' structural empowerment and ratings of managers' leadership-management performance. By using a longitudinal and multilevel design, relationships of empowerment between FLMs and their subordinates working in the same context could be studied over time. An overview of the papers is presented in Table 1.

Table 1. An overview of the papers included in the thesis.

Design and approach	Study sample	Data collection and year	Data analysis
I. Descriptive design, qualitative approach	14 male FLMs	Interviews, 2010-2011	Qualitative content analysis
II. Descriptive design, qualitative approach	14 female FLMs	Interviews, 2012	Qualitative content analysis
III. Longitudinal and correlative design, quantitative approach IV. Longitudinal, correlational and multilevel design, quantitative approach	78 FLMs and 1398 subordinates at T1. 56 FLMs and 769 subordinates at T2.	Questionnaires, T1 2010-2011, T2 2011-2012	Descriptive statistics, multivariate analyses (III & IV) and multilevel modelling (IV)

Setting

The studies in this thesis (Paper I-IV) were carried out in elderly care in Sweden. All FLMs and their subordinates were working in nursing homes and/or home-help services in municipal and private elderly care. As male FLMs working in elderly care are few, informants were searched for all across Sweden in order to conduct the research for Paper I. However, as the purpose was to have a similar variation in background characteristics between the participants in Paper I and II, female FLMs were searched for all across Sweden as well. Therefore, the participants in Paper I and II were working in urban or rural areas in Sweden. In Paper III and IV, the FLMs and their subordinates were working in five municipalities in Sweden. In the municipalities, there were both rural areas with small towns and urban areas with larger towns. Some of the FLMs who participated in the research for Paper III and IV had also been interviewed for Paper I or II.

Sample and procedure

Interview studies

Elderly care managers working for municipalities and private organizations, throughout Sweden, were contacted by e-mail or phone and informed about the studies and their purpose and asked whether FLMs working for them could be contacted and asked to participate in the studies. All elderly care mangers approved of their FLMs being contacted. Then, the FLMs in those organizations were contacted by e-mail and informed about the study, told they would be contacted by telephone and asked whether they wanted to participate in the

studies, and if they did, when and where they wanted the interviews to take place. The aim was to achieve variation in the descriptions, and thus purposive sampling[82] was used. The background information on the participants (age, workplace, education and years of professional experience) was placed in a table that was used to get an overview of the participant characteristics. When the FLMs were called and asked whether they were interested in participating in the studies, they were also asked about their background characteristics to help in ensuring variation in participant characteristics. If the approached FLMs had background characteristics similar to FLMs who had already been included, then they were not included in the studies, again the goal being achieve variation among the participants. The inclusion criterion was that the FLMs had been in their current positions no fewer than six months when the interviews were carried out, thus ensuring that they had some work experience from their current workplace and were not totally new to the organization. In Paper I, nineteen male FLMs were contacted and fourteen of those managers participated. In Paper II, 20 female FLMs were contacted and 14 of these managers participated. See Table 2 for characteristics of the FLMs and their workplaces.

Table 2. Characteristics of the FLMs and their workplaces.

Variables	**Paper I**	**Paper II**
Municipal elderly care	12	12
Private elderly care	2	2
Age, years	33-63	34-65
Years of FLM experience	0.5-35	2.5-26
Number of subordinates	15-120	16-65
Educational background:		
Nursing	3	5
Social work	7	6
Economist	1	1
Physiotherapist	1	1
Occupational therapist	1	
Older education in management at nursing homes	1	1
Education in leadership:		
In-service training	11	10
University level training	3	4

The longitudinal questionnaire study

Contact information for the FLMs was received by each municipal administrator. Names of subordinates were received from each FLM. The FLMs received information about the study, the procedure and participation at meetings and by mail. First, the FLMs were asked to participate; then the subordinates of the participating FLMs were asked to participate. In total, all FLMs (n=98) working in home-help services and/or nursing homes were invited to participate. The inclusion criterion for FLMs was that they had worked in their current positions in elderly care, both private and public, for no fewer than six months. Of the 98 FLMs invited, 78 participated at T1, which gave a response rate of 80%. These FLMs had 2085 subordinates who were invited to participate; 1398 subordinates agreed to participate at T1, giving a response rate of 67%. The inclusion criterion for the subordinates, i.e. assistant nurses, nurses' aides, registered nurses, physiotherapists and occupational therapists, was that they had worked more than one month during the past three-month period, thus ensuring that they had some work experience from their current workplace and were not totally new in the organization. At T2, 60 of the 78 FLMs who participated at T1 were eligible to participate in the study. Reasons for not being eligible were that they had quit work n=5, were retired n=3, on parental leave n=2, or had changed workplace or position n=8. Of the 60 eligible FLMs at T2, four FLMs did not participate and gave no reason for this. Therefore, 56 of 78 (72%) FLMs participated at T2 (Table 3).

Table 3. Number of participants at T1 and T2.

Dropout	Frequency, n
T1 invited	**98**
Declined	8
No reason	12
Answered questionnaires T1	**78**
Not eligible at T2	18
Eligible at T2	**60**
No reason	4
Answered questionnaires T2	**56**

In Paper IV, where the subordinates were included at T2, the subordinates were divided into groups based on the workplace unit, where all FLMs represent one workplace unit each. However, there were fewer (n=769) subordinates participating in Study IV than participants (n=917) who filled in the questionnaire at T2. This was because not all subordinates had a corresponding FLM who participated at T2. See Table 4 for characteristics of the participants. When comparing FLMs who responded only at T1 with FLMs who

responded both at T1 and T2, psychological empowerment was rated higher among FLMs who responded twice than among FLMs who responded only at T1 (P-value 0.042) (Mann-Whitney *U*-test). No other differences between the groups were found.

Table 4. Participant demographics at T1 and T2.

Variable	FLM T1	FLM T2	Subordinates T1	Subordinates T2
Gender:				
Female, n (%)	76 (97.4)	54 (96.4)	1352 (96.7)	735 (96.2)
Male, n (%)	2 (2.6)	2 (3.6)	46 (3.3)	29 (3.8)
Age in years, m (SD)	47.5 (8.9)	49.5 (8.9)	47.8 (10.3)	48.4 (9.4)
Municipal care, n (%)	66 (84.6)	48 (85.7)	1289 (92.2)	716 (93.1)
Private care, n (%)	12 (15.4)	8 (14.3)	109 (7.8)	53 (6.9)
Work time:				
Full-time, n (%)	73 (93.6)	51 (94.4)	707 (51.5)	383 (50.9)
Part-time, n (%)	5 (6.4)	3 (5.6)	665 (48.5)	369 (49.1)
Education in leader-ship:				
University degree, n (%)	62 (80.5)	43 (76.8)		
Vocational, n (%)	13 (16.9)	11 (19.6)		
Other, n (%)	2 (2.6)	2 (3.6)		

Data collection

Semi-structured interviews

From autumn 2010 to spring 2011, semi-structured interviews were performed at the male FLMs' workplaces (n=12) or at the author's office (n=2) (Paper I). Between April and June 2012, the female FLMs were interviewed at their workplaces (n=13) or at the municipal hall (n=1) (Paper II). The interviews were recorded on MP3 players and lasted between 60-150 minutes (Paper I) and between 75–140 minutes (Paper II). To focus the interviews on dimensions of empowerment, the interview guide was based on Kanter's theory[10] of structural empowerment and Spreitzer's[49] dimensions of psychological empowerment. First, a pilot interview was performed with a female FLM; it was not included in the analysis. Then, an interview with a male FLM was performed. When the research group listened to the interview, the group discovered that some questions about psychological empowerment were missing. Therefore, some questions on psychological empowerment were added to the interview guide. Then, an additional interview with the added questions about psychological empowerment was conducted with the male FLM; it was included in Paper I. The opening question[83] "Can you describe what you believe comprises your work as an FLM?" started the interviews, then a series of questions followed focusing on what was included in the managerial role and how

the participating FLMs experienced their working situation. For example, “Can you talk about your resources?”, “Can you talk about the support you get?”, “How do you view your competence in relation to your work?” and “What aspects of your work do you find meaningful?” To acquire more information on, for example, working experiences, probes such as "please tell me more" or "what does that mean for you?" were used. During the interviews, the informants were encouraged to speak freely about their work, and the interview guide was used as a check-list to ensure that all topics were discussed.

The questionnaires

Data collection using the questionnaires took place on two occasions separated by an interval of one year. Data collection at T1 took place from autumn 2010 to summer 2011, and T2 from autumn 2011 to summer 2012. The data collection period was quite long because the FLMs’ subordinates also received questionnaires. The material (information letter about the study aim and the procedures, a questionnaire and a stamped return envelope) was sent by mail to each FLM. The FLMs handed out the material or put in their subordinates’ mailboxes at work. All participants were free to fill in the questionnaires at a place of their choice. All questionnaires were coded, and two reminders were sent to non-responders, which increased the response rate. The questionnaires sent to the FLMs and their subordinates were based on validated instruments; see below. For all instruments used in Paper III and IV, the Cronbach’s alphas (α-values) were ≥ 0.70 for all total scales, and in Paper III, when also using subscales for structural empowerment, the α-values were ≥ 0.70 for all factors except for FLMs informal power (0.66), and for subordinates’ formal power (0.65). Each questionnaire started with questions about the participants’ background variables; the instruments followed. The instruments contained mostly Likert scales, but for some questions, there were possibilities to write comments. In total, the questionnaires consisted of 9 pages.

Instruments

Structural empowerment

To measure structural empowerment, the Swedish version[69] of the Conditions of Work Effectiveness Questionnaire-II (CWEQ-II)[57] was used. The questionnaire consists of six factors and 19 items: access to opportunity, information, support, resources, formal power and informal power. Responses range from 1 to 5 on a Likert scale. Factor scores are averaged and the factors are summed to create a total score. Structural empowerment can be divided into three levels of empowerment. According to Laschinger[84] a total score between 6-13 indicates low levels of empowerment, 14-22 moderate levels of empowerment and 23-30 high levels of empowerment. For Study III and IV, the total score was used. CWEQ-II has shown acceptable construct validity and reliability,[57,69]

and Cronbach's alphas (α-values) for the total scale have been reported to be 0.86.[69] Both FLMs and subordinates filled in the instrument.

Psychological empowerment

To measure psychological empowerment, the Swedish version[85] of Spreitzer's empowerment scale[49] was used. The scale consists of four factors; meaning, competence, self-determination and impact, in total 12 items. Responses are rated on a 7-point Likert scale, where higher scores represent a more desirable state. Factor scores and the total score are averaged. In Study III and IV, the total score was used. The scale has shown satisfactory psychometric properties;[49,85] α-values for the total scale have been reported to be 0.77-0.90,[85] Both FLMs and subordinates filled in the instrument.

Stress symptoms

To measure stress symptoms, the factor Perceived stress symptoms (10 items) from the Psychosomatic Health Aspect Scale[70] was used. Responses are rated on a 5-point scale (0-4). All factors and the total scale are scored to values between 0 and 100. Items are summed and divided by the highest possible score in that factor/scale and multiplied by 100. Higher scores represent a more desirable state. For the factor, α-values have been reported to be 0.86[69] Both FLMs and subordinates filled in the instrument.

Leadership and management performance

The Leadership and Management Inventory (LaMI)[71] was used to measure performance aspects of leadership and management. LaMI consists of three factors and 28 items: interpersonal skills and group management, achievement orientation, and overall organizational view and political savvy. Responses are rated on a 5-point scale (1-5). All factors and total scale are scored to values between 20 and 100 (summarizing the item scores in a factor, dividing by the maximum and multiplying by 100), where high scores represent a more desirable state. In the studies, the total score was used. LaMI has been shown to have acceptable construct validity and reliability: α-values have been reported to be 0.90-0.92[86] for the total scale. Both FLMs and subordinates filled in the instrument. The FLMs filled in their own self-rated leadership-management performance, whereas the subordinates filled in their perception of their FLM's leadership-management performance. The questions were asked differently depending on whether it was an FLM or a subordinate who filled in the questionnaire. For example, the FLMs were asked whether they present understandable information, while the subordinates were asked whether their FLM presents understandable information.

Data analysis

Qualitative content analysis

The interviews were analyzed using qualitative content analysis guided by Graneheim and Lundman.[87] Qualitative content analysis is a suitable method for systematically analyzing verbal information.[88] Qualitative content analysis focuses on individuals and their context and can be performed using either an *inductive approach* when searching for similarities and differences in the data or a *deductive approach* when testing concepts or theories against the collected data.[89] Moreover, the text can be analyzed using the *manifest content* (descriptive content close to the text) and the *latent content* (interpretative content, i.e., "the red thread").[87,89] The inductive analysis process was performed in several steps, starting by listening to and reading the transcribed interviews several times to get a sense of the whole and an overview of the content. Then, meaning units (sentences with the same content) related to the study aim were extracted. These were condensed, abstracted and labeled with a code, in order to shorten the text, but without losing its essence. Next, the codes were analyzed and sorted into subthemes based on similarities and differences. The last step of the process was to abstract the subthemes into themes. However, in Paper II, the analysis started by performing a deductive analysis, inspired by the subthemes from the male FLMs in Paper I. During the analysis process, however, it was difficult to use this deductive approach, as the female FLMs described their work situation in different ways than the male FLMs did. Therefore, the analysis process was restarted, this time using an inductive approach instead, which also was used in Paper I. The text was analyzed, and the whole research team was engaged in discussions in a dynamic process to assure that trustworthiness was achieved.[87]

Statistical analyses

Descriptive statistics were used to present the participants' demographics. The significance level was set to $\alpha=0.05$ (p-value <0.05) in all analyses and to measure internal consistency, Cronbach's alpha (α) was used. All statistical analyses were performed using IBM SPSS Statistics version 20 (Paper III) and version 22 (Paper IV).

In Paper III, the analysis process was performed in several steps to analyze both cross-sectional data from T1 and longitudinal data from participants answering the questionnaires at both T1 and at T2, to study changes over time. Mann-Whitney U-test was used to analyze differences between two independent groups. Based on the median number of subordinates for the FLMs, the variable number of subordinates was dichotomized into 30 or less or 31 or more. For bivariate correlations between the variables, Spearman's rho corre-

lation and Kendall's Tau-*b* were used. When investigating relationships between several variables, multiple linear regression analyses were used at T1, and for analyses of changes over time, generalized estimating equations (GEE)[90] were used. The models were estimated using GEE to account for the correlated observations within individuals. With GEE, one estimates regression parameters consistently – while treating the covariance parameters as nuisance. In all models analyzing changes over time, the indicator variable time-point and a variable of interaction between time-point and structural empowerment were included. For the working correlation structure, the unstructured form was used. In all tests, both at T1 and changes over time, primary variables and the covariates – number of subordinates (dichotomized into 30 or less or 31 or more) and age – were tested. Non-significant covariates were excluded in the final test. Residuals appeared to be normally distributed based on the visual inspections.

To address the hypothesis of whether psychological empowerment serves as a mediator, four single-mediation models were tested (two at T1 and two over time).[91] In the single-mediation models, structural empowerment's total effect on the outcomes may be divided into an indirect and a direct effect. If structural empowerment is mediated by psychological empowerment, an indirect effect should exist. The indirect effect was estimated using the product of the regression coefficients *a* and *b* in the product-of-coefficients method (Figure 3). In the construction of confidence intervals (CIs), an approach of deriving the sampling distribution of the product of two regression coefficients instead of assuming the normal distribution of the product was used.[92]

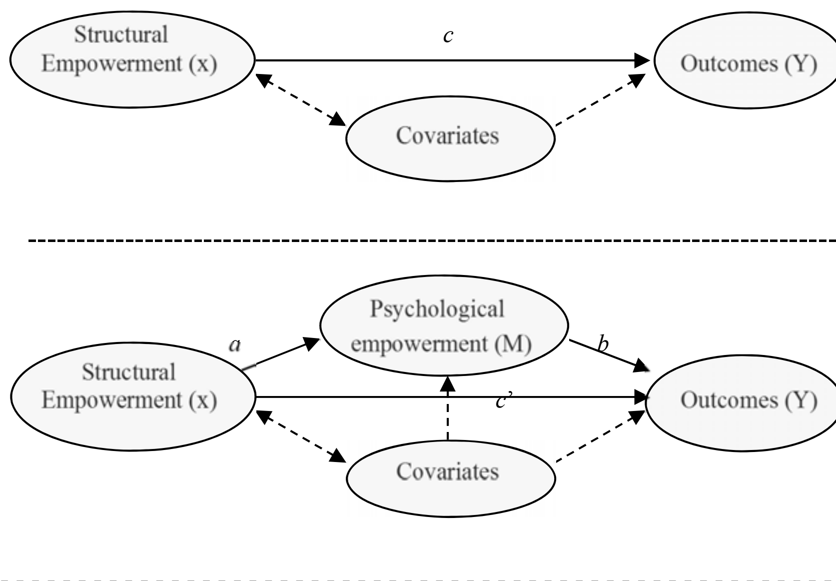

Figure 3. A schematic illustration of the simple mediation model. The upper panel shows the total effect (*c*) of X on Y. The lower panel demonstrates a model in which the effect of structural empowerment on the outcomes is mediated by psychological empowerment. The total effect can be subdivided into an indirect effect (*a*b*) and a direct effect (*c'*). The coefficient *a* represents the effect of X on M controlling for covariates, the coefficient *b* is the effect of M on Y controlling for X and covariates, and the coefficient *c'* is the effect of X on Y controlling for M and covariates.

In Paper IV, multilevel modelling by a linear mixed model was used to test the hypotheses.[90] For H1-H2, random intercept linear models in a sequence of three models were used. For H3-H4, random intercept linear models were used in combination with repeated measures. To study random variation between workplaces, the random intercept specification was used. This made it possible to quantify variation between workplaces, i.e. the cluster/workplace effect, as well as between-individuals and within-individual variation. For the dependence between repeated measurements and the scaled identity form for the random intercept, the compound symmetry form was used (Figure 4 & 5). The estimated regression coefficients of the fixed effects apply both at the workplace level given the random intercepts and at the population level averaged over workplaces. No serious deviation from a normal distribution was seen when visually inspection of residuals was carried out. The covariates – number of subordinates (workplace level) and age (subordinate level) – were excluded if they were not significant in the bivariate analyses. Bivariate significant covariates were tested in the model and included in the final model if they were significant. To indicate precision of the estimates, 95% confidence intervals (CIs) were used.

Timeline H1 and H2

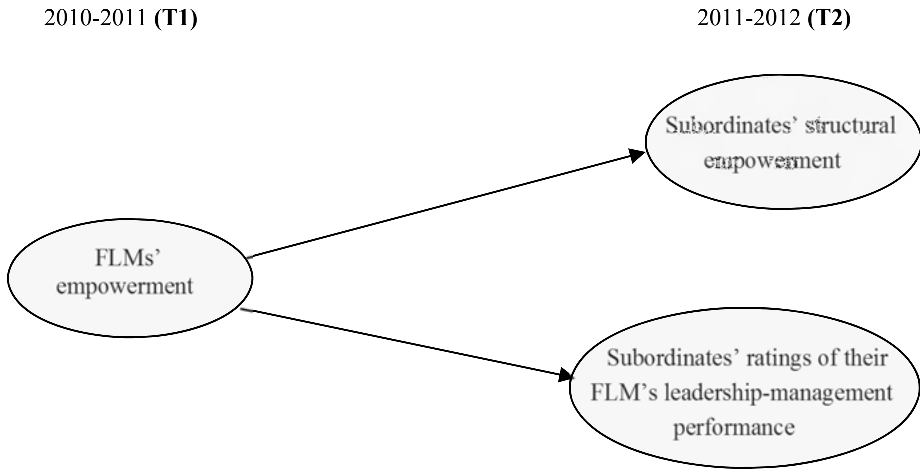

Figure 4. In this figure, the effect of FLMs' self-rated empowerment at T1 on subordinates' self-rated structural empowerment (**H1**) and their ratings of leadership-management performance (**H2**) at T2 are shown.

Longitudinal change H3 and H4

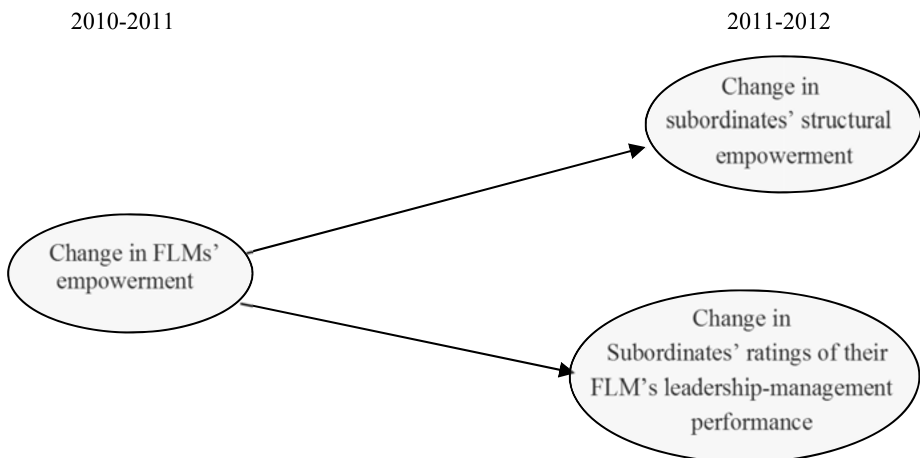

Figure 5. In this figure, the changes in FLMs' perceptions of empowerment over time related to changes in subordinates' self-rated structural empowerment (**H3**) and leadership-management performance ratings (**H4**) over time are shown.

Ethical considerations

All studies in the thesis were approved by the Regional Ethical Review Board in Uppsala, Sweden (reg. no. 2010/192, 2010/192/1). Ethical principles and regulations for medical research according to the Declaration of Helsinki[93] and the Swedish legislation[94] have been followed during the research process. Participants were assured confidentiality and informed that their participation in the studies was strictly voluntary and that they could withdraw at any time without giving a reason. All participants gave their informed consent. All data and materials have been kept so that no unauthorized persons had access to them. For Paper I and II, both oral and written study information and contact information were given to the approached participants. All participants were able to choose where and when they wanted the interviews to be conducted, so they would feel as comfortable as possible during the interviews. Although the interviews were conducted using an empathic and open approach, they contained questions that may have started a process of thoughts and feelings in relation to the FLMs' work situation. This can be seen as a risk, but also as a benefit in that the FLMs were given an opportunity to reflect on their work situation. All participants were informed that they were welcome to contact the researcher at any time if they had any concerns later on, but no one did so.

For Paper III and IV, the FLMs were offered oral study information at meetings and all FLMs received written study information and contact information by mail. The approached FLMs were able to ask questions at these meetings or contact the researcher later on if they had any questions they wished to discuss in private. The approached subordinates received written study information and contact information for the researchers when they received the questionnaire. All approached participants were free to fill in the questionnaires wherever they wished. They put the questionnaires in prestamped envelopes and placed them in the mailbox by themselves, so no one could see if they choose to participate in the study or not. The FLMs gave their informed consent by signing an informed consent form. Subordinates gave their informed consent by sending in their filled-in questionnaire. However, some participants contacted the researcher by phone or e-mail to decline participation. Others sent in the questionnaire blank. Then the researcher put a mark on the code list indicating that the participant had declined to participate. As it was a longitudinal study, questionnaires were sent again one year later. This can be seen as a risk, as there were subordinates who had already declined participation during the first data collection time. Therefore, in order to protect

those subordinates, they were sent the same material as the others, so that no one would know they had previously declined participation. But, in their questionnaires, there was a message stating that the researchers recognized that they did not wish to participate in the study. However, some of them did fill in the questionnaire at T2 even though they had declined participation at T1. All data in the questionnaire study were coded and presented at the group level, so that no participant could be identified. In Paper III and IV, both T1 and T2 measurements were presented to the FLMs at meetings so they could use the results to work with at their units when discussing their work situation. However, because some units were small and participants could easily be identified, we did set a limit of only presenting results at units with 10 or more participants to protect participants working at small units. All FLMs were given the opportunity to discuss their results with the researchers either at the meetings or later on in private, which some FLMs did.

Results

Qualitative papers

The analysis of the interviews with the male FLMs (Paper I) revealed the themes: *organizational demands are in balance with managers' perceived managerial responsibility and structural conditions* and *organizational demands are not in balance with managers' perceived managerial responsibility and structural conditions.* The analysis of the interviews with the female FLMs (Paper II) revealed the theme *it's not easy, but it's worth it.* Table 5 illustrates the similarities and differences in the analyses of the male (Paper I) and female (Paper II) FLMs.

Table 5. Overview of the themes and subthemes in Paper I and II.

Themes Paper I	**Subthemes Paper I**	**Subthemes Paper II**	**Theme Paper II**
Organizational demands are in balance with managers' perceived managerial responsibility and structural conditions	Feeling a sense of satisfaction and stimulation	Enjoying a meaningful job	It's not easy, but it's worth it
	Being on one's own but not feeling left alone	Supported by other persons, organizational preconditions and confidence in their own abilities	
	Having freedom within set boundaries	A complex and demanding responsibility that allows great authority within set boundaries	
Organizational demands are not in balance with managers' perceived managerial responsibility and structural conditions	Feeling a sense of frustration	Lacking organizational preconditions, but developing strategies for dealing with the situations	
	Having a feeling of dejection and resignation		

Paper I

Main results

The themes described the male FLMs' work situation as both challenging and complex. The challenges were described as the driving force for the FLMs. The work situation was changeable in terms of time, tasks and situations. During the work day, the work and tasks could be described as both in balance and not in balance, with a constant fluctuation between these opposite poles. Other important findings were that although the managerial work could be unbalanced and negative, when the male FLMs experienced positive situations of having balance, they felt that their work was a positive challenge.

Organizational demands are in balance with managers' perceived managerial responsibility and structural conditions

This theme described advantages in the male FLMs' work when there was a balance between perceived responsibility, structural conditions and external demands from the organization. Other advantages described were the satisfaction of being able to create good quality care for clients and of having challenging work tasks. The first subtheme, *feeling a sense of satisfaction and stimulation,* described the positive parts of the managerial work when the male FLMs met stimulating challenges, interacted with others and could grow personally. The second subtheme, *being on one's own but not feeling left alone*, described the vital support that the male FLMs experienced, which created a feeling of having the burden lessened and of not being left alone in their role. The third subtheme, *having freedom within set boundaries*, described the FLMs' advantages of having freedom of action and of control over their work, as long as they took responsibility and followed policies, goals and budgets.

Organizational demands are not in balance with managers' perceived managerial responsibility and structural conditions

This theme described the disadvantages in the male FLMs' work when they did not experience a balance between perceived responsibilities, structural conditions and demands from the organization. When they did not have a balance in their work, they expressed frustration and feelings of dejection and resignation. The first subtheme, *feeling a sense of frustration*, describes frustrations in their work when they had limitless demands placed on them and were held responsible for their work. At the same time, their ability to make decisions and influence matters was restricted. The second subtheme, *having a feeling of dejection and resignation,* describes when the male FLMs felt completely powerless and alone in their role.

Paper II

Main results

The theme described the female FLMs' work situation as *not easy, but worth it*. The work was complex and multifaceted, and the FLMs reported that their work affected them in many ways. For example, they described their work as meaningful to them. Although their responsibility was excessive, they experienced great authority within set boundaries. The female FLMs experienced support from other persons, from organizational preconditions, and from having confidence in their own ability, which was essential to them. However, when their organizational preconditions were insufficient, they had to strive to deal with the situation.

Enjoying a meaningful job

Some female FLMs described being proud of their work and really enjoying working as FLMs in elderly care. One of the most meaningful parts of their position was working with the staff and older persons to create good quality elderly care. The female FLMs reported wanting to work close to the day-to-day work, with all its varied and challenging tasks. They described no intentions to change workplace within the organization, although there were opportunities to do so. The fact that their personal goals and the organizational goals corresponded was described as necessary if they were to experience meaning in their work.

Supported by other persons, organizational preconditions and confidence in their own abilities

The support that the female FLMs received was described as essential because it made them feel less alone in their role. The support helped them manage their complex responsibility, and the hands-on support lowered their high workload. However, not all organizations actively offered them support; the FLMs reported that it was more common for them to have to seek support by themselves. Although the female FLMs described support from other persons (colleagues, staff, coordinators, senior management and politicians) and from organizational preconditions (different supportive departments in the organizations), they also expressed having support from feeling confidence in their own capabilities. Many managers described how they had "learned by doing," stating that this experience was necessary in helping them deal with their complex role.

A complex and demanding responsibility that allows great authority within set boundaries

Some female FLMs described their complex responsibilities as frightening, but also as an attractive part of their work. The responsibilities were described as a chain, where different aspects of their responsibilities represent different

links in a chain. However, the FLMs reported that these substantial responsibilities were combined with extensive areas of authority, as long as they worked within set boundaries and met their responsibilities. The female managers described themselves as having a sense of control over their own work, as they had the authority to make both long-term and short-term plans and to make their own decisions.

Lacking organizational preconditions, but developing strategies for dealing with the situations

In this subtheme, the female FLMs described times when their organizational preconditions were insufficient. In such situations, the managers had to strive to take back control and to cope with various demands. For example, the FLMs described insufficient resources with regard to time; this prevented them from being available to staff and clients and from working with development on their units. As this was difficult for them, many FLMs described having learned strategies for to planning and prioritizing among various work tasks. The female FLMs also reported sometimes having limited authority in decision-making concerning staff, as well as insufficient information and support. For this reason, they had built up informal networks that could support them. The FLMs also described a dilemma: when politicians set political goals that they were unable to achieve with their limited resources. In such cases, they had to think outside the box to reach these goals. However, because they often solved these problems in silence, the politicians did not understand the severity of the situations.

Quantitative papers

Paper III

Main results

All hypotheses, both cross-sectional and longitudinal, were supported (see p. 27-28 for hypotheses). The results reveal that the more access the FLMs have to structural empowerment, the more likely they are to feel psychologically empowered, resulting in lower ratings for their stress symptoms and higher ratings for their leadership-management performance. Another result concerned the influence the number of subordinates per FLM had on the FLMs' ratings of structural empowerment and on subordinates' ratings of structural empowerment and stress symptoms.

Hypothesis 1(H1) and 2 (H2), cross-sectional data T1

The relationships between FLMs' structural empowerment and stress symptoms (H1) and leadership-management performance (H2) was mediated by

psychological empowerment. Estimation of the indirect effect in the mediation models and 95% confidence intervals (CI) are presented in Table 6. The variables structural empowerment and psychological empowerment could explain 16% of the variance in stress symptoms and 33% of the variance in leadership-management performance. In the model concerning leadership-management performance, the significant covariate, number of subordinates, was included.

Hypothesis 3 (H3) and 4 (H4), longitudinal data T1 and T2

Concerning the longitudinal data for FLMs responding at both T1 and T2, changes in structural empowerment were related to changes in stress symptoms, and the relationship was mediated by changes in psychological empowerment (H3). Furthermore, changes in structural empowerment were related to changes in the FLMs' self-rated leadership-management performance, and the relationship was mediated by changes in psychological empowerment (H4). In the last model (H4), the significant covariates – age and number of subordinates – were included. For all hypotheses, the 95% CI did not cover the value zero and therefore, the indirect effect was significantly different from zero.

Table 6. The product-of-coefficients method to estimate the indirect effect in the mediation model by using the product of the coefficients a and b.

Hypothesis	Unstandardized indirect effect	95% confidence interval
H1	0.693	0.034 to 1.475
H2	0.489	0.200 to 0.842
H3	0.586	0.122 to 1.232
H4	0.388	0.104 to 0.771

H1-4, Hypothesis 1-4.

Number of subordinates

The number of subordinates dichotomized into ≤ 30 and ≥ 31 was related to the FLMs' and their subordinates' ratings of the outcomes. FLMs with fewer subordinates rated higher levels of structural empowerment (p=0.005), more resources (p=0.002), more formal power (p=0.006), and more informal power (p=0.015), than FLMs with more subordinates did. Subordinates of FLMs with fewer subordinates rated higher levels of structural empowerment (p<0.001) and lower stress symptoms (p=0.045) than subordinates of FLMs with more subordinates did. All of the factors in structural empowerment were also rated higher for subordinates of FLMs with fewer subordinates (all p-values <0.001 except for support p=0.012).

FLMs' and subordinates' ratings of the main variables

Both FLMs and subordinates rated moderate access to structural empowerment (m=20.7 for FLMs and m=18.5 for subordinates), moderate to high access to psychological empowerment (m=5.7 for FLMs and m=5.4 for subordinates), and moderate levels of stress symptoms (m=64.1 for FLMs and m=62.7 for subordinates). The FLMs rated their own leadership-management performance as relatively high (m=83.1), and the subordinates rated their FLM's leadership-management performance as moderate (m=74.0).

Paper IV

Main results

In this multi-level study, both FLMs and subordinates working in the same context were studied. The hypotheses were partly supported (see p. 27-28 for hypotheses). The results reveal that the more access the FLMs had to structural empowerment at T1, the more access the subordinates had to structural empowerment at T2, and the higher the subordinates rated their FLM's leadership-management performance at T2 (when controlling for psychological empowerment).

Hypothesis 1

FLMs structural empowerment at T1 had a statistically significant relationship (β = 0.105, 95% CI 0.021–0.190, p = .015) with the subordinates' structural empowerment at T2 (model 1). When FLMs' psychological empowerment at T1 was added, the relationship of FLMs' structural empowerment at T1 remained statistically significant (β = 0.100, 95% CI 0.005–0.196, p = .040) (model 2). When further adding FLMs' structural empowerment at T2, the relationship of FLMs' structural empowerment at T1 became non-significant (p = .366) (model 3) (Table 7). Hypothesis 1 is thereby partly supported as FLMs' psychological empowerment did not have a statistically significant relationship with subordinates' structural empowerment at T2. In all three models, structural empowerment for subordinates at T1 was included as a covariate.

Hypothesis 2

When testing the relationship between FLMs' structural empowerment at T1 and subordinates' ratings of their FLM's leadership-management performance at T2, the relationship was non-significant (p = .072) (Model 1). When FLMs' psychological empowerment at T1 was added, the relationship of FLMs' structural empowerment at T1 became statistically significant (β = 0.642, 95% CI 0.166–1.118, p = .010) (Model 2). When further adding FLMs' structural empowerment at T2, the relationship of FLMs' structural empowerment at T1 remained statistically significant (β = 0.699, 95% CI 0.029–1.369, p = .041)

(model 3). Hypothesis 2 is thereby partly supported, as the first model was not significant. However, FLMs' psychological empowerment was statistically significant, though not in the hypothesized direction. In all models, the covariates, subordinates' ratings of their FLM's leadership-management performance at T1, were included; see Table 7.

Table 7. Prediction effect of FLMs’ empowerment on subordinates’ self-rated structural empowerment (H1) and their ratings of their managers’ leadership-management performance (H2) at time 2 (T2)

	Outcome H1 Subordinates’ structural empowerment T2			**Outcome H2 Subordinates’ leadership-management T2**		
Independent variables	**Model 1** **β** ***p*-value** ***95% CI***	**Model 2** **β** ***p*-value** ***95% CI***	**Model 3** **β** ***p*-value** ***95% CI***	**Model 1** **β** ***p*-value** ***95% CI***	**Model 2** **β** ***p*-value** ***95% CI***	**Model 3** **β** ***p*-value** ***95% CI***
Intercept	4.103	3.834	3.699	22.433	34.463	34.708
FLM SE T1	**0.105** **.015** 0.021-0.190	**0.100** **.040** 0.005-0.196	0.060 .366 -0.072 to 0.192	0.399 .072 -0.037 to 0.836	**0.642** **.010** 0.166-1.118	**0.699** **.041** 0.029-1.369
FLM PE T1	-	0.063 .817 -0.478 to 0.604	0.033 .905 -0.510 to 0.575	-	**-2.913** **.032** -5.561 to -0.264	**-2.874** **.038** -5.588 to -0.160
FLM SE T2	-	-	0.054 .383 -0.070 to 0.179	-	-	-0.076 .810 -0.717 to 0.565
Subordinates SE T1/LaMI T1	**0.665** **<.001** 0.607-0.723	**0.665** **<.001** 0.607-0.723	**0.666** **<.001** 0.608-0.724	**0.594** **<.001** 0.539-0.649	**0.593** **<.001** 0.538-0.648	0.592 <.001 0.537-0.647
Between workplace variation	0.390	0.400	0.385	15.645	13.892	14.557
Residual variation	6.262	6.266	6.275	97.857	97.795	97.744
ICC	0.059	0.060	0.058	0.138	0.124	0.130

FLM, first-line manager; FLM PE T1, FLMs’ psychological empowerment at T1; FLM SE T1, FLMs’ structural empowerment at time 1; FLM SE T2, FLMs’ structural empowerment at T2; LaMI T1, subordinates’ ratings of their FLM’s leadership-management performance at T1; Subordinates SE T1, subordinates’ structural empowerment at T1. Confidence intervals not covering zero indicates statistically significant results that are in bold print. Multilevel modelling by linear mixed model using random intercept linear models in a sequence of three models. Table 7 is an original table used with permission from the publisher.

Hypothesis 3

When investigating changes over time, the level of the FLMs' perceptions of structural empowerment was related to changes in subordinates' perceptions of structural empowerment; a significant interaction between FLMs' structural empowerment and time ($\beta = 0.117$, 95% CI 0.046–0.187, $p = .001$) was seen. The subordinates' changes over time were dependent on the level of the FLMs' ratings of structural empowerment by the factor 0.117. The relationship was modified, meaning that if the FLMs had higher values, this led to greater changes among subordinates as well. Hypothesis 3 is thereby partly supported, as the FLMs' ratings of psychological empowerment had no statistically significant relationship with subordinates' ratings of structural empowerment; see Table 8.

Hypothesis 4

When investigating changes over time, the level of the FLMs' perceptions of structural empowerment was related to changes in subordinates' ratings of their FLM's leadership-management performance; a significant interaction between FLMs' structural empowerment and time ($\beta = 0.449$, 95% CI 0.154–0.744, $p = .003$) was seen. The subordinates' changes over time were dependent on the level of the FLMs' ratings of structural empowerment by the factor 0.449. The relationship was modified, and for FLMs who had higher values, the subordinates also rated greater changes. Hypothesis 4 is thereby partly supported, as the FLMs' ratings of psychological empowerment had no statistically significant relationship with subordinates' ratings of their FLM's leadership-management performance; see Table 8.

Table 8. Changes in FLMs' perceptions of empowerment over time related to changes in subordinates' self-rated structural empowerment (H3) and ratings of their managers' leadership-management performance (H4).

	Outcome H3 Subordinates' structural empowerment			**Outcome H4 Subordinates' leadership-management**		
Independent variables	**β**	**95% CI for β**	***p*-value**	**β**	**95% CI for β**	***p*-value**
FLM SE	-0.023	-0.116 to 0.070	.627	-0.421	-0.833 to -0.010	**.045**
FLM PE	0.217	-0.191 to 0.625	.296	1.297	-0.495 to 3.090	.156
Time	-2.234	-3.730 to -0.738	**.003**	-8.395	-14.655 to -2.134	**.009**
Interaction*	0.117	0.046 - 0.187	**.001**	0.449	0.154 - 0.744	**.003**
Residual variance	10.239			163.749		
Residual covariance	6.281			94.974		
Random intercept variance Workplace	1.696			64.924		
ICC	0.142			0.284		

FLM, first-line manager; FLM PE, FLMs' psychological empowerment; FLM SE, FLMs' structural empowerment.
*Interaction between FLM SE and time. Multilevel modelling by linear mixed model, using random intercept linear models in combination with repeated measures. Compound symmetry structure of repeated measures was assumed.
Confidence intervals not covering zero indicates statistically significant results that are in bold print. Table 8 is an original table used with permission from the publisher.

Discussion

Summary of main results

The overall aim of this thesis was to study the working life of FLMs and their subordinates in elderly care from an empowerment perspective. In the interview studies (Paper I and II), the FLMs described their work situation as both challenging and complex. The results reveal the importance of structural empowerment for FLMs' experience of psychological empowerment. Although the FLMs sometimes expressed a need for better access to structural empowerment in terms of information, resources and support, they experienced a sense of meaning, competence, self-determination and impact in their work (Paper I and II).

The longitudinal questionnaire study (Paper III and IV) results indicate that the more access the FLMs had to structural empowerment over time, the more likely they were to feel psychologically empowered over time, which resulted in lower ratings for their stress symptoms and higher ratings for their own self-rated leadership-management performance over time (Paper III). When studying FLMs and subordinates working in the same context, the results indicate that the more access the FLMs had to structural empowerment at T1, the more access the subordinates had to structural empowerment at T2, and the higher the subordinates rated their FLM's leadership-management performance at T2 when controlling for psychological empowerment (Paper IV).

Another finding in this thesis was the influence the number of subordinates per FLM had on the FLMs' ratings of structural empowerment and the subordinates' ratings of structural empowerment and stress symptoms (Paper III).

The results support Kanter's theory[10] of structural empowerment and Spreitzer's[49] concept of psychological empowerment (Paper I-IV).

Working life in elderly care

In this thesis, the working life of FLMs and their subordinates was studied. The thesis focused on structural and psychological empowerment in all four papers as well as on structural and psychological empowerment in relation to stress symptoms and leadership-management performance, in the two quantitative papers. In the following chapter, working life will be discussed from the perspectives of empowerment, stress symptoms and leadership-management performance. The chapter ends with a discussion of the theoretical concept of work and care environment.

Access to empowerment

In Paper IV, although all hypotheses were not fully supported, the longitudinal, multi-level results indicate that FLMs who had higher access to structural empowerment were better able to give their subordinates access to structural empowerment and that the relationship was modified, meaning that if the FLMs had higher values, this led to greater changes among subordinates as well. The results in Paper IV are interesting, as they may be the first to investigate access to structural empowerment at different hierarchical levels (subordinates and FLMs) in elderly care. These results are in accordance with Kanter's theory,[10] which states that the higher up in the organization, the more access the individual has to structural empowerment as well as that individuals with high access to structural empowerment are highly motivated and better able to give their subordinates access to structural empowerment. The results are also in line with Lashinger and Shamian's early study,[42] which showed that FLMs must provide employees with access to empowering structures. But before they can provide their staff with access to structural empowerment, the FLMs themselves must first have access to empowerment structures.[42] MacPhee et al.[95] and Dahinten et al.[96] have tested an empowerment-based leadership development program on managers and their staff. The outcomes of the program stressed that the managers who had attended the program used more empowering behaviors in their work,[95] which had positive effects on staff organizational commitment one year later.[96]

The results in Paper IV might also be relevant to the quality of care provided to clients, although that was not studied here. Laschinger[8] argued that access to structural empowerment will empower nurses with optimal job performance, which will make them better able to provide care that meets professional standards – which, in the end, should result in higher quality of care for the patients.[8] Furthermore, Engström et al.[44] and Silén et al.[9] have studied empowerment and the care of clients in Swedish elderly care. They found positive associations between staff assessment of empowerment, and client satisfaction with care[44] and staff ability to work in a more person-centered manner and to improve the person-centered climate.[9]

In Paper IV, Hypothesis 2, the FLMs' structural and psychological empowerment was a statistical significant predictor for subordinates' ratings of their FLM's leadership-management performance (when controlling for psychological empowerment). However, when it came to the FLMs' psychological empowerment, the results were not as expected: a negative relationship was seen when FLM's psychological empowerment was added to the model. This result is not in line with the hypothesized model, according to which the relationship of FLMs' structural and psychological empowerment at one point in time would influence subordinates' ratings of their manager's leadership-management performance at a later time. Is it possible that FLMs who rated their psychological empowerment as high were more autonomic in their working life and did not work as a team with their subordinates and include them in decision-making? This might have resulted in lower ratings being made by their subordinates. Shared decision-making is an important aspect of feeling empowered at work. This might have affected the subordinates' ratings of their FLM's leadership-management performance. For example, the items 'I can decide on my own how to go about doing my work', 'My impact on what happens in my department is great' and 'I have a great deal of control over what happens in my department' in the subscales of self-determination and impact in the psychological empowerment scale might indicate this.[85] According to Spreitzer,[49] it is important that individuals experience meaning, competence, self-determination and impact in their role in relation to the organization, if they are to be empowered to actively influence their role and its context. However, psychological empowerment mediated the relationship between FLMs' structural empowerment and leadership-management performance in Paper III, although the study included only FLMs' and not subordinates' ratings of their FLM's leadership-management performance. In conclusion, as the results of psychological empowerment are difficult to interpret when investigating links between FLMs and subordinates, they need to be investigated further at different hierarchical levels and in other caring settings.

The token perspective

In the qualitative papers (Paper I and II), the male and female FLMs discussed their working life from the perspectives of structural and psychological empowerment. As male FLMs usually are a minority in the working group (i.e. tokens), it was of interest to conduct separate studies of male and female FLMs to see whether they would describe their experiences of their working life in similar ways. However, although the male FLMs in Paper I never mentioned any disadvantages of being tokens, it is interesting that working life was described in different ways by the male and female FLMs. The female FLMs in Paper II described their working life in a positive manner, whereas the male FLMs also described their working life in more negative terms. The female FLMs described strategies for dealing with difficult situations, whereas the

male FLMs did not clearly describe strategies for taking control of or dealing with such situations. Instead, they expressed feelings of frustration, dejection and resignation when organizational preconditions were insufficient. According to Kanter's theory,[10] it is more difficult to be a token, because they are more visible, which entails getting more attention. The theory also describes them as being kept outside the majority group and, therefore, being more likely to be stereotyped. Is it possible that the male FLMs in Paper I felt vulnerable and pressured to perform owing to their token status? However, not all researchers agree with Kanter's theory,[10] stating that it is more difficult to be a token. In Keisu's thesis,[56] the male FLMs described no negative consequences of being tokens in a female-dominated elderly care organization. Although the female and the male FLMs preformed their leadership in similar ways, and although the male FLMs were tokens, their expected masculine qualities and behaviors were creating the norms in both organizations.[56] Regnö[72] used Kanter's[10] proportions of minorities to study the token perspective of men working in the female-dominated municipal care for older persons and the disabled. She found that although the men were tokens, they were described as glorified by most of the female managers. In general, the female managers described their male colleagues and subordinates positively, and the female managers made an effort to hire more men at their units and to encourage them to stay there. However, they also reported situations when their male colleagues received more opportunities to work in projects and to make a career. In sum, Regnö claimed that one cannot generalize that minorities are always subordinated. The glorification of men contributes to the fact that men instead are being made superordinate, and that they will be allowed more scope of action than the majority.[72]

Number of subordinates

In Paper III, the results showed the influence the number of subordinates per FLM had on the FLMs' and their subordinates' working life. FLMs with fewer subordinates (30 or less) rated higher levels of structural empowerment, more resources, more formal power, and more informal power, than FLMs with more subordinates did. Subordinates of FLMs with fewer subordinates rated higher levels of structural empowerment and lower stress symptoms than subordinates of FLMs with more subordinates did. Moreover, the female FLMs in Paper II described difficulties in their working life when they had to deal with a large number of subordinates. Although the FLMs prioritized being available to their staff and building a team spirit, this was complex, as many FLMs had a large number of subordinates spread out across different units, at different geographic locations. Many of the female FLMs were also responsible for many different categories of staff, which made their responsibility for staff even more difficult. According to another Swedish study,[73] the number of subordinates (which in the study was defined as span of control (SOC)), varies across departments, and the department of elderly care reported wider

SOC than the technical department. This is notable, because when managers have wider SOC, their working lives are affected negatively: their job demands increase and they find it harder to balance strategic, administrative and personnel-related tasks,[73] and they must perform more illegitimate tasks.[74] Moreover, as shown in Paper III, FLMs with more subordinates and subordinates of FLMs with more subordinates rated their working life outcomes as lower than FLMs with fewer subordinates and subordinates of FLMs with fewer subordinates did.

The negative effects of having a high number of subordinates have also been reported earlier among FLMs and subordinates in hospital settings.[97–99] For example, wider SOC was significantly associated with lower job satisfaction and work control, as well as higher role overload among the FLMs. Wider SOC was also related to more manager-assessed adverse outcomes of nosocomial infections, medication errors and staff work-related injuries.[98] Wider SOC has also been associated with negative effects on managers' organizational commitment.[97] In sum, given that having large numbers of subordinates affects managers' and their subordinates' working life negatively, it is important that organizations limit the number of subordinates assigned to each FLM.

Stress symptoms

In Paper III, psychological empowerment was found to be a mediator between structural empowerment and stress symptoms. The longitudinal results are the first to indicate that the higher FLMs in elderly care rate their access to structural empowerment in the workplace, the more likely they are to feel psychologically empowered, resulting in lower self-rated stress symptoms over time. These results strengthen previous working life studies on structural and psychological empowerment and stress symptoms among nurses and nursing assistants. For example, structural and psychological empowerment were significantly associated with stress among nurses in long-term facilities in Taiwan[80] and among caregivers in elderly care in Sweden.[69] Structural empowerment has also resulted in lower job stress and burnout among nurses in China.[100]

In Paper I and II, the FLMs described times when their organizational preconditions were insufficient, i.e., when their access to structural empowerment was limited. These situations in their working life can be seen as stressful. At those times, they reported having limitless demands on them, limited authorities in decision-making, and insufficient information and support. Moreover, politicians had set political goals that they were unable to achieve with their limited resources. These situations of lacking empowerment in their work made them feel powerless and alone in their role (Paper I), and they had to struggle to regain control and handle the demanding situations (Paper II). In previous research, role overload, organizational constraints and role conflicts were the most important predictors of nurse manager stress.[101] Furthermore,

working with limited resources, lack of support and understanding from senior management and working in an organization under constant change are other stressors managers have described in qualitative interview studies in Canada[102] and the United States.[103]

In Paper III, both FLMs and subordinates rated their levels of stress symptoms as moderate, which is in line with studies of FLMs[68] and staff[69] in elderly care in Sweden. However, in elderly care, managers have rated their stress symptoms higher than managers in other municipal departments have done.[2] The fact that the FLMs and subordinates rated their stress symptoms as moderate is serious and the level of stress needs to be decreased, as cross-sectional working life research on managers has shown that stress negatively affects work-related decision-making, increases the risk of making errors and negatively affects leadership behaviors[104] and job satisfaction. Furthermore, stress has negative effects on the individual's mental and physical health.[105] In the multiple linear regressions in Paper III, the variables structural empowerment and psychological empowerment could explain only 16% of the variance in the FLMs' self-rated stress symptoms. It is surprising that empowerment did not explain more of the variance in stress symptoms, but similar results have been presented earlier.[69]

Leadership and management performance

In Paper III, when discussing the outcome of leadership-management performance, the results indicated that the more access the FLMs had to structural empowerment, the more likely they were to feel psychologically empowered, resulting in higher ratings of their own leadership-management performance. The results in Paper IV also indicated that the more access the FLMs had to structural empowerment, the higher the subordinates rated their FLM's leadership-management performance. These results are in line with Kanter's theory,[10] which claims that, for managers, high access to structural empowerment can positively affect their well-being and increase their organizational effectiveness and commitment. Therefore, it is reasonable to think that if FLMs were given high access to empowerment structures in their workplace, they would perform better in their role and their subordinates would notice positive effects on their manager's leadership-management performance. Laschinger[8] investigated the effect of structural empowerment on managers' leadership quality. She found that when staff perceived their workplace to be empowering, they rated the nursing leadership quality as high.[8] However, as no studies have been found examining links between empowerment and leadership-management performance in elderly care from FLMs' and their subordinates' point of view, the multi-level results in Paper IV are of interest. Previously, one cross-sectional study stressed positive relationships between FLMs' self-assessed leadership-management performance and structural and psychological empowerment among FLMs in elderly care in Egypt and Sweden.[68]

In Paper III, the FLMs rated their own leadership-management performance as relatively high, whereas the subordinates rated their FLM's leadership-management performance as moderate. Could it be that the subordinates only saw some aspects of their manager's leadership-management performance and did not have the whole picture of the managerial work when they rated their FLM's leadership-management performance? In Paper I and II, the FLMs described that their staff sometimes did not understand the FLMs complex role and had little understanding of managerial work. Furthermore, when subordinates in the same workplaces rated their FLM's leadership-management performance, they were similar in their ratings, i.e., the clustering effect was large (Paper IV). It is possible that the subordinates discuss their FLM with each other, leading to similarities in their ratings.

In the interview studies (Paper I and II), the FLMs expressed the importance of creating a team spirit among the staff, being available to staff and making sure they felt seen. The FLMs described their relationship with staff as fundamental to creating good quality of care for the clients. However, the administrative burden and the lack of time prevented the FLMs from being available to their staff. The inability to perform their leadership was described as frustrating (Paper I); it caused them to develop strategies for dealing with the situations (Paper II). Similar descriptions of the work environment of FLMs in Swedish elderly care have been presented before.[26] FLMs' inability to be available to the staff has been reported among staff as well. Registered nurses have reported receiving little feedback from their FLMs.[106] According to the NORDCARE study,[34] less than 1/3 of the staff experienced that they were being supported by their FLMs. Compared to the other Nordic countries, elderly care in Sweden provided the staff with less support from their FLMs and the staff met their FLMs less often. This is worrying, as it is more than twice as likely that staff who lack support from their FLMs will want to quit their work compared to those who feel they have support.[34]

The work and care environment

All papers (I-IV) in this thesis point to the importance of having a good work environment that empower individuals to accomplish their work in a meaningful way and, thereby, create a good care environment. Although the FLMs sometimes expressed a need for better access to structural empowerment in terms of information, resources and support, they experienced a sense of meaning, competence, self-determination and impact in their work (Paper I & II). Similar results could also be seen in Paper III, where the FLMs rated moderate access to structural empowerment and moderate to high access to psychological empowerment. Therefore, one must not forget that although there were deficiencies in access to structural empowerment that must be taken seriously, there were also many positive aspects of being a FLM in elderly care. For example, the FLMs enjoyed their work (Paper I & II) and were proud of

it (Paper II). They described that a core activity in their work was to interact with staff and clients and to provide the necessary conditions for creating good elderly care (Paper I & II).

Although the focus in the theoretical framework is on empowerment, the results in this thesis are in accordance with the nursing metaparadigm of environment[37] and the person-centered practice framework.[39] The nursing metaparadigm[37] and the person-centered practice framework[39] share the same thoughts as Kanter's theory,[10] which claims that the environment needs to be democratic and inclusive so that staff can work in a person-centered way.[39] However, the quality of the work environment is not just of significance to the individuals who work there, it also affects the clients who are being cared for. Studies have shown that a satisfying work environment promotes positive outcomes for staff as well as high-quality care for clients/patients.[5–9] The work environment needs to enable structural empowerment and sharing of power to create positive practice environments that increase staff job satisfaction[5,7,8] and positively affect the quality of care provided in these work settings.[5–8] These satisfying work settings can also encourage staff to work in a more person-centered manner,[9] which may lead to positive outcomes for patients.[47]

In the future, the older population in Sweden will increase, and more advanced healthcare care will need to be provided at home.[3] This will put even more pressure on management and staff working in elderly care.[3,4] Meanwhile, there is already a great need today to recruit staff to elderly care, as the staff currently working in the sector have high rates of sick leave.[3] Furthermore, the educational level among the staff is low, and the turnover rate among FLMs and staff has been found to be high.[1] One relevant question here is how the municipalities should meet these future challenges? Could the idea of creating a good work environment that empowers FLMs and their subordinates, similar to the Magnet® model,[46] be an affordable organizational strategy to use in elderly care in Sweden? Although the Magnet® model[46] is used in the US, both elderly care and emergency care face the same problems of high turnover rates and decreased well-being among staff. In a multi-national study by Aiken et al.,[6] they concluded that associations between nursing and patient safety were remarkably similar in the included countries and the efforts to improve the work and care environment could be effective elsewhere.

Methodological considerations

In this thesis, one strength was that different designs have been used to study the working life of FLMs and their subordinates in elderly care from an empowerment perspective. Qualitative and quantitative approaches complement each other, and using them in combination provides a richer description of working life in elderly care. The aim of choosing a qualitative approach to describing male and female FLMs' experiences of their work situation in elderly care was to acquire a deeper understanding of their work situation from an empowerment perspective (Paper I & II). The aim of choosing a quantitative approach, based on a longitudinal and correlational design, was to test hypotheses based on the theories of structural and psychological empowerment. By using a longitudinal design, FLMs perceptions of empowerment in relation to the outcomes could be studied over time (Paper III). By using a longitudinal and multilevel design, relationships of empowerment as well as leadership-management performance between FLMs and their subordinates, who worked in the same context, could be studied over time (Paper IV). Previous research[66] has called for longitudinal studies of relationships between structural and psychological empowerment in other settings than hospitals and in geographic locations other than North America; it has also called for research investigating relationships between structural and psychological empowerment and managerial leadership outcomes.

However, both the qualitative and the quantitative approaches used in this thesis have their strengths and weaknesses, which needs to be considered. In the qualitative papers, the methodological considerations will be discussed in terms of trustworthiness, and in the quantitative papers, the methodological considerations will be discussed in terms of validity. All papers (I-IV) were focused on structural empowerment[10] and psychological empowerment,[49] and the choice of having such a theoretical perspective in this thesis will be discussed at the end of the methodological considerations chapter.

Trustworthiness

In qualitative research, trustworthiness (i.e., enhancing the quality of the studies) refers to the degree of confidence the researcher has in the data and the analysis.[82,107] According to Graneheim and Lundman,[87] in order to achieve trustworthiness, the concepts of credibility, dependability and transferability should be considered.

Credibility refers to the focus of the research and confidence that the interpretations and results are truthful.[82,107] In quantitative research, credibility is referred to as internal validity.[82] To enhance credibility in Paper I and II, participants with varied experience and background factors were chosen to participate. This was done in an attempt to capture a variety of descriptions of the work situations and provide richness in the interviews.[87,89] In qualitative research, the sample size depends on the study aim, the questions to be asked and how rich the data are.[89] Before the interviews were conducted, the number of participants had not been determined. However, as the aim was to achieve variation in the descriptions, purposive sampling[82] was used. To achieve variation, the background information on the participants (age, workplace, education and years of professional experience) was entered in a table that was used to get an overview of the participant characteristics and to decide when to stop adding new participants.

Before the interviews were performed, a pilot interview was conducted to test the interview guide and determine whether the questions were suitable to addressing the study aim. The pilot interview confirmed the use of the interview guide, although additional questions about psychological empowerment were added after the first interview with the male FLMs was conducted.[82]

According to Patton,[108] the researchers are of importance to the credibility when performing the interviews and analyzing the data. To reduce the risk of researcher subjectivity when performing the interviews, the interview guide was used as a check-list to limit the researcher's inferences.[82] To reduce the potential risk of the researcher's interpretations affecting the data, the whole research group was involved in the analysis and discussed the process until consensus was reached. During the analyses, the group went back and forth to the original texts to verify that nothing had been missed or that meanings had not been changed.[87,108] The research group consisted of two researchers with managerial experience from different caring organizations and hierarchical levels in the organizations and three researchers with no managerial experience. Two of the researchers have worked in elderly care and the senior researchers had long experience of conducting research in this area. All senior researchers had experience of working with the analysis method. To enable the reader to judge the credibility of the analysis process – from the selection of meaning units to the creation of a theme – representative quotations from the interview texts have been presented in the results in the papers.[87]

Dependability refers to data stability over time and across conditions.[82,107] In quantitative research, dependability is referred to reliability.[82] To enhance dependability in Paper I and II, data collection was performed by the same person, within a somewhat short time interval (except for the first interview with a male participant) to prevent data from changing over time. During the interviews, the informants were encouraged to speak freely about their work, and the interview guide was used as a check-list to ensure that all topics were

discussed. This was done to avoid the risk of inconsistency during the interview process. During the analysis, the co-researchers had an open dialogue, the goal of which was to reach consensus and avoid alternative interpretations as well as to be consistent over time during the process.[87]

Transferability refers to whether the findings can be transferred to other settings or groups.[82,87] In quantitative research, transferability is referred to generalizability.[82] To enhance transferability of the results, the sample, setting, data collection and the data analysis have been described in detail to enable the reader to decide whether the results can be transferred to another context or group. Furthermore, a rich presentation of the results in the papers with verbatim quotations has been given to enhance transferability of study results.[87] The results could be transferred to similar settings in the Swedish context. However, as the results never have a single meaning,[88,109] it is the reader who must determine whether they are transferrable to another context.[87]

Validity

The rigor of Study III and IV will be discussed in relation to four types of validity; statistical conclusion validity, internal validity, construct validity and external validity.[82]

Statistical conclusion validity refers to the statistical power of the sample size and the precision of the analyses. In Paper III and IV, one methodological weakness was the small FLM sample size. The risk of using a small sample is that the statistical power may be low and, therefore, fail to show significant relationships between variables. However, to evaluate the appropriateness of sample size, judgments about sample sizes in relation to the use of different statistical tests have to be made first.[82] In Paper III, a complex modeling in the GEE approach,[90] in combination with a simple mediation model with covariates, was used. In GEE, regression parameters as well as other parameters that essentially concern the within-subject association are estimated. This means that GEE requires a larger sample size than is required for linear regressions. When sample sizes are relatively small, the empirically based standard errors of the regression parameters have a tendency to underestimate the true ones, and the sampling variability of those estimators can be very large.[90] These properties have consequences for the coverage probabilities of CIs. Therefore, the actual alpha-values may be above the nominal, which indicates shorter CIs and therefore a risk of falsely rejecting a true null hypothesis. The distribution-of-product method, which tests for indirect effects, has superior power and has type I error rates comparable to asymptotic normal distribution methods and bootstrap as well as type I error rates close to the nominal 0.05 for sample sizes as small as 50.[92]

In conclusion, the sample size employed in the quantitative studies is adequate for using GEE. To test, or equivalently, to construct a CI for the parameter of indirect effect, the sample size may be regarded as small, although CIs

that did not cover the value zero were obtained. However, with a relatively small sample size, there is a higher risk of obtaining shorter CIs due to use of GEE.

In Paper IV, one strength was that the multilevel design made it possible to study, over time, relationships of empowerment as well as leadership-management between FLMs and their subordinates working in the same context. As both the FLMs and their subordinates remained in the same workplaces, it was possible to examine patterns of change. Although there was a limitation in that the sample size of the FLMs was small (56 FLMs), the sample size of the subordinates was larger (769 subordinates). According to Maas and Hox,[110] at least 50 observations at level 2 are recommended, which is fulfilled in the study. One strength of using linear mixed models was that examination of different aspects of study design and data structure simultaneously was possible.[90]

Another strength in Hypothesis 3 and 4 in Paper IV was that the intra-cluster correlation between workplaces, i.e. the cluster/workplace effect, as well as between-individuals and within-individual variation were accounted for. When measuring the cluster effect, the effect of the subordinates' ratings of their FLM's leadership-management performance was large and the effect of the subordinates' ratings of their FLM's perceptions of structural empowerment was smaller. Although the cluster effect differed, the subordinates within the same workplaces were similar in their ratings, which is in accordance with the study design.[90]

Internal validity refers to the validity of inferences that there is a real correlation between the independent variables, i.e. the presumed cause, and the dependent variables, i.e. the effect.[82] In Paper III and IV, a threat to the internal validity was the cause-and-effect relationship. A weakness in using a correlational design was that the causal relationships may be unclear. Was it the independent variable that affected the dependent variable, or vice versa? However, as the study was also longitudinal, there was a temporal effect in Paper IV in that the cause preceded the effect in time. There was also an empirical relationship (correlation) between the independent variables (presumed cause) and the dependent variables (presumed effect),[82] and the hypotheses have empirical support from earlier research, which is another strength. Further, the covariates – number of subordinates (dichotomized into 30 or less or 31 or more) and age – were tested in all tests in Paper III. The non-significant covariates were excluded in the final test. In Paper IV, the covariates – number of subordinates (workplace level) and age (subordinate level) – were excluded if they were not significant in the bivariate analyses. Bivariate significant covariates were tested in the model and included in the final model if they were significant. By using the following criteria for causality – temporal effects, empirical relationships and covariates[82] – the hypotheses in Paper III were supported and in Paper IV the hypotheses were partly supported. However, although there was support for the hypotheses, they are not deterministic.

Another threat to the internal validity was that the participants were chosen using convenience sampling. This could result in selection bias.[82] In Paper III, when comparing FLMs who responded twice with FLMs who responded only at T1, the FLMs who responded twice rated higher levels of psychological empowerment. No other between-group differences for the primary variables or age, total number of years as a manager and number of subordinates were found.

Construct validity refers to the degree to which the instruments measure the concepts that are of interest in the study.[82] In the questionnaire that was used in Paper III and IV, the variables of empowerment originated from Kanter's theory[10] and Spreitzer's concept,[49] and the questionnaires have been widely used in many disciplines.[9,59,69,96,111] For the variables of stress symptoms[70] and leadership-management performance,[71] the instruments have been used previously in healthcare settings in Sweden.[68,70,71] Also, the psychometric properties of the instruments have been shown to have acceptable construct validity and reliability.[49,57,69,71,85] The internal consistency was measured using Cronbach's alpha (α). In Paper III and IV, the Cronbach's alphas (α-values) were ≥ 0.70 for all total scales, and in Paper III, when also using sub-scales for structural empowerment, the α-values were ≥ 0.70 for all factors except for FLMs informal power (0.66), and for subordinates' formal power (0.65). One limitation of Paper III and IV is that the data are based on self-reported questionnaires, which entails the risk of response biases. However, the responses are in line with previous cross-sectional research in healthcare settings in Sweden.[68–71] It would have been valuable to complement the questionnaires with observations of the participants in their work.

As for **external validity**, or generalizability, the subordinate sample represent different occupational groups, and the settings are representative of elderly care in Sweden.[1,3,4] However, one limitation was that it was a convenience sample, and that few FLMs participated in the study. Another limitation was that there were more employees working in municipal care than in private care, compared to another Swedish study.[1] Although, one strength was that the participants were working in five different municipalities that were both rural and urban. Therefore, the results in Paper III and IV can be generalized to similar settings in the Swedish context. However, as the data collection was performed in 2010-2012, there will be differences in the setting and the organizational context that must be considered when generalizing the results to other settings in 2019. The time frame of the data collection between T1 and T2 was set to one year. It would have been interesting to have performed an extra data collection one year later. However, as there are high turnover rates among FLMs and staff in elderly care,[1] having a longer time frame would have been a problem. In the present study, high attrition rate had already been a problem as 78 FLMs participated at T1 and only 56 of those participated one year later, at T2; see Table 3. While the results in Paper III and IV offer insight into elderly care, forthcoming research needs to replicate them using larger

sample sizes, from other sectors and among other employees in healthcare. It is also of interest for future research to employ a longer time frame and more measurement occasions.

The theoretical framework in the thesis

This thesis focuses on a theoretical framework of structural empowerment as described by Kanter,[10] and of psychological empowerment as described by Spreitzer.[49] The interpretations in this thesis are naturally influenced by the theoretical framework. An advantage of using a theoretical framework is that the framework has guided the methods used. In Paper I and II, the interview guide was inspired by structural and psychological empowerment, the goal being to gain a deeper understanding of the male and female FLMs' work situation from an empowerment perspective. In Paper III and IV, a quantitative approach was used to test hypotheses based on structural and psychological empowerment linked to FLMs' working life outcomes as well as to investigate relationships of empowerment between FLMs and their subordinates working in the same context. However, to clarify the conceptual basis of this thesis, an attempt has been made to clearly describe the key variables in the theoretical framework and the theoretical framework in the different studies. Also, the findings have been discussed in relation to the theoretical framework and they show that the theoretical framework is supported.[82,112]

However, using a theoretical framework may also be a weakness, as the framework has guided the thesis. If other theories and concepts had been used to study working life in elderly care, the results might have been different. As the theory of structural empowerment[10] and the concept of psychological empowerment[49] originate from other disciplines, this could be a weakness. That is to say, borrowing a theory and concept and using them in a nursing approach may be a limitation. However, structural and psychological empowerment have been used to a great extent in nursing when investigating working life outcomes in different healthcare settings and in different countries.[66] This strengthens the utility of using the theoretical framework in this setting.[112]

Conclusions

The results indicate that FLMs' working life in elderly care is complex and challenging and that FLMs seem to need better access to structural empowerment (Paper I-IV). FLMs who have more access to structural empowerment in the workplace are more likely to feel psychologically empowered, which results in lower self-rated stress symptoms and higher self-rated leadership and management performance (Paper III). When studying FLMs and subordinates working in the same context, FLMs who have more access to structural empowerment are better able to give their subordinates access to structural empowerment. Furthermore, when FLMs have more access to structural empowerment, their subordinates rate their leadership and management performance higher (Paper IV). The results also indicate that the number of subordinates influenced the FLMs' ratings of structural empowerment and the subordinates' ratings of structural empowerment and stress symptoms (Paper III). The papers in this thesis support the use of Kanter's theory of structural empowerment and Spreitzer's concept of psychological empowerment when investigating FLMs' (Paper I-IV) and their subordinates' (Paper III & IV) working life. However, although FLMs report deficiencies in their access to structural empowerment, they experience their work as a positive challenge (Paper 1) and they feel that their work, though not easy, is worth it (Paper II).

Clinical implications

The results of this thesis have both practical and theoretical implications. Practically, these results are of importance for political leaders and senior management teams, as they need to understand and be actively engaged in the working life of FLMs and their subordinates. Political leaders and senior management teams have the mandate to provide FLMs and their subordinates with empowering structures, and they need to start now. Although the FLMs and the staff experience meaning in their work, the situation in elderly care is pressed, with high rates of sick leave and turnover among the FLMs and their subordinates. While the older population is increasing in size, the need for FLMs and staff is increasing as well, and there are already problems with maintaining a healthy workforce in elderly care. Therefore, the work environment needs to ensure that FLMs have access to empowerment structures and promote sharing of power, so that FLMs can support their subordinates in the care of older persons.

In this thesis, the FLMs have reported deficiencies in their access to structural empowerment in terms of information, resources and support. When it comes to resources, this thesis indicates that the number of subordinates influences the FLMs' and their subordinates' working lives. If FLMs are to be able to balance different tasks and have the best prerequisites for performing in their role and empowering their subordinates, they must have a reasonable number of subordinates. However, there is no "golden number of subordinates" that managers should have. This number depends on many factors, for example, how many units the FLMs are responsible for, geographic location, the kind of care being provided, the turnover rates at the unit, the health and education of the staff and whether the staff work full time or part time. All of those factors need to be considered when finding the optimal number of subordinates for each FLM. However, during the past decade, the number of subordinates has been of interest to political leaders and organizations in elderly care in Sweden. Therefore, it is becoming more common for organizations to set limits of no more than 30 subordinates per manager.

When the FLMs described their support, they sometimes mentioned lacking active support from the supportive organizational structures and their superiors. Therefore, the organizations need to offer FLMs more hands-on support from the human resources and the financial department instead of offering more kinds of supportive systems. One way of doing this could be to designate contact persons at these departments who spend some of their worktime out at

the FLMs units, relieving them of some of their administrative tasks. This would free up time for the FLMs that they could invest in their core activities of being available to their subordinates and working with their leadership. It would also facilitate exchange of information between the departments if they worked more closely with each other. Another form of support that some of the managers requested was to have a substitute who could assume responsibility for the units after hours, on weekends and when the FLMs were on vacation or sick leave. This could reduce the FLMs' job strain, which increases when they are out of the office. Moreover, support from superiors and the political board could be improved. According to the Swedish work environment authority, the FLMs' work environment needs to be part of the systematic work environment management and it needs to be prioritized in the line organization in the same ways that staff members' working life is being prioritized. One way of doing this would be to create routines in the organizations for how the FLMs' working life should be discussed. If political leaders and senior management teams are to understand the working life of FLMs and their subordinates, they need to be visible out at the units and create forms for informing, discussing and supporting the FLMs and their subordinates.

Although the above proposals concerning how to provide FLMs with access to structural empowerment are of importance, they may not cover the needs of all FLMs. One must remember that each FLM has his/her own experience and needs, and therefore, access to structural empowerment must be individualized and each FLM must be offered customized access to structural empowerment based on these individual needs.

Theoretically, the results support Kanter's theory of structural empowerment and Spreitzer's concept of psychological empowerment, which are suitable to use when studying the working life of FLMs and their subordinates in elderly care from an empowerment perspective. Therefore, the instruments of structural empowerment, psychological empowerment, stress symptoms and leadership-management performance could be used further when studying these perspectives in the working life context. For example, they could be used by human resources departments in different organizations in a caring context.

Svensk sammanfattning (Swedish summary)

Det övergripande syftet med avhandlingen var att undersöka första-linjens chefers och deras medarbetares arbetsmiljö inom äldreomsorgen utifrån ett empowerment-perspektiv.

Delstudie I syftade till att beskriva manliga första-linjens chefers upplevelser av sin arbetssituation inom äldreomsorgen. Mellan år 2010-2011 intervjuades fjorton manliga första-linjens chefer inom äldreomsorgen i Sverige. Intervjuguiden som användes var inspirerad av teorier om empowerment. De semistrukturerade intervjuerna analyserades med hjälp av kvalitativ innehållsanalys, vilket resulterade i två teman och fem subteman. Det första temat beskrev när organisatoriska krav var i balans med chefernas upplevda ansvar och strukturella förutsättningar. De manliga cheferna beskrev att de kände sig ensamma men inte utelämnade, att de hade frihet inom givna ramar samt en känsla av tillfredsställelse och stimulans i arbetet. Det andra temat beskrev när organisatoriska krav var i obalans med chefernas upplevda ansvar och strukturella förutsättningar. I detta tema beskrev de manliga cheferna sin känsla av frustration och av uppgivenhet. De manliga första-linjens cheferna upplevde sig behöva bättre tillgång till strukturell empowerment, så som resurser, stöd och information. Resultatet i studien visade att även om arbetssituationen upplevdes vara både komplex, utmanande och föränderlig så sågs utmaningarna som en ständig drivkraft för cheferna.

Delstudie II syftade till att beskriva kvinnliga första-linjens chefers upplevelser av sin arbetssituation inom äldreomsorgen. Fjorton kvinnliga första-linjens chefer som arbetade inom äldreomsorgen i Sverige intervjuades under våren och sommaren, 2012. Samma intervjuguide som användes i delstudie I användes även i delstudie II. Även dessa intervjuer analyserades med hjälp av kvalitativ innehållsanalys, vilket resulterade i ett tema och fyra subteman. Temat beskrev att även om arbetssituationen inte var enkel för cheferna, så var deras arbete ändå mödan värt. I de olika subteman så beskrev de kvinnliga cheferna sitt arbete som komplext och mångfacetterat men även som meningsfullt för dem. Även om deras ansvar var stort, så upplevde de att de hade stora befogenheter inom givna ramar. Kvinnorna beskrev också att de upplevde stöd från andra personer och från organisatoriska förutsättningar, vilket var viktigt

för dem. Dock så var deras strukturella förutsättningar/strukturella empowerment ibland otillräckliga och i dessa situationer beskrev de kvinnliga cheferna hur de fick utveckla strategier för att kunna hantera dessa situationer.

Delstudie III syftade till att undersöka samband mellan första-linjens chefers strukturella och psykologiska empowerment och deras stress symtom samt deras egna chefs- och ledarskapsförmåga. Ett ytterligare syfte var att undersöka om antalet medarbetare per chef påverkade skattningarna av ovannämnda variabler för cheferna och deras medarbetare. Vid två tillfällen, med ett års mellanrum, skickades enkäter ut till cheferna och deras medarbetare som arbetade i fem olika kommuner. Enkäterna analyserades med hjälp av deskriptiv och multi-variat statistik. Resultatet i studien visade att ju bättre tillgång cheferna hade till strukturell empowerment, desto mer sannolikt var det att de kände psykologisk empowerment, vilket resulterade i att de skattade sina stress symtom lägre och sin egen chefs- och ledarskapsförmåga högre. Resultatet visade även att chefer som hade 30 eller färre medarbetare skattade högre strukturell empowerment jämfört med chefer som hade fler medarbetare. Även medarbetare till chefer som hade 30 eller färre medarbetare skattade högre strukturell empowerment och lägre stress symptom jämfört med skattningar gjorda av medarbetare till chefer som hade fler medarbetare.

Delstudie IV syftade till att undersöka samband mellan första-linjens chefers strukturella och psykologiska empowerment och deras medarbetares strukturella empowerment samt medarbetarnas skattningar av sina chefers chefs- och ledarskapsförmåga. Delstudien baserades på samma enkäter som användes i delstudie III. Resultatet visade att ju bättre tillgång cheferna hade till strukturell empowerment vid första enkättillfället, desto bättre tillgång hade medarbetarna till strukturell empowerment vid andra enkättillfället, samt desto högre skattade medarbetarna sina chefers chefs- och ledarskapsförmågor vid andra enkättillfället.

Acknowledgements

Denna avhandling hade inte gått att skriva utan hjälp och stöttning från många olika personer. Då min resa med forskningen inte varit spikrak, utan bestått av många svängar och olika stopp på vägen, så vill jag tacka alla som bidragit till att jag nu äntligen har kommit fram till slutdestinationen.

Forskningsprojektet och mina doktorandstudier har finansierats med medel från Akademin för hälsa- och arbetsliv vid Högskolan i Gävle, Uppsala Universitet, AFA försäkring och Region Gävleborg.

Då denna avhandling skrivits vid Institutionen för folkhälso- och vårdvetenskap (IFV) vid Uppsala Universitet så vill jag rikta ett tack till prefekt *Karin Nordin* och tidigare prefekter *Johan Hallqvist* och *Marianne Carlsson* för att jag fått möjlighet att genomföra forskarutbildningen hos er. Jag vill även tacka studierektor *Stefan Eriksson* och tidigare studierektor *Barbro Wadensten* samt alla tidigare och nuvarande doktorandkollegor och seniora forskare vid IFV. Speciellt tack till *Katarina Hjelm* som fått mig att känna mig välkommen till IFV.

Jag vill särskilt tacka:
Alla studiedeltagare inom äldreomsorgen som har delat med sig av sina erfarenheter, tid och engagemang. Utan er hade denna avhandling inte kunnat genomföras!

Min huvudhandledare, *Maria Engström*. Tack för ditt engagemang och för att du delat med dig av dina kunskaper inom området och inom forskningens värld. Tack även för din förmåga att få mig att utvecklas som doktorand, för ditt lugn och tålamod när det varit svajigt i livet, och för att du alltid varit närvarande, stöttande och har trott på mig. Du har även fått mig att utveckla min läsförståelse för handskrivna kommentarer… Jag är väldigt tacksam för att jag fick möjlighet att ha dig som min huvudhandledare! Min biträdande handledare, *Bernice Skytt*. Tack för din klokhet, våra diskussioner och för att du har delat med dig av dina stora kunskaper om chef- och ledarskap. Du har med varsam hand guidat mig in i den kvalitativa forskningsvärlden och fått mig att se omvärlden från olika perspektiv. Jag vill särskilt tacka dig för våra

samtal om livet, djur och resorna till pelargonernas underbara värld. Min biträdande handledare, *Barbro Wadensten*. Tack för ditt engagemang, ditt stöd och för din guidning på resan genom doktorandutbildningen. Jag vill även tacka dig för att du delat med dig av dina erfarenheter och kunskaper inom forskningsvärlden samt att du alltid fått mig att känna mig välkommen till alla doktorandaktiviteter hos IFV.

Hans Högberg, min medförfattare till de kvantitativa manusen. Tack för ditt tålamod och din utomordentligt pedagogiska förmåga att guida mig i statistikens värld. Tack även för alla samtal om livet, växter och resor.

Elisabeth Häggström, min medförfattare till mitt första kvalitativa manus. Tack för din kunskap, ditt engagemang och ditt glada humör.

Min akademichef *Annika Strömberg* och tidigare akademichef *Nader Ahmadi* samt min avdelningschef *Anne-Sofie Hiswåls* vid Högskolan i Gävle. Tack för att ni skapat förutsättningar för mig att kunna genomföra mina doktorandstudier och för all stöttning som ni har gett mig under resans gång.

Alla tidigare och nuvarande doktorander och kollegor vid Avdelningen för vårdvetenskap vid Högskolan i Gävle. Tack för allt stöd, alla samtal, diskussioner och för konstruktiv feedback vid seminarier.

Tack *Ann-Christin Karlsson, Leif Eriksson, Mariann Hedström, Per-Ola Blomgren, Lisa Hultin, Katarina Hjelm, Kati Knudsen, Marja-Leena Kristofferzon, Anna Hofsten, Hans Högberg* och *Marianne Carlsson* för att ni läste och gav konstruktiva kommentarer på denna kappa. Särskilt tack till *Annica Björkman, Annakarin Olsson, Ylva Pålsson* och *Ann-Sofi Östlund* för att ni förhandsgranskade denna kappa.

Mina förra och nuvarande rumskamrater och vänner *Annakarin Olsson, Ann-Sofi Östlund, Kati Knudsen* och *Ylva Pålsson*. Jag är tacksam för att jag har fått lära känna er och dela glädje och motgång under doktorandtiden med er. Tack för allt stöd, alla samtal och diskussioner, allt skratt, alla promenader och för att jag fått lära känna er och era familjer! Vad hade denna resa varit utan er? Tack *Monica Kaltenbrunner Nykvist* för luncher, fikapauser och telefonsamtal då vi pratat om doktorandlivet och ”vanliga livet”. Jag ser fram emot att ha framtida forskningssamarbeten med dig.

Tack alla vänner som gjort livet utanför doktorandlivet till ett nöje och särskilt tack till *Kajsa Nordin* för alla samtal, promenader, svampturer i skogen, ridturer och allt tedrickande. *Malin Eriksson* för all stöttning och hjälp med barnen och för att du alltid varit en trygg klippa för vår familj här i Gävle. *Ulrika Rollison* för att du alltid har funnits där för mig och min familj. Våra dagliga

samtal, ibland flera gånger per dag, då vi pratat om stort och smått. Allt som vi har gått igenom har gjort dig till en syster. Smålandsvännerna *Terese Brorsson, Ylva Nilsson, Linda Robertsson* och *Frida Malmberg.* Tack för att ni finns i mitt liv och för våra Kristi Himmelsfärdshelger. Det är så tryggt att veta att ni alltid finns var jag än i världen befinner mig. *Erica Mattsson*, min äldsta vän. Du har alltid varit nyfiken på min forskning och stöttat mig i livet.

Tack till min bror *Carl*, och hans *Malin, Oliver* och *Tom*. Jag ser fram emot att snart ha mer tid att kunna komma till London och hälsa på er. Tack till min mamma *Carina* och min bortgångna far *Ronny* för ni alltid fått mig att känna mig älskad. Tack för att ni lärt mig att vara nyfiken och våga testa på nya saker. Särskilt tack till dig mamma för att du alltid har försökt vara närvarande och hjälpa mig, även om det är ett långt avstånd emellan oss. Du har alltid lyssnat tålmodigt på mig, och aldrig tvivlat på mig, även om du inte alltid har vetat vad jag hållit på med i alla år. Jag ser fram emot att ”komma hem igen”.

Slutligen så vill jag rikta ett tack till alla två- och fyrbenta medlemmar i min familj. Ni är mitt allt! Tack mina underbara barn, *Joel* och *Jacob,* ni kom till under min doktorandtid och ni har alltid uppmärksammat mig på vad som är viktigast här i livet! Tack *Fredrik,* för att du är du. Du är min trygghet och ger mig alltid stöd, uppmuntran och dagliga skratt. Du är min teammate!

References

1. SOU 2017:21. Läs mig! Nationell kvalitetsplan för vård och omsorg om äldre personer Del 1. (Read me! National Quality Plan for Elderly Care Part 1). 1–471 (2017). Available at: https://www.regeringen.se/4969b7/contentassets/9378aff4b35a427c99b772345af79539/sou-2017_21_webb_del1.pdf. (Accessed: 4th September 2018)
2. Berntson, E., Wallin, L. & Härenstam, A. Typical situations for managers in the Swedish public sector: Cluster analysis of working conditions using the Job Demands-Resources Model. *Int. Public Manag. J.* **15,** 100–130 (2012).
3. The Swedish Ministry of Health and Social Affairs (Socialdepartementet). Framtidens äldreomsorg – en nationell kvalitetsplan (Elderly care of the future – a National quality plan). (2018). Available at: https://www.regeringen.se/49ee56/contentassets/faebe5c0bff14b9fb7cd9df7625d2e10/framtidens-aldreomsorg--en-nationell-kvalitetsplan-2017_18_280.pdf. (Accessed: 20th September 2018)
4. The National Board of Health and Welfare (Socialstyrelsen). Vård och omsorg om äldre - lägesrapport 2018 (Elderly care – 2018 Progress report). (2018). Available at: http://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/20857/2018-2-7.pdf. (Accessed: 3rd September 2018)
5. Aiken, L. H., Clarke, S. P., Sloane, D. M., Lake, E. T. & Cheney, T. Effects of hospital care environment on patient mortality and nurse outcomes. *J. Nurs. Adm.* **38,** 223–229 (2008).
6. Aiken, L. H. *et al.* Patient safety, satisfaction, and quality of hospital care: Cross sectional surveys of nurses and patients in 12 countries in Europe and the United States. *BMJ* **344,** 1–14 (2012).
7. Purdy, N., Spence Laschinger, H. K., Finegan, J., Kerr, M. & Olivera, F. Effects of work environments on nurse and patient outcomes. *J. Nurs. Manag.* **18,** 901–913 (2010).
8. Spence Laschinger, H. Effect of empowerment on professional practice environments, work satisfaction, and Patient Care Quality: further testing the Nursing Worklife Model. *J. Nurs. Care Qual.* **23,** 322–330 (2008).
9. Silén, M., Skytt, B. & Engström, M. Relationships between structural and psychological empowerment, mediated by person-centred processes and thriving for nursing home staff. *Geriatr. Nurs.* **40,** 67–71 (2019).
10. Kanter, R. M. *Men and Women of the Corporation*. (BasicBooks, 1993).
11. Statistics Sweden (SCB). Äldres levnadsförhållanden - Arbete, ekonomi, hälsa och sociala nätverk 1980–2003 (Living Conditions of the elderly, Work, economy, health and social networks 1980–2003). (2006). Available at: https://www.scb.se/statistik/_publikationer/le0101_1980i05_br_01_le112sa0601.pdf. (Accessed: 10th October 2018)

12. SOU 2017:21. Läs mig! Nationell kvalitetsplan för vård och omsorg om äldre personer Del 2. (Read me! National quality plan for elderly care Part 2.). (2017). Available at: https://www.regeringen.se/4969b7/contentassets/9378aff4b35a427c99b77234 5af79539/sou-2017_21_webb_del2_hela.pdf. (Accessed: 4th September 2018)
13. SFS (2001:937). *Socialtjänstförordning (Social Services Ordinance)*. (The Swedish Ministry of Health and Social Affairs, 2001).
14. SFS (2008:962). *Lag om valfrihetssystem (The Freedom of Choice Act)*. (The Swedish Ministry of Finances, 2008).
15. SFS (2016:1145). *Lag om offentlig upphandling (The Public Procurement Act)*. (The Swedish Ministry of Finances, 2016).
16. Swedish Association of Local Authorities and regions (SKL). Valfrihetssystem inom social omsorg (Freedom of choice within social care). (2018). Available at: https://skl.se/demokratiledningstyrning/driftformervalfrihet/valfrihetssysteme rsattningssystem/socialomsorg.1758.html. (Accessed: 22nd November 2018)
17. National Board of Health and Welfare (Socialstyrelsen). Tillståndet och utvecklingen inom hälso- och sjukvård och socialtjänst Lägesrapport 2015. (The state of and developments in health/medical care and social services 2015 Progress Report). (2015). Available at: https://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/19747/2015-2-51.pdf. (Accessed: 18th October 2018)
18. Jönson, H. & Szebehely, M. *Äldreomsorger i Sverige: Lokala variationer och generella trender (Elderly care in Sweden: Local variation and overall trends)*. (Gleerups utbildning AB, 2018).
19. Evertsson, P. & Rosengren, K. Political experiences of changing the focus in elderly care in one municipality. *J. Nurs. Manag.* **23,** 994–1002 (2015).
20. SFS (2001:453). *Socialtjänstlag. The Social Services Act*. (The Swedish Ministry of Health and Social Affairs, 2001).
21. World Health Organization. Health statistics and information systems. (2019). Available at: https://www.who.int/healthinfo/survey/ageingdefnolder/en/. (Accessed: 1st March 2019)
22. Björk, S. *et al.* Exploring the prevalence and variance of cognitive impairment, pain, neuropsychiatric symptoms and ADL dependency among persons living in nursing homes; A cross-sectional study. *BMC Geriatr.* **16,** 1–8 (2016).
23. Dahlkvist, E. *et al.* Garden greenery and the health of older people in residential care facilities: a multi-level cross-sectional study. *J. Adv. Nurs.* **72,** 2065–2076 (2016).
24. Roos, C., Silén, M., Skytt, B. & Engström, M. An intervention targeting fundamental values among caregivers at residential facilities: effects of a cluster-randomized controlled trial on residents' self-reported empowerment, person-centered climate and life satisfaction. *BMC Geriatr.* **16,** 1–16 (2016).
25. SOSFS 2012:3. *Värdegrunden i socialtjänstens omsorg om äldre (Fundamental values underlying the social services' care for the elderly)*. (The National Board of Health and Welfare (Socialstyrelsen), 2012).
26. The Swedish work environment authority (Arbetsmiljöverket). Första linjens chefer i vård och omsorg. (First-line managers in a caring context). (2018). Available at: https://www.av.se/globalassets/filer/nyheter/projektrapport_forsta_linjens-chefer_inom_vard_och_omsorg_2015-051464.pdf. (Accessed: 14th September 2018)

27. Thelin, A. & Wolmesjö, M. Tid att leda. En kunskapsöversikt om hur chefskap påverkar äldreomsorgens kvalitet (Time to lead. A report of how management affect quality in elderly care). (2014). Available at: http://mb.cision.com/Public/1167/9686008/bdea288a6137305b.pdf. (Accessed: 4th September 2018)
28. Swedish Association of Local Authorities and Regions (SKL). Arbetsgivarperspektiv på kommuner och landsting fakta och analys 2011 (Employer perspectives in Swedish municipalities and county councils: Facts and analyses for 2011). (2011). Available at: https://webbutik.skl.se/bilder/artiklar/pdf/7164-679-8.pdf. (Accessed: 8th November 2018)
29. Tullberg, M. *Med ljuset på - ledare och ledda i äldreomsorgen (With the Lights On – Managers and their subordinates in elderly care)*. (Liber, 2006).
30. Antonsson, H. Chefers arbete i äldreomsorgen - att hantera den svårhanterliga omvärlden: Relationen mellan arbete och organisering (Managers work in elder care – to manage the unmanageable: The relation between work and organising). (Linköping University: Dissertation, 2013).
31. Regnö, K. Chefer i välfärdens tjänst – En forskningsrapport om hur personalgruppens storlek påverkar kvalitet och hälsa (Managers in the service of the welfare system - A report of how span of control influences quality and health). (2016). Available at: https://vision.se/globalassets/documents/rapporter/2016/chefer-i-valfardens-tjanst.pdf. (Accessed: 24th October 2018)
32. Statistics Sweden (SCB). På tal om kvinnor och män (About women and men). (2018). Available at: https://www.scb.se/contentassets/528dd6d093b64a38895735f333a89a8a/le0201_2017b18_br_x10br1801.pdf. (Accessed: 6th December 2018)
33. Dellve, L. & Wolmesjö, M. Att leda integrerat värdeskapande i en röra av värden och förutsättningar (Leading integrated value-creation in a muddle of values and prerequisites). (2016). Available at: https://www.hb.se/PageFiles/1326/Värdeskapande ledarskap i äldreomsorgen.pdf. (Accessed: 29th August 2018)
34. Szebehely, M., Stranz, A. & Strandell, R. Vem ska arbeta i framtidens äldreomsorg? (Who will work in the elderly care of the future?). (2017). Available at: https://www.socarb.su.se/polopoly_fs/1.320035.1486983623!/menu/standard/file/Slutversion rapport feb13.pdf. (Accessed: 28th November 2018)
35. Swedish Association of Local Authorities and Regions (SKL). Sveriges viktigaste jobb finns i välfärden. Rekryteringsrapport 2018 (Sweden’s most important jobs are in the welfare system). (2018). Available at: https://webbutik.skl.se/bilder/artiklar/pdf/7585-610-0.pdf?issuusl=ignore. (Accessed: 19th November 2018)
36. Andersson, H. Så mycket bättre? (So much better?). (2018). Available at: https://www.kommunal.se/sites/default/files/sa_mycket_battre_2018_webb.pdf. (Accessed: 18th December 2018)
37. Fawcett, J. The Metaparadigm of Nursing: Present Status and Future Refinements. *J. Nurs. Scholarsh.* **16,** 84–87 (1984).
38. Fawcett, J. On the Requirements for a Metaparadigm: An Invitation to Dialogue. *Nurs. Sci. Q.* **9,** 94–97 (1996).
39. McCormack, B. *et al.* Developing person-centred practice: nursing outcomes arising from changes to the care environment in residential settings for older people. *Int. J. Older People Nurs.* **5,** 93–107 (2010).

40. Manojlovich, M. & Laschinger, H. The nursing worklife model: Extending and refining a new theory. *J. Nurs. Manag.* **15,** 256–263 (2007).
41. Spence Laschinger, H. K., Gilbert, S., Smith, L. M. & Leslie, K. Towards a comprehensive theory of nurse/patient empowerment: Applying Kanter's empowerment theory to patient care. *J. Nurs. Manag.* **18,** 4–13 (2010).
42. Laschinger, H. & Shamian, J. Staff nurses' and nurse managers' perceptions of job-related empowerment and managerial self-efficacy. *J Nurs Adm* **24,** 38–47 (1994).
43. Laschinger, H., Wong, C., McMahon, L. & Kaufmann, C. Leader behavior impact on staff nurse empowerment, job tension, and work effectiveness. *J. Nurs. Adm.* **29,** 28–39 (1999).
44. Engström, M., Högberg, H., Strömberg, A., Hagerman, H. & Skytt, B. Relationship between staff assessment of working life in elderly care and older persons' satisfaction with care - a multilevel, cross-sectional and correlational design. *Unpubl. Work.* (2019).
45. Nursalam, N. *et al.* Development of an empowerment model for burnout syndrome and quality of nursing work life in Indonesia. *Int. J. Nurs. Sci.* **5,** 390–395 (2018).
46. American Nurses Credentialing Center (ANCC) (2018). Available at: https://www.nursingworld.org/organizational-programs/magnet. (Accessed: 25th October 2018)
47. McMillan, S. S. *et al.* Patient-centered approaches to health care: A systematic review of randomized controlled trials. *Med. Care Res. Rev.* **70,** 567–596 (2013).
48. Askheim, O. & Starrin, B. *Empowerment i teori och praktik. (Empowerment in theory and practice)*. (Gleerups utbildning AB, 2007).
49. Spreitzer, G. M. Psychological empowerment in the workplace: dimensions, measurement, and validation. *Acad. Manag. J.* **38,** 1442–1465 (1995).
50. Laschinger, H. K. S. *et al.* A profile of the structure and impact of nursing management in Canadian hospitals. *Healthc. Q.* **11,** 85–94 (2008).
51. Spence Laschinger, H. K., Wong, C. A., Grau, A. L., Read, E. A. & Pineau Stam, L. M. The influence of leadership practices and empowerment on Canadian nurse manager outcomes. *J. Nurs. Manag.* **20,** 877–888 (2012).
52. Finegan, J. E. & Spence Laschinger, H. K. The antecedents and consequences of empowerment: A gender analysis. *J. Nurs. Adm.* **31,** 489–497 (2001).
53. Williams, C. The glass escalator: Hidden advantages for men in the "female" professions. *Soc. Probl.* **39,** 253–267 (1992).
54. Simpson, R. Masculinity at work: The experiences of men in female dominated occupations. *Work. Employ. Soc.* **18,** 349–368 (2004).
55. Lupton, B. Explaining men's entry into female-concentrated occupations: Issues of masculinity and social class. *Gender, Work Organ.* **13,** 103–128 (2006).
56. Keisu, B. Att peka med hela handen: Om arbetsvillkor och kön bland första linjens chefer (Wearing the pants: Working conditions and gender among first-line managers). (Umeå University: Dissertation, 2009).
57. Laschinger, H., Finegan, J., Shamian, J. & Wilk, P. Impact of structural and psychological empowerment on job strain in nursing work settings: expanding Kanter's model. *J Nurs Adm.* **31,** 260–272 (2001).
58. Laschinger, H. K. S., Finegan, J., Shamian, J. & Wilk, P. Workplace empowerment as a predictor of nurse burnout in restructured healthcare settings. *Longwoods Rev.* **1,** 2–11 (2003).

59. Knol, J. & Van Linge, R. Innovative behaviour: The effect of structural and psychological empowerment on nurses. *J. Adv. Nurs.* **65,** 359–370 (2009).
60. Li, I. C., Kuo, H. T., Huang, H. C., Lo, H. L. & Wang, H. C. The mediating effects of structural empowerment on job satisfaction for nurses in long-term care facilities. *J. Nurs. Manag.* **21,** 440–448 (2013).
61. Trus, M., Razbadauskas, A., Doran, D. & Suominen, T. Work-related empowerment of nurse managers: A systematic review. *Nurs. Heal. Sci.* **14,** 412–420 (2012).
62. Laschinger, H. K. S., Finegan, J. E., Shamian, J. & Wilk, P. A longitudinal analysis of the impact of workplace empowerment on work satisfaction. *J. Organ. Behav.* **25,** 527–545 (2004).
63. Laschinger, H. K. S., Nosko, A., Wilk, P. & Finegan, J. Effects of unit empowerment and perceived support for professional nursing practice on unit effectiveness and individual nurse well-being: A time-lagged study. *Int. J. Nurs. Stud.* **51,** 1615–1623 (2014).
64. Laschinger, H., Finegan, J. & Wilk, P. The impact of unit leadership and empowerment on nurses' organizational commitment. *J Nurs Adm.* **39,** 228–235 (2009).
65. Spence Laschinger, H. K. & Fida, R. Linking nurses' perceptions of patient care quality to job satisfaction: The role of authentic leadership and empowering professional practice environments. *J. Nurs. Adm.* **45,** 276–283 (2015).
66. Wagner, J. I. J. *et al.* The relationship between structural empowerment and psychological empowerment for nurses: A systematic review. *J. Nurs. Manag.* **18,** 448–462 (2010).
67. Meng, L., Jin, Y. & Guo, J. Mediating and/or moderating roles of psychological empowerment. *Appl. Nurs. Res.* **30,** 104–110 (2016).
68. Abdelrazek, F. *et al.* Leadership and management skills of first-line managers of elderly care and their work environment. *J. Nurs. Manag.* **18,** 736–745 (2010).
69. Engström, M., Skytt, B. & Nilsson, A. Working life and stress symptoms among caregivers in elderly care with formal and no formal competence. *J. Nurs. Manag.* **19,** 732–741 (2011).
70. Engström, M., Ljunggren, B., Lindqvist, R. & Carlsson, M. Staff satisfaction with work, perceived quality of care and stress in elderly care: Psychometric assessments and associations. *J. Nurs. Manag.* **14,** 318–328 (2006).
71. Skytt, B., Carlsson, M., Ljunggren, B. & Engström, M. Psychometric testing of the Leadership and Management Inventory: A tool to measure the skills and abilities of first-line nurse managers. *J. Nurs. Manag.* **16,** 784–794 (2008).
72. Regnö, K. Det osynliggjorda ledarskapet: Kvinnliga chefer i majoritet (Invisible management: Female managers are in the majority). (Royal Institute of Technology: Dissertation, 2013).
73. Wallin, L., Pousette, A. & Dellve, L. Span of control and the significance for public sector managers' job demands: A multilevel study. *Econ. Ind. Democr.* **35,** 455–481 (2014).
74. Björk, L., Bejerot, E., Jacobshagen, N. & Härenstam, A. I shouldn't have to do this: Illegitimate tasks as a stressor in relation to organizational control and resource deficits. *Work Stress* **27,** 262–277 (2013).
75. Westerberg, K. & Armelius, K. Municipal middle managers: psychosocial work environment in a gender-based division of labor. *Scand. J. Manag.* **16,** 189–208 (2000).

76. Josefsson, K. & Peltonen, S. District nurses' experience of working in home care in Sweden. *Heal. Aging Res.* **4,** 1–8 (2015).
77. Josefsson, K. Registered nurses' health in community elderly care in Sweden. *Int. Nurs. Rev.* **59,** 409–415 (2012).
78. Orrung Wallin, A. Job satisfaction, strain and stress of conscience among nurse assistants working in residential care for older people. (Lund University: Dissertation, 2013).
79. Stranz, A. Omsorgsarbetets vardag och villkor i Sverige och Danmark: Ett feministiskt kritiskt perspektiv (The everyday realities and conditions of care work in Sweden and Denmark: A feminist critical perspective). (Stockholm University: Dissertation, 2013).
80. Li, I. C., Chen, Y. C. & Kuo, H. T. The relationship between work empowerment and work stress perceived by nurses at long-term care facilities in Taipei city. *J. Clin. Nurs.* **17,** 3050–3058 (2008).
81. Macphee, M., Skelton-Green, J., Bouthillette, F. & Suryaprakash, N. An empowerment framework for nursing leadership development: Supporting evidence. *J. Adv. Nurs.* **68,** 159–169 (2012).
82. Polit, D. & Beck, C. *Nursing Research. Generating and Assessing Evidence for Nursing Practice*. (Lippincott Williams and Wilkins, 2016).
83. Kvale, S. & Brinkmann, S. *InterViews: learning the craft of qualitative research interviewing*. (Sage, 2009).
84. Laschinger, H. Conditions for work effectiveness questionnaire I and II. User manual. (2012). Available at: https://www.uwo.ca/fhs/hkl/cweq_download.html. (Accessed: 17th March 2019)
85. Hochwälder, J. & Bergsten Brucefors, A. A psychometric assessment of a Swedish translation of Spreitzer' s empowerment scale. *Scand J Psychol* **46,** 521–529 (2005).
86. Skytt, B. First-line nurse managers' preconditions for practice: The important interplay between person and organization. (Uppsala University: Acta Universitatis Upsaliensis: Dissertation, 2007).
87. Graneheim, U. H. & Lundman, B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. *Nurse Educ. Today* **24,** 105–112 (2004).
88. Krippendorff, K. *Content Analysis: An Introduction to Its Methodology*. (Sage, 2013).
89. Graneheim, U. H., Lindgren, B. M. & Lundman, B. Methodological challenges in qualitative content analysis: A discussion paper. *Nurse Educ. Today* **56,** 29–34 (2017).
90. Fitzmaurice, G., Laird, N. & Ware, J. *Applied Longitudinal Analysis, 2nd Edition*. (John Wiley Sons, 2011).
91. Preacher, K. J. & Hayes, A. F. Contemporary approaches to assessing mediation in communication research. in *The Sage sourcebook of advanced data analysis methods for communication research.* (eds. Hayes, A. F., Slater, M. D. & Snyder, L. B.) 13–54 (Sage Publications, Inc., 2008).
92. Tofighi, D. & MacKinnon, D. P. RMediation: An R package for mediation analysis confidence intervals. *Behav Res Methods.* **43,** 692–700 (2012).
93. World Medical Association. WMA Declaration of Helsinki – Ethical Principles for Medical Research Involving Human Subjects. (2013). Available at: https://www.wma.net/policies-post/wma-declaration-of-helsinki-ethical-principles-for-medical-research-involving-human-subjects/. (Accessed: 8th October 2018)

94. SFS (2003:460). *Lag om etikprövning av forskning som avser människor (The Act Concerning the Ethical Review of Research Involving Humans)*. (The Swedish Ministry of Education, 2003).
95. Macphee, M. *et al.* Testing the effects of an empowerment-based leadership development programme: Part 1 - leader outcomes. *J. Nurs. Manag.* **22,** 4–15 (2014).
96. Dahinten, V. S. *et al.* Testing the effects of an empowerment-based leadership development programme: Part 2 – staff outcomes. *J. Nurs. Manag.* **22,** 16–28 (2014).
97. Havaei, F., Dahinten, V. S. & Macphee, M. The effects of perceived organisational support and span of control on the organisational commitment of novice leaders. *J. Nurs. Manag.* **23,** 307–314 (2015).
98. Wong, C. A. *et al.* Examining the relationships between span of control and manager job and unit performance outcomes. *J. Nurs. Manag.* **23,** 156–168 (2015).
99. Lucas, V., Spence Laschinger, H. K. & Wong, C. A. The impact of emotional intelligent leadership on staff nurse empowerment: The moderating effect of span of control. *J. Nurs. Manag.* **16,** 964–973 (2008).
100. Guo, J. *et al.* Structural empowerment, job stress and burnout of nurses in China. *Appl. Nurs. Res.* **31,** 41–45 (2016).
101. Kath, L. M., Stichler, J. F., Ehrhart, M. G. & Sievers, A. Predictors of nurse manager stress: A dominance analysis of potential work environment stressors. *Int. J. Nurs. Stud.* **50,** 1474–1480 (2013).
102. Udod, S. A., Cummings, G., Care, W. D. & Jenkins, M. Impact of role stressors on the health of nurse managers: A Western Canadian context. *J Nurs Adm.* **47,** 159–164 (2017).
103. Shirey, M., McDaniel, A., Ebright, P., Fisher, M. & Doebbeling, B. Understanding nurse manager stress and work complexity: factors that make a difference. *J Nurs Adm.* **40,** 82–91 (2010).
104. Shirey, M. R., Ebright, P. R. & Mcdaniel, A. M. Nurse manager cognitive decision-making amidst stress and work complexity. *J. Nurs. Manag.* **21,** 17–30 (2013).
105. Kath, L. M., Stichler, J. F. & Ehrhart, M. G. Moderators of the negative outcomes of nurse manager stress. *J. Nurs. Adm.* **42,** 215–221 (2012).
106. Josefsson, K. & Hansson, M. To lead and to be led in municipal elderly care in Sweden as perceived by registered nurses. *J. Nurs. Manag.* **19,** 498–506 (2011).
107. Lincoln, Y. S. & Guba, E. G. *Naturalistic inquiry*. (Sage Publications, Inc., 1985).
108. Patton, M. Q. *Qualitative research & evaluation methods*. (Sage Publications, Inc., 2015).
109. Sandelowski, M. When a cigar is not just a cigar: Alternative takes on data and data analysis. *Res. Nurs. Heal.* **34,** 342–352 (2011).
110. Maas, C. & Hox, J. Sufficient sample sizes for multilevel modeling. *Methodology* **1,** 86–92 (2005).
111. Ayala Calvo, J. C. & García, G. M. Hardiness as moderator of the relationship between structural and psychological empowerment on burnout in middle managers. *J. Occup. Organ. Psychol.* **91,** 362–384 (2018).
112. Alligood, M. *Nursing Theorists and their work*. (Elsevier, 2014).

// Acta Universitatis Upsaliensis

Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine 1553

Editor: The Dean of the Faculty of Medicine

A doctoral dissertation from the Faculty of Medicine, Uppsala University, is usually a summary of a number of papers. A few copies of the complete dissertation are kept at major Swedish research libraries, while the summary alone is distributed internationally through the series Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine. (Prior to January, 2005, the series was published under the title "Comprehensive Summaries of Uppsala Dissertations from the Faculty of Medicine".)

Distribution: publications.uu.se
urn:nbn:se:uu:diva-379307

ACTA
UNIVERSITATIS
UPSALIENSIS
UPPSALA
2019