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Citation for published version (APA):

Orrung Wallin, A. (2013). *Job satisfaction, strain and stress of conscience among nurse assistants working in residential care for older people*. [Doctoral Thesis (compilation), Department of Health Sciences]. Department of Health Sciences, Lund University.

Total number of authors:

1

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Job satisfaction, strain and stress of conscience among nurse assistants working in residential care for older people



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av

Anneli Orrung Wallin

Leg. sjuksköterska

AKADEMISK AVHANDLING

som med vederbörligt tillstånd av Medicinska fakulteten vid Lunds universitet för
avläggande av doktorsexamen i medicinsk vetenskap kommer att offentligen försvaras i
SSSH-salen, Health Sciences Centre (HSC), Baravägen 3, Lund,
den 7 december 2013, kl. 09.00.

Fakultetsopponent

Docent David Edvardsson

Umeå universitet och La Trobe University, Australia

Organization LUND UNIVERSITY Department of Health Sciences Author: Anneli Orrung Wallin	Document name DOCTORAL DISERTATION	
	Date of issue: December 7, 2013	
	Sponsoring organization	
Title and subtitle: Job satisfaction, strain and stress of conscience among nurse assistants working in residential care for older people		
Abstract :The overall aim of the thesis was to investigate and explore job satisfaction, strain and stress of conscience (SC) among nurse assistants (NAs) working in residential care for older people. The thesis had a descriptive, cross-sectional and correlational design and consisted of one paper where qualitative methodology was used and three where quantitative methodology was used. The qualitative study (I) was based on six focus group interviews with NAs (n=36) and the quantitative studies (II-IV) were based on questionnaires. A total of 225 NAs participated in studies II-III and a sub sample of these NAs (n=114) participated in study IV. All data was collected in the south of Sweden. A conventional content analysis was used for exploring the NAs' experiences of job satisfaction (I), and descriptive and analytical statistics were used in order to investigate and explore associations of job satisfaction (II), strain/SC (III) and associated variables. In addition the psychometric properties in terms of the construct validity, data quality and reliability were investigated for the instruments used as dependent variables (IV). The results showed that the NAs' job satisfaction and strain/SC constitute a complex web of interrelated aspects. Study I showed that the NAs' job satisfaction was based on the encounter with the residents and their next of kin and the ability to establish significant relationships with them. They also experienced job satisfaction when they had the prerequisites to use and develop their competence and when they worked in a harmonious and inspiring environment. In studies II and III a positive caring climate was associated with high levels of job satisfaction and inversely to low levels of strain/SC. In addition the extent of personalizing care, amount of organizational and environmental support and, leadership also contributed to positive as well as negative aspects of their wellbeing. Furthermore, health complaints showed to be related to negative affectivities of work. The psychometric properties of the instruments used in studies II-IV showed varying strengths and weaknesses (IV) and further development is thus needed. In conclusion, getting the prerequisites for providing high quality care, a positive caring climate, a high extent of personalizing care, a high amount of organizational and environmental support and last but not least having leaders and managers with good leadership characteristics appears to be important for the NAs' wellbeing at work.		
Key words Job satisfaction, strain, stress, stress of conscience, nurse assistants, residential care, long-term care, quality of care, leadership, person-centred care, caring climate, health complaints, psychometric properties,		
Classification system and/or index terms (if any)		
Supplementary bibliographical information		Language: English
ISSN and key title: 1652-8220, Lund University, Faculty of Medicine Doctoral Dissertation Series 2013:132		ISBN 978-91-87651-07-6
Recipient's notes	Number of pages 171	Price
	Security classification	

Distribution by Anneli Orrung Wallin, Lund University, Department of Health Sciences, P.O.Box 157, SE-221 00 Lund, SWEDEN.

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Date October 29, 2013

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Front page: Photographer Mikael Risedal

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Faculty of Medicine, Department of Health Sciences

ISBN 978-91-87651-07-6

ISSN 1652-8220

Printed in Sweden by Media-Tryck, Lund University

Lund 2013



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In memory of Dan Lindberg

'There is an island of opportunity in the middle of every difficulty'

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Abstract

The overall aim of the thesis was to investigate and explore job satisfaction, strain and stress of conscience (SC) among nurse assistants (NAs) working in residential care for older people. The thesis had a descriptive, cross-sectional and correlational design and consisted of one paper where qualitative methodology was used and three where quantitative methodology was used. The qualitative study (I) was based on six focus group interviews with NAs (n=36) and the quantitative studies (II-IV) were based on questionnaires. A total of 225 NAs participated in studies II-III and a sub sample of these NAs (n=114) participated in study IV. All data was collected in the south of Sweden. A conventional content analysis was used for exploring the NAs' experiences of job satisfaction (I), and descriptive and analytical statistics were used in order to investigate and explore associations of job satisfaction (II), strain/SC (III) and associated variables. In addition the psychometric properties in terms of the construct validity, data quality and reliability were investigated for the instruments used as dependent variables (IV). The results showed that the NAs' job satisfaction and strain/SC constitute a complex web of interrelated aspects. Study I showed that the NAs' job satisfaction was based on the encounter with the residents and their next of kin and the ability to establish significant relationships with them. They also experienced job satisfaction when they had the prerequisites to use and develop their competence and when they worked in a harmonious and inspiring environment. In studies II and III a positive caring climate was associated with high levels of job satisfaction and inversely to low levels of strain/SC. In addition the extent of personalizing care, amount of organizational and environmental support and leadership also contributed to positive as well as negative aspects of their wellbeing. Furthermore, health complaints showed to be related to negative affectivities of work. The psychometric properties of the instruments used in studies II-IV showed varying strengths and weaknesses (IV) and further development is thus needed. In conclusion, getting the prerequisites for providing high quality care, a positive caring climate, a high extent of personalizing care, a high amount of organizational and environmental support and last but not least having leaders and managers with good leadership characteristics appears to be important for the NAs' wellbeing at work.

Abbreviations

FS	Factor score
ICC	Intra Class Correlation
LPN	Licensed Practical Nurse
N/A	Not Applicable
NA	Nurse Assistant
P-value	Probability value
RCT	Randomized Control Trials
RN	Registered Nurse
SC	Stress of conscience
SCQ	Stress of Conscience Questionnaire
SDCS	Strain in Dementia Care Scale
SOC	Sense of Coherence
TS	Total score
VIF	Variance Inflation Factor

Original papers

The thesis is based on the following papers; which is referred to in the text by their Roman numerals:

- I Orrung Wallin, A., Edfors, E. & Edberg, A.-K. The experience of job satisfaction among nurse assistants working in residential care for older people. In manuscript.
- II Orrung Wallin, A., Jakobsson, U. & Edberg, A.-K. (2012). Job satisfaction and associated variables among nurse assistants working in residential care. *International Psychogeriatrics*, 24 (12), 1904-1918.
- III Orrung Wallin, A., Jakobsson, U. & Edberg, A.-K. (2013). Job strain and stress of conscience among nurse assistants working in residential care. *Journal of Nursing Management*, Epub a head of print, doi: 10.1111/jonm.12145.
- IV Orrung Wallin, A., Edberg, A.-K., Beck, I. & Jakobsson, U. (2013). Psychometric properties concerning four measurements measuring job satisfaction, strain, and stress of conscience in a residential care context. *Archives of Gerontology and Geriatrics*, 57, 162-171.

The papers have been reprinted with the kind permission of each journal.

Preface

I began my career in the health care sector in the early 1990s as a nurse aide, without any formal health-care education at all, in a psychiatric care unit for older people who were being transferred back into the community, and into their own homes after the closure of the large mental hospitals. I continued working within the field of adult psychiatry and several years later received a formal education as a nurse aide in the psychiatric field. In times when person-centred care and care philosophy were still rarely spoken of I was taught the importance of considering the whole person and together with this person and based on his/her point of departure take the right course of actions. I had the privilege to work with dedicated people, from the chief physician to the psychiatric aide who truly loved and believed in the work that we all were doing together. In those days we were pioneers embracing the importance of team work, shared care philosophy and thoughts of how to provide high quality care, aspects that in essence are similar to the evidence-based guidelines for aged care and specifically for national guidelines of dementia care today.

Later on I continued my education and became a registered nurse and specialist nurse in the care of older people. Times were and still are getting harder in society with economic restraints, minimized staff levels and quality indicators being linked to the minimum levels of acceptable quality care rather than to the qualitative content of the provision of care. In these times I started to work as a specialist nurse where I among other things counselled staff working in municipal care. It was in the encounter with the staff I discovered that the nurse assistants (NAs, i.e. Licenced Practical Nurses and nurse's aides) working 24/7 with the residents were left alone with many difficult choices and decisions to be made in their daily work. They often stated that they wanted to do much more than the resources permitted and the national evidence-based guidelines were far from being given or mandatory in their everyday reality. However despite all the circumstantial miseries concerning the NAs work situation most of the NAs that I met still seemed to be satisfied with their work, not about the shortages and deficits, but when encountering and caring for the residents. This is the background to my interest in the staff work situation and particularly for the NAs working in residential care for older people.

Introduction

The body of research focusing on staff working in residential care has previously mainly focused on the burden (McVicar 2003) and increasing work load (Wimo et al. 1999). One reason for the increasing burden is that the residents are becoming older and frailer and thus suffering from higher rates of multi-morbidity, polypharmacy and are more dependent on activities in their daily life (Nordberg et al. 2007). Furthermore approximately 70 per cent of the residents suffer from cognitive impairments (Ernst Bravell et al. 2011). One reason for this is that the organizational structure of the care and social services for older people has changed so that an increasing number are being cared for in their ordinary homes while a move to a residential care facility requires extensive care needs. The staff thus have a large workload and have also been found to experience strain and a troubled conscience when they cannot do as much as they would like for the residents (e.g. Edberg et al. 2008, Juthberg and Sundin 2010). In spite of this the staff generally state that they are satisfied with their work (e.g. Brodaty et al. 2003, Castle 2007). These somewhat contradictory findings highlight the need for a comprehensive understanding of the work situation of the staff and in particular the main providers of care, the NAs. The findings indicate that there might be different factors that contribute to the positive and negative aspects of the NAs work situation and wellbeing. Much of the previous research has focused on the negative aspects of the wellbeing of staff (e.g. Boekhorst et al. 2008, Moyle et al. 2003). This presents a difficult situation, as we have limited knowledge about what actually contributes to their job satisfaction, as knowledge of aspects that promote job satisfaction appear to be equally important as those aspects that prevent stress and strain. Furthermore, there is a lack of studies taking a comprehensive approach in investigating the interrelationships between aspects that contribute to positive as well as negative aspects of wellbeing, which in turn are important when designing supportive interventions directed towards the staff. As the wellbeing of the staff is related to the care provided (e.g. Castle 2007) such knowledge can, in turn, contribute to the quality of care in residential care.

Background

Care of older people

Since the early 1990s health care for older people (>65 years) in Sweden has been administered by the county councils who have been responsible for the specialist and primary care, while the municipalities have been in charge of home care, respite care, residential care and social services (SALAR 2007). While the population of older people has become older and frailer the health care consumption (Condellius et al. 2008) and societal costs (Nordberg et al. 2007) have increased. This increases the risk for the frail older person being caught in between different health care systems with the consequence of a fragmented and inadequate care. It is often the next of kin who discovers that the situation at home for an older person is getting out of hand and initiates the process for their relative to move into a residential care facility (Sandberg et al. 2002). While on the other hand the extent of the older person's needs for care and social services and whether they are consistent with the criteria for moving into residential care is individually assessed by a public officer and the decision is taken by the municipality (cf. Törnquist 2004). Concurrently, the total number of beds with 24/7 care for older people has been radically reduced and there is a shift towards caring for the older people at home as long as possible. Of those older persons receiving municipal care in Sweden in 2011, more than double the number (11.5 %) received home care than residential care (5.1 %) (SALAR 2013). As a consequence of this older people who move into residential care facilities are those with multimorbidity, suffer from cognitive impairments (Ernst Bravell et al. 2011) and are in later stages of their lives (Andersson et al. 2007). Furthermore, approximately 50 per cent of those suffering from cognitive impairments are diagnosed with dementia. However, only half of those diagnosed with dementia are living at dementia specific care units, despite the evidence that persons with dementia have specific care needs (National Board of Health and Welfare, 2010). In conclusion the increasing care burden and complexity of the older people living at residential care facilities puts great demands on the staff in terms of specific knowledge and competence in order to face these challenges.

Staff working in residential care

Those who care for the residents, 24/7, in the residential care facilities for older people are mainly NAs, i.e. licenced practical nurses (LPN) and nurse's aides. The LPN usually has three years upper secondary schooling with a focus on caring and social services and the nurse's aides have limited or no basic education in care and social services at all. In 2006, 68 per cent of the NAs had an education in nursing care (SALAR 2007). Both the LPNs and nurse's aides provide the basic care, such as bathing and clothing the residents, but also perform everyday domestic work tasks such as cooking, cleaning and washing (Törnquist 2004). The care and social services the NAs provide are regulated by the Swedish Social Services Act (SFS 2001:453). Some of the LPNs, have an additional individual delegation concerning certain medical duties from the registered nurse (RN) such as dressing pressure ulcers and administering drugs (Törnquist 2004) regulated in the same act as above. Together with the NAs working in residential care facilities, there are RNs in charge of the medical and specialised nursing care as regulated by the Swedish Health and Medical Services Act (SFS 1982:763). The RNs work daytime hours, and sometimes work within the same organisation as the NAs and are placed on the residential care facility and sometimes they are organised separately and called upon on a consultative basis. Outside office hours the RNs are available on call for the NAs and the residents. General practitioners from the primary care organisation, occupational therapists and physio-therapists are also involved in the care of the older people, however, mainly on a consultative basis. The first line manager is in charge of the work including responsibility for the finances and the staff, mainly the NAs but sometimes also the RNs, occupational therapists and physiotherapists. There is no formal requirement of education for the first line managers but they often have an educational background within the social work or nursing care fields (cf. Törnquist 2004). Consequentially, with the shift towards other professional categories having a consultative role, the NAs are in reality often left alone with decisions to make about basic care and services as well as medical and nursing care tasks. Where to turn to get support becomes difficult when the responsibility for the care provision is divided between the first line managers and RNs. The first line managers are formally in charge of the staff and care at the residential care facilities, however the RNs are responsible for the medical care and nursing care provision and are in this sense responsible for these aspects of the nursing care.

The NAs' work situation

There have been many reports of NAs leaving the residents in residential care units unattended and sometimes even locked in their rooms at night (National board of Health and Welfare, 2012). From a clinical perspective, it could be argued that these actions are the result of low staffing levels, where NAs are trying to protect the residents when they have to leave the care unit and help colleagues at adjacent ones. This practice has been included in the procedures and approved by some municipalities. This has been done despite the fact that the older persons who move into residential care facilities have received a decision based on the assessment of their extensive care needs by a public officer in accordance with the Social Services Act (SFS 2001:453), and which generally entails needs of support 24/7. In a response to this situation a government bill concerning responsibilities for care and adequate staffing levels for residential care facilities is in progress (National Board of Health and Welfare, 2013). Furthermore a bill that focuses on the care of persons with dementia, who are particularly exposed and vulnerable, and which concerns staffing levels and required competence levels among the staff has been accepted (SOSFS 2012:12). Both these bills concerning general and dementia-specific residential care facilities will come into power in 2015. The dementia-specific regulation confirms that the residential care facilities hosting a person with dementia or cognitive impairments where other plausible causes have been ruled out, should provide the services that the person has been granted. These residents are also entitled to staff 24/7 and the care needs should be identified without delay in order to take the right course of actions. Furthermore, recommendations have been stated concerning the qualifications and basic knowledge that the staff need in order to care for persons with dementia. This knowledge includes: common value systems, principles of care, theoretical knowledge of dementia and how it affects the person suffering from it (SOSFS 2012:12). This bill will most certainly have consequences for the NAs' work situation; they will not be forced to work alone and more explicit care plans for the residents will be required, which in turn affects the NAs' workload and the possible need for increased resources. On the other hand the bill also highlights the need for skilled staff, which in turn affects the NAs and especially those with a low level of education or none at all, whose knowledge and skills will have to be improved.

This further highlights the importance of and the need for the leaders and managers to support their staff. However, studies (Beck et al. 2012a, Albinsson and Strang 2002) have shown that NAs in general and dementia-specific residential care have experienced the management as being indistinct, indecisive or even invisible. In a study by Josefsson and Hansson (2011), half of the RNs in municipal care did not feel they had sufficient back up and a quarter stated that they had conflicts with their

first line managers. In addition 28 per cent of the RNs did not see themselves as leaders even though they were responsible for the medical and nursing care and 88 per cent stated that they had no regular supervision (Josefsson and Hansson 2011). This indicates that if the recommendations in the new regulations are to be optimally realized then it is necessary that the leaders (i.e. first line managers and RNs) take an active role in the management of the care provided. Furthermore, this requires a clarification of the different roles of the leaders and managers in supporting the NAs in the actual care provision as well as in the development of common values and principles. This also indicates that the leaders themselves are in need of extended guidance and support from the top line managers in order to meet and satisfy the intentions as stated in the legislation (cf. SOSFS 2012:12). Adding up to this, research has shown that staffing levels are associated with quality of care, usually with the help of indicators of quality care, such as pressure ulcers and the use of restraints (Spilsbury et al. 2011). The staff perceive adequate staffing as essential for the provision of quality of care (Bowers et al. 2000), while relatives and residents see the staff and care provision as the core components of quality care (e.g. Bowers et al. 2000, Rantz et al. 1999). It thus seems as there is a discrepancy between the quality indicators that society and researchers focus on in comparison with the aspects that staff, residents and next of kin have emphasised. This can thus lead to difficulties when the system, the residents and their next of kin and the staff have different expectations of what is to be implemented in order to improve the quality of care.

One important aspect that has been linked to quality of care is the person-centred care approach that has been highlighted in the national guidelines for dementia care (National Board for Health and Welfare 2010) and in turn been associated with the wellbeing of staff (e.g. Edvardsson et al. 2011, Tellis-Nayak 2007, Sjögren 2013). The literature does not provide an explicit definition of person-centred care. However, McCormack (2004) has in a literature review of person-centeredness found four core concepts related to person-centred care and linked these with a derivative of Kitwoods (1997) definition of person-centeredness: *'...standing or status that is bestowed upon one human being, by others, in the contexts of relationship and social being. It implies recognition, respect and trust'* (Kitwood 1997, p.8) McCormack's conceptualisation (2004) of the four core elements were as follows: Being in relation was associated with persons prevailing in relations with others; Being with self was associated with being respected, trusted and recognized, as a person influence a person's sense of self; Being in a social world was associated with persons being social beings and; Being in place was associated with persons articulating their presence through their personhood (McCormack 2004). Person-centred care is thus not only a quality indicator of care but is also associated with the nurse-patient dynamics and the staff's wellbeing and thus appears to be an important outcome when investigating the wellbeing of staff. The vulnerable work situation of the NAs indicates there is a need to address and investigate aspects of their wellbeing not only for their own sake but

also regarding the impact on the quality of care provision. Furthermore, there is a need to explore aspects that are associated with both positive and negative aspects of the wellbeing of NAs, as this knowledge is needed for creating supportive measures for NAs in residential care.

Job satisfaction

Positive aspects of work are often described in terms of job satisfaction. A widely used definition of job satisfaction is that proposed by Locke (1976): *'a pleasurable or positive emotional state resulting from the appraisal of one's job or job experiences'* (p.1304) which implies the inter-relationship between affective (emotional state) and cognitive (appraisal) domains and a meta perspective of our thoughts about our job (Judge et al. 2001). However, in contrast to Locke's definition, Hart and Cooper (2001) maintain in their overview of occupational stress that when staff make judgments about their job satisfaction they actually assess their satisfaction with positive as well as negative experiences. This thus implies that the negative affectivities of job satisfaction might be related to stress and strain rather than the positive affectivities of the concept of job satisfaction (Hart and Cooper 2001). The body of theories underpinning job satisfaction is extensive and is usually developed from the perspective of organizational psychology. Judge and co-workers (2001) distinguished between three categories of theories: situation theories, dispositional theories and interactive theories. Firstly, situation theories imply that it is the job itself or contextual aspects that results in job satisfaction such as Herzberg's Two-factor theory (1966). This theory implies that there are different factors that result in satisfaction than in dissatisfaction and removing those factors related to dissatisfaction would not improve satisfaction but only reduce dissatisfaction. The study by Judge and co-workers (2001) showed that intrinsic aspects such as responsibilities, achievements and work itself were seen as motivators that in turn were associated with satisfaction and Extrinsic aspects or hygiene factors such as pay, working conditions company policies were associated with dissatisfaction. Another situation theory is the job characteristics model (cf. Hackman and Oldham 1976) and concerns job satisfaction being achieved when the work comprises intrinsically motivating characteristics such as being able to see the whole process of one's work, the degree of significance and importance of the job, varied work tasks, having control of how to do the job and whether the job provides feedback of one's performance. Those who strive for personal development and having higher growth needs are also those who are most predestined for being satisfied with the motivating characteristics previously described. Secondly, Judge and co-workers (2001) describe the dispositional approaches that imply that job satisfaction is derived from individual personality traits. When investigating personality and job satisfaction, positive affectivity was associated with pleasurable engagement, enthusiasm and high energy, whereas

negative affectivity was associated with being nervous and unpleasurable engagements. However, according to a review of the literature by Judge and co-workers (2001), both positive and negative affectivity is associated with job satisfaction. Thirdly, interactive theories propose that satisfaction is in particular derived from the interrelationship between personality and the situation. One of the theories suggested by Judge and co-workers (Judge et al. 2001) is the Value-percept theory by Locke (1976), where the author maintains that job satisfaction is determined by the individuals' values and dissatisfaction occurs when those values are violated. Satisfaction thus equals the values of what one wants minus what one has, times the subjective importance of this value (Judge et al. 2001). When considering the body of research in the field of job satisfaction in relation to the nursing care context, situation theories have generally been used with the focus on job satisfaction being related to the job itself and contextual factors. Dispositional and interactive approaches have received little attention.

Furthermore, several studies have focused on staff in residential care and have claimed to have investigated both job satisfaction and job strain (Boekhorst et al. 2008, Moyle 2003). However the results from these studies reveal that a greater focus has been placed on the strenuous aspects of the work than what constitutes job satisfaction thus indicating that a pathogenic approach to the concept has been used. This then becomes problematic not only in the light of the definition by Locke (1976) that job satisfaction entails a positive outcome, but also in the light of other studies that postulate that job satisfaction and job strain are not correlated (Brodaty et al. 2003, Hansson et al. 1995, Herzberg 1959) and thus cannot be treated as opposites. A further issue concerning the research about job satisfaction is the predominance of studies based on a large number of questionnaires, which have been designed for general or specific occupational groups but not always underpinned with a conceptual foundation (Coomber and Barriball 2007, van Saane et al. 2003). Moreover the levels of validity and reliability of the instruments are rarely high and often poorly described (van Saane et al. 2003). The specificity of different types of cultures and work areas and particularly in the field of contemporary nursing care, increases the need for an exclusive approach in the design of job satisfaction questionnaires that focus on specific work groups and care settings (Coomber and Barriball 2007). A substantial body of research has been performed on predictors and factors associated with job satisfaction (Castle et al. 2006). Factors such as the care climate (Pekkarinen et al. 2006) and work experience and education (Zimmerman et al. 2005) have been found to be correlated with job satisfaction. However, most studies mainly focus on one or a few predictors when investigating job satisfaction, for example, person-centred care (Edvardsson et al. 2011) and personality traits (Chang et al. 2010) or as an outcome measure for interventions (Hägström et al. 2005). When investigating job satisfaction, there is thus a need for exploring it from different perspectives

(i.e. a general organizational perspective and a nursing care perspective) and in terms of the multifactorial relations of associated aspects.

Stress and strain at work

In the research on stress and strain at work the focus has been on investigating the wellbeing of staff from a negative viewpoint. Knapp (1988) distinguished strain as the effect, 'the wear and tear itself' (p.181) separated from stress defined as 'the cause of wear and tear' (p.181), however, it has also been suggested that there is a common inter-relationship and causality between stress and strain (Hart and Cooper 2001). Lazarus (1990) suggests a process-oriented perspective when investigating stress (cf. Lazarus 1990) with the consequence that stress and strain overlap and are interrelated, which is in line with studies carried out concerning the work situation of staff in nursing care.

In the literature review by Hart and Cooper (2001), four major underpinning assumptions from the previous body of research of stress and strain were described. The first assumption concerns the notion of stress being associated with unpleasant emotional positions that the staff experience as a consequence of their work. The second assumption found in the literature was that stress is perceived at the expense of pleasurable feelings, implying that stress and job satisfaction are at opposite ends of a continuum. This is probably the reason for negative and positive affects about work not been investigated at the same time. The third assumption was that the concept of stress can be measured with a single variable and that stress resulted in an absence of satisfaction at work. However, within this single measurement approach, there have been somewhat different focuses on the person's psychological response to work, subjective interpretation of work or objective aspects of the work. The fourth and last assumption was that negative work characteristics, situations or events contributed to aspects usually associated with poor quality of work life as well as high turnover, poor productivity and increased sickness absence (Hart and Cooper 2001). Hart and Cooper (2001) maintain further that the evidence for these assumptions are basically driven from empirical knowledge and that there is a lack of a coherent theory driven base. However, Lazarus (1990), suggests a different approach to the concept, that stress is a process containing a large system of interrelated aspects rather than being a uni-dimensional construct and furthermore suggests using an even wider definition of the construct that takes both positive and negative aspects into account such as the concept of emotions (Lazarus 1990). Consequently, investigating and exploring the negative and positive outcomes of the staff work situation is important in order to gain a greater understanding of the complex interrelationships' of factors that are important for both negative and positive outcomes of the staff's wellbeing.

When looking at the body of research on job stress and strain, there are several related factors. Reviews of the literature have found that stress among nurses is related to leadership and management (McVicar 2003, Clegg 2001), to work environment, to professional conflicts as well as to emotional demands and the workload (McVicar 2003). McVicar (2003) further emphasised that different factors might be important depending on which area of nursing that is under scrutiny. This notion is supported by studies showing that nurses working in dementia specific units reported lower levels of stress when caring for persons with dementia exhibiting behavioural symptoms than nurses in non-specialised care units (Pekkarinen et al. 2006, Morgan et al. 2005). In Sweden, residents with dementia live both in dementia specific care units as well as in ordinary residential care units. However, the nurses patient ratio and the amount of inhouse training are usually more optimised in dementia care settings (Holmes et al. 1990). It thus seems as though there are a large number of factors that contribute to the stress and strain of staff in residential care of which context specific measurements such as working at a dementia-specific and non-specific care units could be of importance when investigating job strain.

Additional factors that have been associated with job strain are, for example, nurses' age and work experience (Zimmerman et al. 2005), caring climate, education and possibilities for discussing ethically difficult situations (Edvardsson et al. 2009b). Zimmerman and co-workers (2005) found that nurses with less work experience (1 to 2 years), younger age and being male were associated with higher levels of strain. In addition, nurses with less work experience were more disposed to practice person-centred care and had a more hopeful attitude to their work than nurses with longer work experience had. Furthermore, higher education levels were correlated with a more dementia-sensitive care. In the study by Zimmerman and co-workers (2005) cultural diversities were found in the result, which indicate that nurses' job strain might vary due to cultural aspects. This latter study is of American origin, which may limit the transferability of the results to a Swedish context. However in another study of job strain, in which nurses from Sweden, Australia and United Kingdom were interviewed (Edberg et al. 2008), no major cultural diversities were found and instead it was the uniformity between the nurses' views on what constituted job strain in these countries that was emphasized. In conclusion, nurses in dementia care have a large workload and are pressured from high levels of emotional and often conflicting demands (Edvardsson et al. 2009a). Several variables seem to be associated with job strain, and there is a need for the exploration of a comprehensive model of strain and its associated variables.

Stress of conscience

Another concept that is closely linked with stress and strain is the newly developed concept of stress of conscience which refers to stress that is caused by a troubled conscience and is related to when nurses does not act in accordance with their own conscience (Glasberg et al. 2006). This concept is in turn related to Moral Distress and what Jameton (1984) defined as initial distress, which occurs when people are prevented from doing what they think is the right thing. However, moral distress also includes reactive distress that refers to when people do not react to their experience of the initial distress (Jameton 1984) and consequently does not result in stress of conscience. Moral distress has however been defined and interpreted in different ways by various theorists and nursing researchers (McCarthy and Deady 2008). There is a classic definition of moral distress by Jameton (1984), which is: *'when one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action'* (p.6). Stress of conscience thus appears to be one of the possible outcomes of moral distress.

In recent decades when care organisations have been made more cost efficient in order to meet economic constraints the discrepancy increases between what Fagerström (2006) described as being a good care provider or not and between what one wants to do and what one actually can do. This further highlights the complexity of care provision with relationships and work tasks within the caring context (Fagerström 2006). Similarly the main source of strain that Edberg and co-workers (Edberg et al. 2008) found among nurses in dementia care was when they did not have the ability, opportunity or resources to do as much as they wanted to do for the residents. This resulted in turn in moral stress with frustration and apathy when the nurses felt they lacked the power to make changes (Edberg et al. 2008). These results touch upon and highlight the importance of the concept stress of conscience (Glasberg et al. 2006, Saarnio et al. 2012) as a targeting outcome, which is important for the NAs' wellbeing and the quality of the care they provide. However, in a study by Juthberg and co-workers (2010) the perception of conscience itself, even though highly associated with stress of conscience was also seen as an asset by the nurses and was used as an ethical guideline in the provision of care (Juthberg et al. 2008). Nurses experienced an internal conflict when not being able to follow their conscience at work and expressed that their conscience warned them against hurting others (Glasberg et al. 2008). This result is in line with that of Juthberg and co-workers (2008), which showed that being exposed to contradictory demands and experiences of shortcomings was related to emotional exhaustion and burnout among nurses in residential care (Juthberg et al. 2008). Furthermore, work-related aspects among health care providers such as lack of social support from supervisors and low levels of resilience have been related to stress of conscience (Glasberg et al. 2008).

These factors had, however, a very low explanatory value (2,8 %). In addition the nurses, in the study by Edberg and co-workers (2008), reported difficulties in understanding and interpreting the residents' needs as constituting a major constraint and a source of strain. Stress of conscience thus appears to be an important aspect in the complex mesh of related factors when investigating the NAs' work situation.

NAs work situation in the frame of nursing care

The foundation of nursing care rests upon the nurse *'caring about'* and *'caring for'* the patients/residents, which is provided as an interrelated and inseparable unity in the encounter between nurse and patient. The nurse-patient encounter, in most nursing care models, is described as being the foundation of nursing care provision. The *'caring about'* aspect refers to relational caring aspects of nursing care and the *'caring for'* concerns the provision of care in terms of care tasks and refers to the nursing aspect of nursing care. The provision of nursing care is, however, also influenced by several other aspects, as shown in Figure 1.

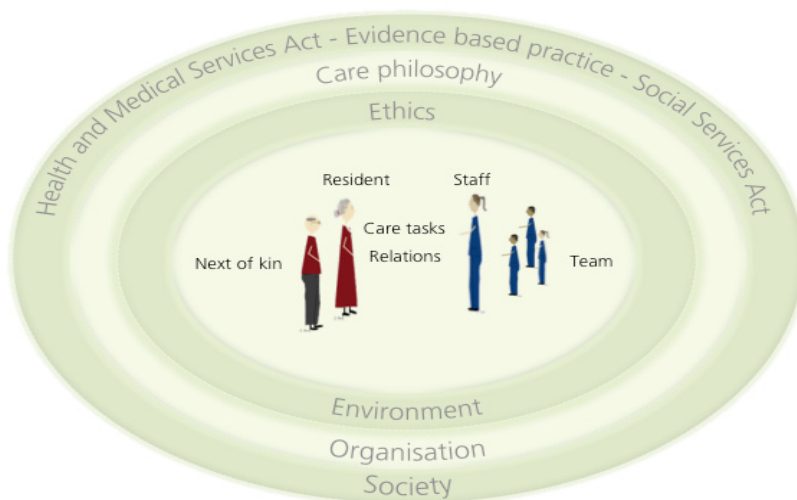


Figure 1. A model of nursing care and interacting factors (modified after: Norberg and Ternstedt 2009)

The inner circle in figure 2 refers to the influence of others who are closely involved in the nursing care provision and thus concerns the core elements of nursing care. This level, apart from the nurse and the patient, also includes the next of kin and the work team. This is referred to as the micro-perspective of nursing care, which also concerns environmental aspects and prerequisites influencing nursing care as well as ethical aspects related to the nurse-patient encounter. The next level, the meso-perspective, concerns the organizational structure in which the nursing care is provided, i.e. how the nursing care is structured and how management and leadership is provided, which in turn affects the nursing care provision. The meso-perspective also concerns the overarching, care philosophy, for example, a person-centred care provision. The macro-perspective concerns the legislation and evidence based practice as a framework for nursing care provision as well as the society in general which in turn affect both the meso and micro levels (Norberg and Ternstedt 2009). When investigating and exploring aspects related to the nurse-patient encounter, and in this thesis with a specific focus on the NAs' work situation, it is thus important to include factors that in turn influence the encounter, especially from the micro and meso perspective. This includes the work group, the work and caring climate, organisation and leadership as well as the prerequisites for providing a person-centred care as these factors most certainly affect both job satisfaction, strain and stress of conscience. It also seems important to gain a deeper understanding of aspects related to staff job satisfaction as previous research has mainly focused on aspects contributing to negative outcomes of their work.

Aim

The overall aim of the thesis was to investigate and explore job satisfaction, strain and stress of conscience among nurse assistants' working in residential care for older people.

Specific aims

- I. To explore the experience of job satisfaction among nurse assistants' working in a residential care context for older people.
- II. To investigate job satisfaction and explore associated variables among nurse assistants working in residential care.
- III. To investigate job strain and stress of conscience and explore associated variables among nurse assistants working in residential care.
- IV. To investigate psychometric properties of four instruments measuring job satisfaction, strain and stress of conscience in a residential care context.

Methods

Rationale for design and methodology

The thesis was designed with a focus on gaining a broad comprehensive picture of the wellbeing of NAs working in residential care for older people. There is a tendency, in medical research as well as in health sciences research, to focus on problems and disease oriented aspects (cf. Antonovsky 1996). For example, in some previous research where despite stating that the aim is to investigate job satisfaction, the point of departure has been negative outcomes (Boekhorst et al. 2008, Kristiansen et al. 2006). It was thus important in this thesis to investigate the wellbeing of NAs from both positive and negative points of departure, in order to attain this broader comprehensive picture. Another standpoint was the use of both qualitative and quantitative methods, i.e. triangulation of data, as complementary ways of investigating a phenomenon. A qualitative perspective, for example, focusing on peoples' experiences, could give in-depth understanding for, and validation of the findings in quantitative studies (Polit and Beck 2008). This was the case in papers I and II, where paper I had a descriptive explorative qualitative design investigating the experiences of satisfaction at work from the NAs perspective, while paper II had a cross sectional explorative design investigating job satisfaction and associated variables using quantitative methods. Paper III also had an explorative cross sectional design investigating negative aspects of work such as strain and stress of conscience and associated variable using quantitative methods. As the work situation and wellbeing of staff has a long tradition within the field of organizational psychology and economy, several general instruments have been developed concerning for example stress and satisfaction at work. However, the caring aspects in the nursing context address areas that might be different in other occupational fields. There has on the other hand been a trend towards more specialized and professionalized work forces in nursing, which highlights the need for additional measurements that also address specific work groups (McVicar 2003), such as staff working in residential care facilities. The choice was thus made to use both general measurements that are based on an organizational point of view and could be applied to any work group and work setting (i.e. general job satisfaction), as well as specific measurements that are developed for a nursing care context (i.e. stress of conscience) and addressing work specific aspects (i.e. satisfaction with nursing care provision and strain in nursing care). Even if the instruments

measuring job satisfaction, strain and stress of conscience have previously been used in a residential care context, they had been tested in heterogeneous samples and have not been validated for NAs exclusively. This raised the question of the validity and reliability for the actual study population, which was the rationale for a thorough investigation of the psychometric properties of the instruments in paper IV. An overview of the design, sample, methods and analysis for each paper is presented in table 1.

Table 1. An overview of the studies in the thesis

	Paper I	Paper II	Paper III	Paper IV
Design	Descriptive, explorative design, qualitative study	Cross sectional, explorative design, quantitative study	Cross sectional, explorative design, quantitative study	Descriptive, correlational design, quantitative study
Sample	<i>n</i> =36 NAs working at 4 residential care facilities	<i>n</i> =225 NAs working at 9 residential care facilities	<i>n</i> =225 NAs working at 9 residential care facilities	<i>n</i> =114 NAs working at 5 residential care facilities
Data	Focus group interviews	Instruments; dependent variables: Job Satisfaction Questionnaire, Psychosocial Aspects of Job satisfaction Questionnaire	Instruments; dependent variables: Strain in Dementia Care Scale, Stress of Conscience Questionnaire	Instruments: Job satisfaction questionnaire, Psychosocial Aspects of Job Satisfaction Questionnaire, Strain in Dementia Care scale, Stress of Conscience Questionnaire
Analysis	Qualitative content analysis	One way ANOVA, χ^2 -test Fisher's exact test Kruskal-Wallis test Post hoc test: Mann-Whitney U-test with Bonferroni <i>adj.</i> Multiple linier regression analysis (backward)	Student t-test, χ^2 -test Cramer's V-test Mann-Whitney U-test Multiple linier regression analysis (backward)	<i>Data quality:</i> Missing values, floor and ceiling effects. <i>Validity:</i> corrected item-total correlations, inter- and intra-scale correlations. <i>Reliability:</i> Cronbach's alpha, alpha if item deleted. <i>Test-retest reliability:</i> Weighted Kappa, Intra Class Correlations (ICC)

Sample

This thesis comprised three different samples (Table 2). The sample for paper I consisted of 36 NAs (35 LPNs and 1 nurse's aides) working in residential care facilities in urban and rural areas of southern Sweden. Ten residential care facilities with four to six units, comprising general care units as well as dementia-specific units, representing municipal, non-profit and private residential care were initially identified. Telephone contact with the managers was then taken and oral information about the study was provided. Six managers declined participation on behalf of the staff, mainly due to organizational changes and not wanting to add to the high workload for the NAs. The four managers who were interested were provided with written information and thereafter agreed to allowing the NAs to participate in the study on site and during working hours.

A total of approximately 160 NAs, of which 6-10 per cent were nurse's aides, worked at the four targeted residential care facilities in study I. After receiving written permission from the managers, information about the study was given to the staff at each facility during ordinary workplace meetings. The NAs who were interested in participating in the interviews then contacted the manager, who in turn contacted the researchers and arranged for the time and place of the interview at each workplace. The NAs who volunteered for the interviews then received both oral and written information about the aim of the study, that their participation was voluntary and about the procedure of the interview. The participants were guaranteed that the material would be treated with confidentiality and that the results were to be presented in a way that neither the facility nor any individual participant could be identified.

The sample for papers II and III consisted of 225 NAs working in nine residential care facilities within three city districts in southern Sweden. The residential care facilities consisted of a total of 34 care units, representing dementia-specific care units ($n=11$) and general care units ($n=23$) with 8 to 12 residents living in each unit. The staff-patient ratio varied from 0.56-0.71. A RN was responsible for 15-30 residents and a first line manager was in charge of 18 - 60 NAs. The residential care facilities were initially recruited for an intervention study (Beck 2013, Beck et al. 2012b) with a focus on support to the staff, but as papers II and III only consisted of cross sectional data from the baseline assessments, they were not influenced by any intervention effect. All NAs at the nine facilities ($n=312$) were asked about participating and 28 per cent declined. Of the 225 NAs participating, 78 per cent were LPNs and 22 per cent were nurse's aides. The intervention focusing on support to the staff, comprised study circles and workshops for the NAs and their leaders and

aimed at providing increased knowledge about the palliative care approach and providing opportunities for reflection and discussion between the NAs and their leaders.

The sample for paper IV consisted of a sub-sample of 114 NAs of the 225 NAs participating in the data collection for papers II and III at the six-month post intervention follow up. NAs working at residential care facilities with a high response rate at baseline (intervention as well as control units) were requested to complete parts of the questionnaire that concerned job satisfaction, strain and stress of conscience again approximately a second time 14 days after the six-month follow up. All the addressed participants in the sub-sample for paper IV agreed to participate in the study.

Table 2 Characteristics of the samples in the thesis

	Study I (n =36)	Study II, III ^a (n =225)	Study IV ^b (n =114)
Age (years)			
mean (SD)	44.3 (11.0)	44.1 (11.0)	45.3 (11.1)
median (q ₁ -q ₃)	46.0 (36-52)	44.0 (35-53)	45.0 (23-68)
Gender, n (%)			
Female	33 (91.7)	190 (86.4)	95 (86.4)
Formal education, n (%)			
compulsory school, only	-	28 (13.3)	13 (12.1)
upper secondary school	-	156 (74.3)	81 (75.7)
university/college	-	26 (12.4)	9 (8.4)
Work experience, (years)			
mean (SD)	17.5 (8.3)	16.5 (9.8)	16.5 (10.4)
median (q ₁ -q ₃)	15.5 (12-23)	14 (8-24)	14.0 (2-40)
Position, n (%)			
LPN	35 (97.2)	173 (77.6)	88 (79.3)
nurse's aide	1 (2.8)	50 (22.4)	23 (20.7)
Working time, n (%)			
Daytime	31 (86.1)	177 (78.7)	90 (81.1)
Working hours, n (%)			
Fulltime	11 (30.6)	102 (45.3)	53 (48.2)
Workplace, n (%)			
dementia care unit	12 (33.3)	74 (32.9)	43 (38.1)
general care unit	24 (66.7)	151 (67.1)	70 (61.9)

Missing values: ^a 0-8.4%, ^b 0-13.9%

Data collection

The papers in this thesis are based on qualitative as well as quantitative data. Data for paper I was collected in focus group interviews, while data for papers II-IV were collected in a questionnaire, including instruments as well as single items. The instruments used in papers II-IV in this thesis are presented in tables 3 and 4.

Focus group interviews

Focus group interviews are based on the concept that when people with something in common are brought together, a sense of security and togetherness is created that in turn facilitates the participants to share feelings and thoughts on the subject in focus. Through the participants' reflections about the narratives in the focus group discussions a synergy is created that enriches the narratives even further (Krueger and Casey 2009).

A total of six focus group interviews (Krueger and Casey 2009) were conducted between March and May 2013. In five of these the participants consisted of four to six NAs from different units within the same residential care facility. In the sixth focus group ten NAs from the same unit participated, even though Krueger and Casey (2009) have recommended that participants in a focus group should not be too familiar with each other. The fact that all staff at that unit were to have the opportunity of participating was, however, a prerequisite stipulated by the manager in order to allow the staff at the residential care facility to take part in the study. All focus groups were conducted in a separate room at the participants' work place. During the focus group interview, the author (AOW) had the role of moderator while one of the co-authors (EE) of paper I had the role of observer. The moderator led the discussions, while the observer was focused on the interaction in the group and only entered into the discussion to ask questions in order to clarify the narratives and to sum up at the end of the interviews. All focus group interviews started with an initial open-ended question 'could you give an example of an everyday situation at work where you felt satisfied'. In addition probing questions such as 'could you tell me more about that?' and 'what did you mean by that' and 'how did this make you feel?' were used in order to gain a better understanding of the unspoken, implicit meanings of the narratives. The interview guide and the procedure were tested in a pilot focus group interview prior to the study (not included in the analysis). The experience from the pilot interview was that the participants sometimes had a tendency to hover around the same subject. When similar situations occurred in the focus groups included in the study, the moderator made a brief summary of the content with the following question 'did I describe what was said correctly?' and 'Is there anything else

that is important for you feeling satisfaction with work?'. Before ending the interview the participants were asked if they had anything more to add (cf. Kvale and Brinkman 2009). The focus group interviews were approximately 85 min long (range, 71-104 min) and all interviews were digitally recorded and transcribed verbatim.

Measurements

Data for papers II-IV consisted of different measurements included in a questionnaire that was distributed to the NAs and completed during working hours. The questionnaire used for papers II and III was completed by the NAs during November 2009, while the questionnaire used for paper IV was completed during November 2010. Research administrators at each city district coordinated the data collection and gave written and oral information to the participants about the study. The questionnaires were completed individually and were returned to the coordinators in a sealed envelope. The only means of identification was a code, which only the coordinator had access to in order to facilitate the sending of reminders to participants who had not returned their envelope. No more than two reminders were sent to the participants. The questionnaire was developed for the intervention study and the included instruments and single items had been identified from previous research and clinical expertise and in relation to the NAs' work situation and the residential aged care context. The full length questionnaire at baseline comprised 43 pages and took approximately 1-1.5 hours to complete (cf. Beck 2013). The data extracted for this thesis comprised instruments and single items concerning the dependent variables; job satisfaction, strain and stress of conscience (presented in table 3) as well as instruments used as independent variables (presented in table 4).

Table 3. Overview of the instruments used as dependent variables (II-IV)

Instrument	Factors (F)	No. Items	Response alternatives	Total score	Cronbach's alpha
Job Satisfaction Questionnaire (Ekvall 2001)	F1. Autonomy, F2. Competence, F3. Emotion, F4. Initiative, F5. Relation	20	0 mostly negative – 3 mostly positive	0-3	TS: 0.79-0.89 (Ekvall 2001)
Psychosocial Aspects of Job Satisfaction Questionnaire (Engström et al. 2006)	F1. Personal development, F2. Workload, F3. Criticism, F4. Expectations and demands, F5. Cooperation, F6. Internal motivation, F7. External motivation, F8. Position in the group	49	0 never - 4 very often, 0 very bad – 4 very good, 0 very little – 4 very much	0-100	TS: 0.70 F1-F5: 0.71-0.86, F6-F8: 0.52-0.59 (Engström et al. 2006)
Strain in Dementia Care Scale (SDCS) (Edberg et al., subm.)	F1. Frustrated empathy F2. Difficulties understanding and interpreting F3. Balancing competing needs F4. Balancing emotional involvement F5. Lack of recognition	27x2	A) how often: 1 never/ seldom – 4 very often, B) the amount of stress: 1 none/hardly no stress – 4 high stress	1-16	TS: 0.93 FS: 0.77-0.88 (Engström et al. 2006)
Stress of Conscience Questionnaire (SCQ) (Glasberg et al. 2006)	F1. Internal demands F2. External demands and restrictions	9x2	A) how often: 0 never – 5 every day. B) the extent of troubled conscience: 0 not at all – 6 yes it gives me troubled conscience	TS: 0-125 FS: 0-125	TS: 0.83 FS: 0.74-0.78 (Glasberg et al. 2006)

TS= Total score, FS= Factor score

Table 4. Overview of the instruments used as independent variables (II-III)

Instrument	Factors (F)	No. Items	Response alternatives	Total score	Cronbach's alpha
Sense of Coherence Questionnaire (SOC) (Antonovsky 1987)	N/A	29	1 rarely/seldom – 7 very often	29-203	TS: 0.89 (Pålsson et al. 1996)
Person-centred Care Assessment Tool (Edvardsson et al. 2010)	F1. Personalized care F2. Organizational and environmental support	13	1 completely disagree – 5 completely agree	1-5	TS: 0.75 FS: 0.72-0.73 (Edvardsson et al. 2010)
Person-centred Climate Questionnaire, staff version (Edvardsson et al. 2009b)	N/A	14	1 no, I completely disagree – 6 yes, I completely agree	1-6	TS: 0.88 (Edvardsson et al. 2009b)
Quality of Care Aspects Questionnaire (Engström et al. 2006)	F1. Nursing and medical care F2. Communication obstacles F3. Documentation F4. Communication ability	24	0 never happens – 4 happens very often; 0 very bad – 4 very good	0-100	TS: 0.70 FS: 0.80-0.86 (Engström et al. 2006)
Creative Organizational Climate Questionnaire (Ekvall 2004)	F1. Challenge, F2. Freedom, F3. Support, F4. Trust, F5. Dynamism F6. Playfulness, F7. Debates, F8. Conflicts, F9. Risk taking, F10. Idea time	50	0 agree, not at all – 3 agree, very much	0-3	FS: 0.77-0.91 (Boström et al. 2007)
Leadership Behaviour Questionnaire (Farxgroup AB ©, Ekvall and Arvonen 1994)	F1. Employee/relations, F2. Change/development F3. Production/task/structure	24	1 completely disagree – 6 completely agree	1-6	FS: 0.93-0.95 (Selgren et al. 2007)

N/A= Not Applicable, TS= Total score, FS= Factor score

Job satisfaction

General job satisfaction (II, IV) was measured using the Job Satisfaction Questionnaire (Ekvall 2001) that is based on Maslow's (1943) theory of human motivation and empirical stress research. High scores indicate high levels of job satisfaction and a total and factor mean score is produced by the summarised score divided by the number of items. The mean score for a similar group of NAs was in a previous study 2.1 (Ekvall 2001). Previous factor analyses in samples with work groups from the industrial and the social service sector resulted in a five factor solution (Ekvall 2001).

Satisfaction with nursing care provision (II, IV) was measured using the Psychosocial Aspects of Job satisfaction Questionnaire (Engström et al. 2006). This instrument was developed specifically for an aged care context. High scores indicate high levels of job satisfaction and a total and factor index is calculated by the summarised score divided by the highest possible score multiplied by 100. A previous study in an aged care context, reported a mean score of 66.9. Furthermore a factor analysis resulted in an eight-factor solution explaining 64 per cent of the variance (Engström et al. 2006).

Strain

Negative aspects of work in terms of job strain (III, IV) were measured using the Strain in Dementia Care Scale (SDCS) that has recently been developed (Edberg et al. subm.). The SDCS was originally developed to measure strain in nursing care with a specific focus on challenges in working with persons who have cognitive impairment, i.e. dementia, in general or dementia-specific residential care units. In this thesis the instructions in the questionnaire was rephrased addressing NAs in residential care in general rather than NAs working in dementia care only. The SDCS consists of statements concerning potentially strenuous everyday situations that might occur for NAs. The items are twofold and comprise A) how often the situation occurs and B) when it occurs, the amount of stress it causes. Higher scores indicate a worse work situation with a greater amount of strain. A total and factor mean score weighting the A and B question is calculated by multiplying the items A and B part, before summarising the total or factor items divided by number of questions. A factor analysis in a previous study with a mixed sample of health care staff working in dementia care, resulted in a five factor-solution explaining 52.3 per cent of the variation (Edberg et al. subm.).

Stress of conscience

Negative aspects of work in terms of stress of conscience (III, IV) were measured using the Stress of Conscience Questionnaire (SCQ) (Glasberg et al. 2006). The questionnaire consists of twofold items concerning A) how often ethically difficult

situations occur and B) when they occur, to what extent it gives one a troubled conscience (rated on a visual analogue scale). A total and factor mean score weighting the A and B question is summarised after multiplying the items in the A and B part, providing a total index and factor scores. Higher scores indicate a worse work situation with a higher stress of conscience. Glasberg and co-workers (2006) made a factor analysis which resulted in a two-factor solution explaining 54.6 per cent of the variance. Another study by Juthberg and co-workers (2008) presented a mean score of 44.6 in a sample of NAs. When adding RNs to the analysis, the mean score increased to 48.0.

Demographic and work related information

The questionnaire further included demographic and work related information. The information used for papers II-IV was age (years), gender (male/female), marital status (married/partner or single), children living in the household (yes/no), formal education (compulsory school, only (9 years)/ upper secondary school/ university or college), position at the workplace (LPN/Nurse's aide), work experience with residential care (years), working time (day/night), working hours (Full time/part-time) and workplace (dementia care setting/general care setting). Similar data were collected from the participants in paper I at the time of the interview.

Health complaints

The presence of health complaints (II, III) was measured using single items from a questionnaire concerning staff health (Engström et al. 2006): During the last three months have you experienced: a) sleep problems; b) feeling worried and restless; c) physically exhausted after work; d) felt sad and depressed. All questions were answered on a five-point scale (0=never to 4=very often). High scores indicate poor health (Engström et al. 2006).

Sense of coherence

The sense of coherence (SOC) refers to the resources that are available for the person when meeting the demands in life and was measured using the Sense of Coherence questionnaire (II, III), developed by Aaron Antonovsky (1987). The core components of sense of coherence are comprehensibility, manageability and meaningfulness. Before summarizing the total score negative questions were reversed. High scores indicate high sense of coherence. In a previous study including district nurses the mean score was 154 (SD 13.6) (Pålsson et al. 1996).

Personalizing care and Organizational and environmental support

The prerequisites for a person-centred care provision (II, III), was measured using the Person-centred Care Assessment Tool (P-CAT) (Edvardsson et al. 2010) including questions about attitudes and prerequisites for a person-centred care provision. For

this thesis the instrument was used on the factor level. High scores indicate a high degree of person-centred care. Negative questions were reversed before a factor mean score was calculated by summarising scores divided by the number of items (Edvardsson et al. 2010). In a previous study a factor analysis emerged with a two-factor solution in a sample of staff in an aged care context explaining 42 per cent of the variance. The weighted mean score was 3.7 for total score and between 4.0 and 3.3 for the factors (cf. Sjögren et al. 2012).

General work climate

To measure the general work climate (II, III) the Creative Organizational Climate Questionnaire (Ekvall 2004) was used. The instrument was developed within the frame of an organizational research program aiming to support innovation, creativity and renewal of product and processes. The climate is described as an attribute of the organisation and does not involve beliefs, norms or values such as in the concept of organizational culture. High scores indicate a positive general work climate and a total and factor mean score was calculated by the summarised score, divided by the number of items. Previous studies have reported a 10-factor solution, however the explained variance of the factor analysis has not been reported (cf. Ekvall 2004). Mean score in a previous study was reported to be 1.7 for total (Boström et al. 2007).

Caring climate

The caring climate (II, III) was measured using the Person-centred Climate Questionnaire, staff version (Edvardsson et al. 2009b). The instrument was initially developed from qualitative studies, taking the point of departure from the perspective of patients and next of kin of what constitutes a caring climate. The word 'patient' was replaced with 'resident' in order to suit the residential care context. A total score was summarized and then divided with the number of items, providing a mean score. In a previous study including a mixed sample of health care staff working in hospital wards, the mean total score among the different wards ranged from 4.0 to 5.3 (Edvardsson et al. 2009b).

Quality of care

Quality of care (II, III) was measured using the Quality of Care Aspect Questionnaire (Engström et al. 2006) that was specifically developed to capture aspects important for the quality of care in an aged care context. High scores indicate high level of quality of care. A total and factor index was calculated by the summarised score divided by the highest possible score multiplied by 100. A previous factor analysis produced a four-factor solution explaining 56.4 per cent of the variance (Engström et al. 2006).

Leadership

The leadership (II, III) was measured using the Leadership Behaviour Questionnaire (© Faraxgroup AB, Ekvall and Arvonen 1994) which consists of two sub-scales concerning A) the leaders' managerial behaviour and B) the prerequisites for a leader. In this study only the A sub scale was used. High scores indicate a positive leadership. A total and factor mean score was produced by summarising the items, divided by the number of items. A previous factor analysis produced a three factor solution explaining 97 per cent of the variation (Ekvall and Arvonen 1994), and the mean total score in a mixed sample of health care staff was 4.4 (Sellgren et al. 2006).

Analysis

Qualitative as well as quantitative analysis methodology was used in this thesis. The focus group interviews in paper I was analysed using a qualitative content analysis while statistical analyses were used for the data in papers II-IV.

Qualitative content analysis

The focus group interviews were analysed using a qualitative conventional content analysis as described by Hsieh and Shannon (2005). They describe the conventional content analysis as one of three different approaches; (a) the summative content analysis that is focused on counting and comparing key words and finding implicit structures in the text; (b) the directed content analysis that involves a deductive approach where the text is analysed in the frame of a theory or previous research during the initial coding of the text; and, (c) the conventional content analysis that is described to be applicable where there the aim is to describe a phenomenon there is limited knowledge about. In the conventional content analysis, the interpretation of the content derives from the text rather than from theory, as in the directed approach, and the application of theory and/or previous research is instead addressed when discussing the results (Hsieh and Shannon (2005). The conventional content analysis involves several steps. The first step is repeated reading of the text to become immersed and grasp a broad picture of the text. Three researchers with extensive experience in the field of care of older people and dementia care conducted the analysis. The researchers came together and discussed their initial impressions of the text. Notes were taken from the discussion and were later used during the categorisation. The next step was to read the text word for word, highlighting and coding words containing the key thoughts.

Codes having similar content were then grouped into meaningful clusters. This process was reflective, comparing the codes and the text, and in discussion between

the authors. In the last step of the analysis, the text from the fifteen, so called, meaningful clusters were reread and rearranged into nine subcategories embraced by three main categories (Hsieh and Shannon 2005).

Statistical analysis

In papers II-IV descriptive and analytical statistics were used for the analysis of quantitative data. When describing the sample, mean scores and standard deviations (SD) were calculated for continuous variables while frequencies and percentages were calculated for categorical variables. Furthermore, correlations were made (Spearman's rank correlations) among and between the measurements used as dependent variables and instruments used as independent variables (framework). Imputations with mean substitutions were made in the questionnaires if <10 per cent were missing per case and questionnaire. The significance level for differences and associations were set to p-value <0.05. All statistical analyses were performed using SPSS Statistics 20.0 (SPSS Inc., Chicago, IL, USA) and the Vassar Stats website for statistical calculations (II-IV).

In paper II the sample was divided between NAs reporting low (quartile 1), moderate (quartile 2-3) and high (quartile 4) levels of job satisfaction. Comparisons between the three groups were made with One-way ANOVA (interval and ratio data), Chi-square test (nominal data) and Kruskal-Wallis test (ordinal or skewed ratio data). In paper III the sample was divided between NAs reporting low (< quartile 4) and high (quartile 4) levels of job strain. Statistical analyses comparing the two groups were made with Student's t-test (interval and ratio data), Mann-Whitney U-test (ordinal and skewed ratio data) and Chi-square test or Cramer's (nominal data).

In papers II and III, job satisfaction (II), strain and stress of conscience (III) and associated variables were explored. Independent variables were age, gender, SOC, civil status, formal education, work experience, position, working time, working hours, workplace, sleep problems, feeling worried and restless, physically exhausted after work, sad and depressed, extent of personalizing care organizational and environmental support, general work climate, caring climate, quality of care, and leadership. A total of 20 independent variables were entered into the regression models. Multiple linear regressions were performed with backward selection. A sample size of 5-10 participants per independent variable entered into the regression models is considered as acceptable (Norman and Streiner 2008). Consequently, 20 independent variables require a sample between 100-200, which is lower than the sample size in papers II and III. The final models included only significant variables with the exception of including non-significant variables related to significant dummy variables. Both the B coefficient and Beta coefficient were reported due to the B indicating how the dependent variable changes with one unit change in the

independent variable. The Beta on the other hand takes the interrelationship between the independent variables into account indicating the hierarchical order in the regression model (Norman and Streiner 2008). In order not to overestimate the regression models using a standard R^2 , an adjusted goodness of fit (R^2_{adj}) was used in papers II and III. The multicollinearity was tested for variables entered in the regression models by means of correlations (≤ 0.7), tolerance (≥ 0.10) and the Variance Inflation Factor (VIF; ≤ 10) (cf. Norman and Streiner 2008). In addition, if residuals were not normally distributed (tested using the Shapiro-Wilk test of normality and visual assessment of normal probability plots) the dependent variable was logarithmized and residuals reassessed (III).

In paper IV, the psychometric properties concerning job satisfaction, job strain and stress of conscience was assessed. The analysis included *data quality* comprising calculations of floor and ceiling effects (i.e. $>15\%$ on minimum and maximum scores) (cf. Terwee et al. 2007) (IV) and the response rate on total score for the instruments (framework). The *Construct validity* was assessed by means of convergent and divergent validity in terms of inter-correlations (Spearman's rank order correlations) on total and factor scores. Convergent validity was estimated if related instruments measuring job satisfaction and strain versus stress of conscience correlated highly, i.e. >0.7 (Norman and Streiner 2008) and concepts not being related should not be correlated i.e. divergent validity. In addition construct validity was estimated if intra-scale correlations between total score and the factors for each instrument were ≥ 0.7 . In addition, correlations between total score with each item included and excluded in the instrument within 0.2-0.8 (i.e. corrected item-total correlations) indicated that the construct validity was satisfactory.

The *reliability* was deemed as satisfactory if the internal consistency (i.e. Cronbach's alpha) was between 0.7-0.9. Furthermore, an evaluation of the impact of the removal of an item from the scale on the Cronbach's alpha for the different factor scores (i.e. Cronbach's alpha if item deleted) was calculated on the first test occasion. Test-retest reliability was assessed with a two-week interval including weighted kappa analyses (linear weighting) made for ordinal data on item level. The levels of agreement of between test-retest data were set to: almost perfect (0.81-1.00), substantial agreement (0.61-0.80), moderate agreement (0.41-0.60), fair agreement (0.21-0.40) and poor/slight agreement (0.00-0.20) (Landis and Koch 1977). Furthermore, Intra Class Correlations (ICC; with absolute agreement) was calculated on item, factor and total scores that had been transformed into continuous variables with reference to Altman (1991) who has postulated that large samples usually result in an approximately normally distributed sample mean. The agreement of a good fit of the test re-test reliability using ICC was set to >0.7 (Streiner and Norman 2008).

Ethical considerations

During the study processes of the thesis an effort was made to facilitate for the NAs to make an *autonomous choice* when agreeing to participate in the studies, meaning that the agreement to participate in the studies was supposed to be intentionally, with an understanding of what the informed consent meant that they agreed upon and, that there were no controlled constraints regarding the participation in the studies (cf. Beauchamp and Childress 2013). In spite of these efforts, there was still a risk that the participants felt obliged to participate in study I. This was due to the NAs having to confirm that they were volunteering to participate in the study through the first line managers and thus the NAs could feel obliged to participate in the study, when knowing that the first line manager approved the study in the first place.

Precautions were taken in studies II-IV, in order for the NAs not to feel pressured by the organisation to participate. Separate research coordinators were managing the data collection and retrieving informed consent from the NAs. The NAs gave informed consent, after verbal and written information about the study. The participants were also informed that participation in the study was voluntary and that they could stop participating at any stage of the study. Confidentiality was attained by coded data and no personal details except for demographic and work related information that was included in the studies (II-IV). However, despite the actions that were taken for the NAs to acknowledge that the participation in the study was voluntary there was still a risk that some NAs felt obliged to participate in the intervention study where the data for studies II-IV were collected, and answer the questionnaire. Even though the first line managers had no knowledge of which of the NAs that were participating in the study, there could be a risk of the NAs feeling pressured by their work team and colleagues. This was the plausible reason for a few of the questionnaires being returned uncompleted in sealed envelopes to the researcher (II-III). This raised the question whether the participants indeed had made an autonomous choice when agreeing to participate in the study, or had agreed to participate in the study as a sense of obligation or even being influenced by the organisation or colleagues. However, by making sure that the organisation or manager did not have access to any of the data in the study the possibility for making an autonomous choice about not wanting to participate could still be achieved in the end. This also raises the question of the balance between *non-maleficence* and *beneficence* and in *justice* of the research. In order to minimize the potential harm in terms of an increased burden by participating in the study, it was seen as crucial for the NAs to be able to participate in the study during working-hours. The study had initially been approved by the directors of care, top-down (I-IV), before addressing the potential participants. The studies in this thesis had no explicit outcome that could be beneficial for the NAs participating in the studies. However, the results could be beneficial for future NAs, in terms of the

knowledge being used in the development and improvement of the work situation for NAs working in residential care. Furthermore, the intervention study aimed to provide knowledge and support to NAs and their leaders (Beck et al. 2012b) that in turn were hypothesised to affect the quality of care and the wellbeing of the residents.

There were discussions within the research group if there could be persons who did not want to participate in the study but would like to take part in the intervention. When testing a program that is hypothesised to be of beneficence for the participants it would be unjust to provide the content conditionally and thus the non-participants were able to take part in the study circles without being included in the study. However, none of the participants, who declined to participate in the intervention study, chose to participate in the study circles (II-IV). Furthermore, the implicit benefit from the research in this thesis concerns the synergy when reflecting over work related aspects such as their wellbeing, provision of care and the context they worked in. This was especially seen in the focus group interviews with the NAs about their experience of job satisfaction and the link to the provision of quality of care (I). The research in this thesis was guided by the ethical principles of the Helsinki declaration (WMA, 2008). However, no ethical approval was needed for any of the papers in the thesis (I-IV), which was also confirmed by the advisory decision from the regional ethical board (ref.no. 2009/527) for the intervention study (II-IV). This was referred to the limited risk of harm induced for NAs participating in the study and in agreement with the Swedish legislation (SFS 2003:460) in 2009.

Results

The overall results showed that NAs’ job satisfaction, strain and stress of conscience and work related variables seem to be separate concepts as they showed low correlations (Table 5, which is only presented in the thesis).

Table 5. Correlations between instruments measuring dependent- and independent variables

Instruments	1.	2.	3.	4.
1. General job satisfaction	1.000	0.643	-0.265	-0.322
2. Satisfaction with nursing care provision	0.643	1.000	-0.285	-0.402
3. Strain	-0.265	-0.285	1.000	0.523
4. Stress of conscience	-0.322	-0.402	0.523	1.000

Sense of coherence	0.304	0.363	-0.407	-0.246
Extent of personalizing care	0.472	0.606	-0.101	-0.257
Amount of organizational and environmental support	0.287	0.461	-0.341	-0.369
Caring climate	0.489	0.631	-0.307	-0.277
Quality of care	0.325	0.479	-0.288	-0.278
General work climate	0.359	0.572	-0.142	-0.149
Leadership	0.444	0.592	-0.227	-0.288

1-4 represents instruments measuring dependent variables (II-IV). Non-significant correlations (Spearman’s rho) in bold.

An overview of the results (I-III) is presented in figure 2, which highlights the jigsaw puzzle of inter-related aspects that were found to be associated with job satisfaction, strain and stress of conscience. The results are presented below in terms of the experience of job satisfaction and levels, associated factors and psychometric properties of job satisfaction, strain and stress of conscience.

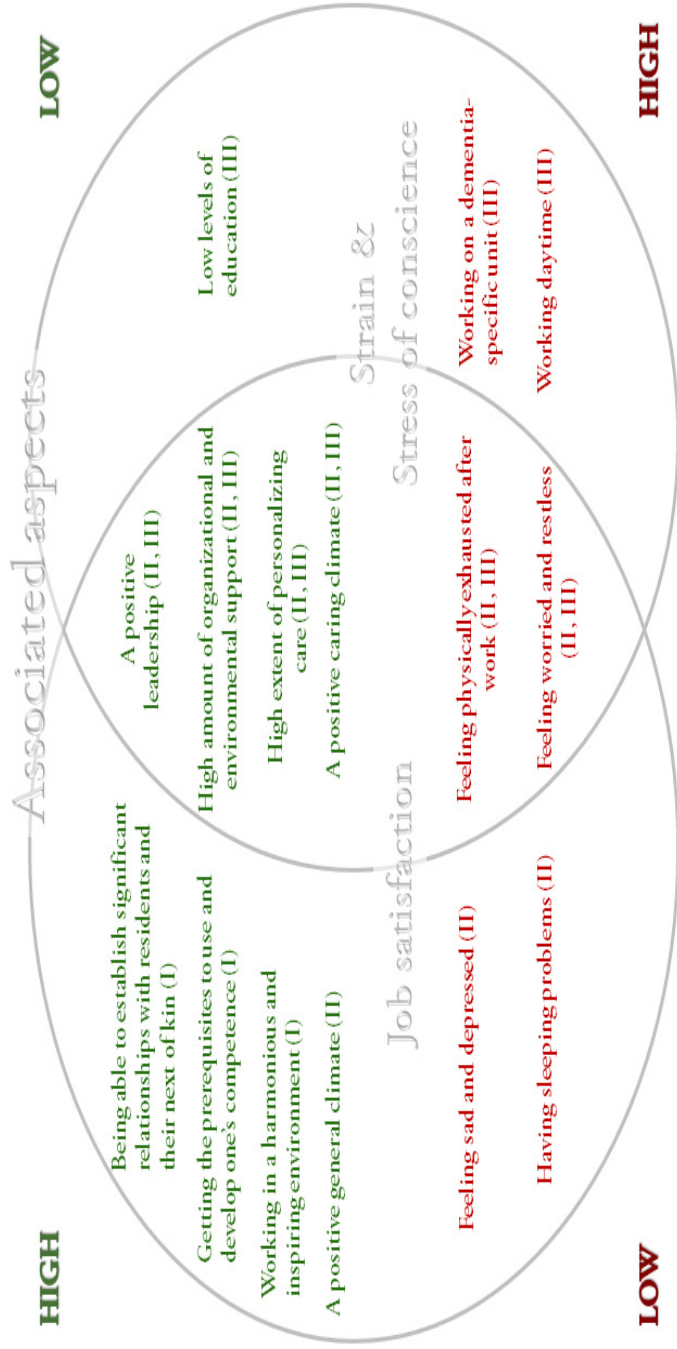


Figure 2. Overview of results in paper I-III in the thesis

Job satisfaction

NAs experience of job satisfaction

When exploring the NAs experience of job satisfaction, the NAs spoke of the encounter with the residents being significant for their experience of job satisfaction, but also the encounter with the next of kin, leaders and co-workers was described as essential. It was emphasised that it was those moments when they got a 'special connection' with the residents and next of kin that they experienced as profoundly satisfying. The narratives ranged from the everyday care tasks to moments of the uttermost profound existential interchange of thoughts about life and its course with the residents. Furthermore the NAs expressed their experience of job satisfaction in terms of being happy and content and as a positive sensation of pleasure. The NAs experience of satisfaction with work was closely linked to; Being able to establish significant relationships with resident and their next of kin; Getting the prerequisites for using and developing one's own competence; and Working in an harmonious and inspiring environment (I).

Being able to establish significant relationships with residents and their next of kin

It was through the small things in the encounter with the residents and their next of kin, when they established significant relationships that seemed to be one of the key elements for their job satisfaction. The NAs expressed that it was profoundly satisfying when they got that 'special connection' with the resident and their next of kin. This connection was described as *'being chosen to share the other's lifeworld'* and for example concerned when a resident became especially fond of a certain NA. These significant relationships formed in turn a bond of mutual trust that generated reflections about the past, the present and when the residents were facing death. In addition, this bond made it possible for the next of kin to let go and to be able to leave the residents in the NAs care. Furthermore, a prerequisite for being able to establish significant relationships was *'having the possibility of being in the present'*, i.e. when the NAs had time to be 'in the present' in the encounter with the residents. This was described as having 'it'; something beyond words, that contained a 'special connection' with the residents. Being in the present could also entail having time to sit down and chat with residents or share an innermost moment with the resident on their deathbed (I).

Getting the prerequisites for using and developing one's own competence

The NAs' job satisfaction was also closely linked to whether or not they were able to use and develop their competence. This was expressed in terms of *'balancing personal involvement'*. The NAs narrated that there sometimes was a fine line between involvement with the residents and next of kin or being emotionally overinvolved that instead could contribute to dissatisfaction. The NAs also expressed the balance of the personal involvement was facilitated when the NAs felt they could trust the care of the residents to capable colleagues and leave all thoughts of work at the end of the day. Work could, however, also be experienced as a refuge from personal problems, where it was satisfying to be able to do a good job, despite private circumstances. When the NAs felt they were *'mastering challenges'*, for example, in terms of shortages in staffing levels, when the climate was chaotic and the residents were being difficult to handle, the ability to handle such situations was seen as a confirmation of their competence. It was not, however, only an inner feeling of mastering that was important, *'being acknowledged by others'* in terms of being seen and heard by the residents, next of kin, colleagues and managers as well as other health care actors was also important. When the NAs felt that the work climate was permissive and they could talk openly about difficult work situations and sometimes even allow other NAs to take over when they felt that things get out of hand, they felt acknowledged. Even if not being explicitly expressed as an aspect contributing to satisfaction at work, the NAs said that a more positive view about aged care from politicians and the society in general would perhaps provide a greater sense of confirmation of hard work being well done. Another aspect related to their competence was *'having the possibility to grow'*. This included aspects such as the opportunity to receive clinical supervision when caring for challenging residents or to learn new things and keeping up to date concerning special interests such as aged care, nutrition and pain management. When given opportunities for reflecting and discussing with other staff the NAs felt that they developed and progressed as professionals (I).

Working in a harmonious and inspiring environment

A harmonious environment that was also inspiring was seen as an important aspect of satisfaction. This concerned *'a sense of togetherness in the work group'* and was described as being a part of something greater than the NAs themselves. It was through working together in a stable work group where the NAs cooperated and trusted each other's abilities for providing high quality care. However, it also included having fun together as colleagues, for example, during coffee breaks. They spoke of the climate at the residential care facility became brighter for both NAs and the residents when humour was used. Another environmental aspect concerned *'an enriched contextual frame of work'*, which included a homelike and welcoming indoor milieu as well as an inviting outdoor environment, for example, being close to nature and having outdoor spaces. The environment in terms of *'a shared value system at the work place'* was also seen as

important. This concerned the importance of having a shared value system and guidelines how to provide high quality care, having respect for each other's different professional qualities and everybody working and trying to make the best of the work situation (I).

Levels of job satisfaction

The NAs were generally satisfied with work at the residential care facility. They reported a higher degree of general job satisfaction, with a mean score of 2.2 (SD 0.5) representing 75 per cent of the highest possible score, than of satisfaction with nursing care provision with a mean score of 65.0 (SD 9.8) represented 65 per cent of the highest possible score. When comparing personal and work-related factors and health complaints between those reporting low, moderate and high job satisfaction the trend was similar for general job satisfaction and satisfaction with nursing care provision. No significant differences were found among most of the personal and work-related information, except a higher degree of SOC among those reporting low levels of job satisfaction. However, work-related aspects concerning the extent of personalizing care, the amount of organizational and environmental support, caring climate, quality of care, general work climate and leadership were significantly more positive among those reporting high satisfaction and most health complaints were significantly more frequent among those NAs reporting low job satisfaction (II).

Associated factors

The general job satisfaction

When exploring a model of general job satisfaction the associated factors explained 36 per cent of the variance. A positive caring climate was associated with and explained most of the variance of high levels of general job satisfaction; followed by a high extent of personalizing care. A high level of health complaints such as feeling worried and restless was associated with and explained most of the variance of low levels of general job satisfaction; which was followed by feeling exhausted after work (II).

The satisfaction with nursing care provision

When exploring a model of satisfaction with nursing care provision the associated factors explained 64 per cent of the variance. A positive caring climate was associated with and explained most of the variance of high levels of satisfaction with nursing care provision; followed by the extent of personalizing care, general work climate, leadership and, amount of organizational and environmental support. A high level of health complaints such as feeling sad and depressed was associated with, and

explained most of the variance of low levels of satisfaction with nursing care provision; which was followed by having sleeping problems (II).

Psychometric properties

The general job satisfaction

The Job Satisfaction Questionnaire had acceptable psychometric properties, except for the test-retest reliability. The *data quality* showed a high response rate of 92 per cent and no floor or ceiling effects were detected. The *construct validity* in terms of corrected item-total correlations ($r=0.55-0.79$) was acceptable and correlations between total scores and the factors ($r=0.76-0.91$) indicated a homogeneous construct, meaning that the factors were related to the concept as a whole, however on the verge of being too highly correlated. This was further verified by the *reliability* in terms of the internal consistency estimated with the alpha for the total score of the instrument being 0.95 and thus indicating that there might be an item redundancy within the instrument (alpha 0.82-0.90 for the sub-scales). Furthermore, the test re-test reliability showed that the agreement between the NAs ratings of general job satisfaction were below a good fit (ICC, 0.61), indicating that general job satisfaction had low reliability (IV).

The satisfaction with nursing care provision

The Psychosocial Aspects of Job Satisfaction Questionnaire had psychometric problems. The *data quality* in terms of response rate was relatively low (66.1 %), however, no floor or ceiling effects were detected, when assessed for total score. The *construct validity* in terms of corrected item-total correlation ($r=0.06-0.76$) revealed problems in terms of the three items concerning the work being complicated by too high expectations and demands from residents, relatives and co-workers ($r=0.06-0.18$). In addition, the correlations between total score and the factors indicated that the construct was far from homogeneous ($r=0.39-0.85$). Furthermore the *reliability* in terms of internal consistency was too high for the total score (alpha 0.94) indicating redundancy of the items. On the other hand on the sub-scale level (alpha, 0.59-0.86) some of the alphas were too low (External motivation, 0.59 and Position in the group 0.59). Regarding the test-retest reliability, the agreement (ICC, 0.91) between the NAs ratings of their satisfaction with the nursing care provision was well above a good fit (IV).

Strain

Levels of strain

The NAs generally reported low levels of strain with a mean score of 3.3 (SD 1.4), which represented 21 per cent of the highest possible score. When comparing personal and work-related factors and health complaints between those reporting low and high levels of strain significant differences were found for demographic characteristics such as lower age, being single, low sense of coherence and higher education. Most of the NAs who reported high levels of health complaints also reported higher levels of strain. The trend for work-related aspects were the same with low ratings being associated with high levels of strain in terms of the work experience, being a nurse's aide (versus a LPN), the amount of organizational and environmental support, quality of care and the leadership. There were no significant differences between high and low levels of strain among the NAs reports of working shifts, working hours, working place, extent of personalizing care or the general work climate (III)

Associated factors

When exploring a model of strain the associated factors explained 25 per cent of the variance. A high amount of organizational and environmental support explained most of the variance of low levels of strain; followed by a positive caring climate and only having compulsory schooling (versus upper secondary schooling). A high level of health complaints such as feeling worried and restless explained most of the variance in high levels of strain; followed by working at a dementia specific unit (versus a general unit) and, working daytime (versus night-time) (III).

Psychometric properties

The Strain in Dementia Care Scale had acceptable psychometric properties when assessed on total score. The *data quality* showed a response rate of 73 per cent and no floor or ceiling effects. The *construct validity* was satisfactory and was assessed in terms of corrected item-total correlation ($r=0.31-0.71$) and intra scale correlation between total score and factors ($r=0.75-0.86$). The *reliability* in terms of internal consistency (alpha, 0.92) was however slightly above recommended values indicating a

redundancy of items in the instrument. The test-retest reliability showed that the agreement between the NAs rating of the strain in nursing care was good (ICC, 0.85) when assessed on total score level (IV).

Stress of conscience

Levels of stress of conscience

The NAs working in residential care generally reported low stress of conscience with a mean score of 27.3 (SD 25.6), which represented 12 per cent of the highest possible score. When comparing levels of stress of conscience with personal and work-related factors and health complaints significant differences were found for demographic and other characteristics such as a low sense of coherence, a higher level of education, being nurse's aides (versus LPNs), working day-time and higher levels of health complaints for those NAs that reported higher levels of stress of conscience. The trend for work-related aspects was the same with low ratings being associated with high levels of stress of conscience in terms of the extent of personalizing care, the amount of organizational and environmental support, caring climate, quality of care and leadership. There were no significant differences between high and low levels of stress of conscience among the NAs reports of work experience, working hours, working place or the general work climate (III)

Associated factors

When exploring a model of stress of conscience the associated factors explained 30 per cent of the variance. A high amount of organizational and environmental support was associated and explained most of the variance of low levels of stress of conscience; followed by having a compulsory schooling (versus upper secondary schooling), a positive leadership and a high extent of personalizing care. Working daytime explaining most of the variance of high levels of stress of conscience; followed by feeling physically exhausted after work (III).

Psychometric properties

The Stress of Conscience Questionnaire displayed some problems when the psychometric properties were assessed. The *data quality* in terms of the response rate was 76.5 per cent and there were floor effects (16.5%). The *construct validity* was satisfactory and was assessed in terms of corrected item-total correlations (range: 0.55-0.76) and correlations between total score and the factors (0.88-0.90). The *reliability* in terms of internal consistency showed a Cronbach's alpha of 0.83 for the total score (0.75-0.76 on sub-scale level). The test re-test reliability showed that the agreement between the NAs rating of the stress of conscience was good (ICC, 0.83) when assessed on total score level (IV).

Discussion

Methodological considerations

When designing research studies the path is lined with difficult methodological choices that each have advantages and disadvantages. However, by using different designs and methodologies (i.e. triangulation of data and methods), the studies can complement and to some extent validate each other's results and reduce any inherent weakness in the particular design (Polit and Beck 2008, Lincoln and Guba 1985). This thesis was thus based on different designs where studies I-III had an exploratory design in which study I was qualitative and studies II-IV were quantitative. Furthermore the quantitative studies had a cross-sectional design in II and III and a correlational design in IV. The methodological considerations of the qualitative design will be discussed in terms of trustworthiness and the quantitative design will be discussed in terms of validity and reliability. The methodological aspects of the psychometric evaluation of the dependent variables in study IV are included in the general discussion of the results.

Trustworthiness

The methodological considerations of qualitative research depend on achieving trustworthiness. The discussion of the qualitative findings in this thesis will concern the four key concepts when assessing the trustworthiness of a study, i.e. its credibility, dependability, confirmability and transferability (Lincoln and Guba 1985).

Credibility

The credibility of the qualitative findings concerns different ways of making the results believable and trustworthy. In the qualitative content analysis it is important that a variety of different experiences are represented in the material (Graneheim and Lundman 2004). The possibility of achieving a variation in experiences increases if the sample is heterogeneous (Krueger and Casey 2009). The heterogeneity in study I was reinforced in a number of ways: a variation of age, gender, education, working place, working time, working hours and work experience was sought in the inclusion of the participants as well as a variation in municipal, private and non-profit

residential care facilities situated in rural and urban areas of southern Sweden. The heterogeneity was further reinforced as NAs from different care units, but within the same residential care facility formed the focus groups. However, in one case one of the focus groups consisted of NAs from the same care unit as it facilitated for them to participate in the study. Furthermore, the size of the six focus groups ranged from five to 10 participants. This could be said to negatively affect the credibility of the data. Focus groups of different sizes with more or less homogeneous and heterogeneous samples may actually add to the variation in the narratives in the study. In study I it seemed as the larger focus groups appeared to generate a great extent of variation of experiences, while at the same time the narratives were not as 'rich' as those in the smaller focus groups.

A limitation of the study was that no member checks with the NAs included in the study were performed. However, the moderator summarised the content for the participants at the end of each focus group interview and asked the question 'have I correctly described and summarised the interview' and 'is there anything else they you would like to add'. This was done in order for the participants to agree to or correct the immediate impression and interpretation of the narratives. Furthermore, the researchers who have designed and conducted the focus group interviews have extensive experience of the aged care context that has been studied, which reduces the risk of misinterpreting the texts from the interviews. In addition, the results from another data source (II), where the NAs assessed their job satisfaction in questionnaires supported some of the findings in study I, thus strengthening the credibility of the results through the triangulation of different data sources and methods (cf. Lincoln and Guba 1985). Finally quotations from the focus group interviews were presented in the results in order to facilitate for the reader to determine the credibility of the results as well as to substantiate and exemplify the analysis (I).

Dependability

The dependability concerns the stability of the data over time and independently of context. The attainment of the confirmability is reliant on the dependability being achieved. In order to achieve dependability of data it is important to have the same questions throughout the interviews (Graneheim and Lundman 2004). By using a semi structured interview guide the risk for altering the question route was reduced. In addition a pilot focus group interview was conducted in order to test the interview guide with the slight modification of the moderator summarising the content when the narratives began to circle around the same topics. This was usually done towards the end of the interview. However, due to the moderator never having previously conducted focus group interviews, there might have been more probing and follow-up questions in the latter interviews, thus generating more in-depth narratives. The stability of the data was also supported through having the same moderator and

observer for all the interviews and the potential variation of the richness of the interviews did not seem to alter the variations of aspects being narrated (I).

Confirmability

The confirmability concerns the objectivity of the data and neutrality of the researcher (cf. Lincoln and Guba 1985). One approach to achieve confirmability in study I was that the senior researcher did not participate in the interviews in order to attain neutrality towards the data. A triangulation of researchers interpreting the data was carried out (cf. Lincoln and Guba 1985) when all three authors worked together prior to the initial coding. There was a discussion and documentation of the first impressions of the text before the initial coding started and later on when the cluster scheme was sorted in to a hierarchy of categories and sub categories. The triangulation of researchers involved in the analysis further reduced the risk of bias due to pre-understanding tainting the analysis. However, all three researchers had similar backgrounds; being RNs and having work experience from both psychiatric and dementia care. On the one hand, having a pre-understanding in the field of inquiry could be advantageous in terms of the researchers having knowledge of the context and the topics addressed in the interviews. On the other hand, researchers who have similar backgrounds could also potentially have tainted the results and thus increased the risk for bias. However, the methodological choice in study I was to use an inductive approach, i.e. the conventional content analysis (Hsieh and Shannon 2005) focusing on the participants' unique experiences. Furthermore, by following the suggested steps in the analysis process as proposed by Hsieh and Shannon (2005) the risk of bias is reduced. In a similar way the use of a moderator and an observer in the focus group interviews facilitated the focus group staying focused on the topic of job satisfaction and all the experiences of job satisfaction being thoroughly explored.

Transferability

The transferability of qualitative studies concerns in this case the accuracy and applicability of the results for other NAs' work situation and contexts (cf. Lincoln and Guba 1985). As a step towards attaining transferability, the procedures have been thoroughly described in order for the reader make a correct judgement. A limitation of study I can be that none of the approached private residential care facilities agreed to participate in the study. This was due to organizational changes and to an already high workload for the NAs. This limits the transferability of the results to NAs working within private residential care facilities and further research within this context is needed.

Validity

The validity of studies II and III will be discussed in terms of internal validity, construct validity, statistical conclusion validity and external validity due to their cross-sectional design.

Internal validity

Internal validity concerns the plausibility of the effect of the investigation ruling out alternative explanations for the findings. The possible threats to the internal validity; i.e. other aspects than the independent variable explaining the findings, is usually discussed in reference to *history, maturation, testing, instrumentation, statistical regression, selection bias and attrition*. These aspects, however, are mainly concerning the threats related to the time aspects of longitudinal studies and randomized control trials (RCT) (cf. Kazdin 2003), and thus not relevant to the study design in this thesis. This does not imply, however, that there are no threats to the internal validity in a cross-sectional research study. The consequence of the cross sectional design in studies II and III is that no inference can be established about the relationship between cause and effect of dependent and independent variables (Polit and Beck 2008, Kazdin 2003). The cross-sectional design is, however, relevant when one wants a gain deeper understanding of the phenomena and the inter-relationships that are studied. The same rationale is applicable when not adjusting for confounders in the exploration of the associated factors. Even if socio-demographic characteristics might be less important in comparison with those factors that are more explicitly related to work, in the long run, their contribution and interrelationships with other factors are equally important in the initial exploration of the concepts. This should normally be the first step when exploring a new research field (cf. Kazdin 2003). However, in this case the situation seems to be the other way around. Several studies have been conducted on a few factors associated with the dependent variables and thus the interrelationships of these different factors have not yet been explored, despite the extensive research produced in the field of the wellbeing of nursing staff. In addition, the NAs' experience of job satisfaction as seen in the qualitative results (I) did in many ways verify the findings of study II and III and vice versa.

Construct validity

Construct validity is usually discussed with reference to casual relationships of an intervention in relation to the theoretical foundations and content of the interventions (Kazdin 2003). However, construct validity also concerns whether the measurements allow the researcher to make correct conclusions about observational behaviours, such as attitudes (Streiner and Norman 2008). By using instruments that have previously been psychometrically evaluated and used among NAs in a Swedish

context the construct validity of the thesis was strengthened. The use of both general and context specific measurements was another way of trying to capture several dimensions of what is important for the wellbeing of NAs in their job. The intra and inter-correlations of the instruments confirmed the connection among the dependent variables in terms of convergent and divergent validity. The rationale for operationalizing the constructs into those reporting low, moderate and high levels of job satisfaction (II) and low and high levels of strain and stress of conscience (III) could be a threat to the construct validity. The middle group of moderate job satisfaction could in particular be unreliable and include cases with both high and low levels of job satisfaction. Similarly those reporting low levels of strain should comprise all those not representing high strain/stress of conscience (the 4th quartile of the sample). However, the use of quartiles for separating the groups rather than merely dividing the sample using the mean value strengthens the possibility for discriminating between those reporting high levels of job satisfaction, strain and stress of conscience versus other conditions. Furthermore, the results in study I imply that the construct of job satisfaction lacks an important dimension concerning the NA-resident encounter and aspects concerning the care provision, which is a threat to its construct validity. Further development of the instruments measuring job satisfaction is thus needed before any safe conclusions about the NAs' levels of job satisfaction can be made.

Person-centred care is state of the art in aged care provision and an important factor to investigate in relation to the staff's wellbeing. However, it might be a threat to the construct validity (II, III) when the instrument measuring person-centred care concerns the prerequisites for person-centred care rather than person-centred care per se. This in turn results in the instrument being operationalized on an organizational level, which makes the underpinning factors i.e. the extent of personalizing care and amount of organizational and environmental support, respectively especially important to investigate, rather than as a rough global standard. Thus, the construct validity of person-centred care could be somewhat questionable. Nonetheless, when looking at the overall picture, (Figure 2) and when the underpinning factors are presented as prerequisites for person-centred care they were found important both for positive and negative affectivities of the NAs' wellbeing in residential care.

Statistical conclusion validity

Statistical conclusion validity concerns aspects of the quantitative evaluation that inferences are made from, of the comprehension of the tests and their foundations and of the calculation of statistics. When testing a hypothesis there is always a risk for type I (alpha) and type II (beta) error. A type I error refers to the null hypothesis (i.e. that there are no differences) being falsely rejected. The risk for type I error (alpha) is expressed in terms of the probability (p) value. Type II error refers to the opposite, when the null hypothesis is being falsely accepted, i.e. that there is a true difference

but not significant in the statistical evaluation. In order to minimise the risk for type II errors, power analysis calculations can be made in order to determine how large a sample one needs for detecting differences in the statistical tests (Kazdin 2003, Altman 1991) A limitation of this study was that no power analysis was performed explicitly for studies II and III, but only for the intervention study (cf. Beck 2013) and not for the dependent variables investigated in this thesis. However, the risk for a type II error due to low statistical power was not likely due to the results that demonstrated significant differences in the sample. In studies II-III the alpha level was set to $p < 0.05$ which meant that the risk for falsely rejecting the null hypothesis was less than 5 per cent. The risk for type I errors increases with the number of hypothesis tests and thus when performing multiple tests (i.e. post-hoc tests), comparing more than two groups a Bonferroni adjustment with a reduced alpha level of $p < 0.017$ was used (cf. Norman and Streiner 2008).

A mean imputation on group level was performed for those cases where there 10 per cent missing or below, in order to retain as many cases as possible in the analysis with a minimum violation of the results. However, when using mean imputation the results also move towards the group mean with the increasing sample (cf. Altman 1991), and the risk for type II error (beta) thus increases, meaning that the null hypothesis is falsely accepted and the true difference being inferred as non-significant (II, III). By using imputations the statistical power was increased and statistical differences could be detected which thus does not support the case for type II errors in the results.

External validity

External validity concerns the possibility for generalizing the findings to a wider population, including aspects such as *characteristics of the sample and the setting of the investigation* (Kazdin 2003). The convenience sample in this thesis is a major threat to the external validity as there is no control of the representativeness of the sample to the population. The sample in studies II-IV only represents NAs from urban care units and the initial inclusion criteria were residential care facilities that were stable with no organizational problems. This might have biased the representativeness and limits the possibility for generalizing the findings to NAs working in rural areas. Furthermore, the transferability of the results to NAs that work in residential care facilities with NAs or leaders working in more unstable residential care facilities facing organizational changes could also be limited. However in a previous cross-sectional study that did not include an intervention study, NAs reported slightly higher levels of job satisfaction (e.g. Engström et al. 2011), than in this thesis, thus indicating that the convenience sample was not as great a threat as one could assume.

The non-respondents could be a major threat to the external validity in terms of a skew representativeness of the sample. In this thesis there were 31 per cent non-respondents for studies II and III, and none for study IV, and the characteristics of

the non-respondents are unknown. The non-respondent rates have, however, been reported to be between 20 - 40 per cent for surveys in general (Martikainen et al. 2007), and thus indicate that the response rate is within the range of what can be expected. On the other hand when Martikainen and co-workers (Martikainen et al. 2007) investigated characteristics of non-respondents they had 20 - 30 per cent higher sickness-absence levels in comparison with respondents. This could indicate the possibility of a threat to the external validity and reduce the transferability of the findings in this thesis to a wider population. It could be that those NAs with the highest levels of strain/stress of conscience and lowest levels of job satisfaction are those who declined to participate in the studies (I-IV). However, this is not a limitation solely of this thesis but a consideration that needs to be addressed in all research. What we do know is that the age and gender of the sample was in line with official statistics (Lacouture 2009), and the sample thus seems to be representative in this sense. The results in study IV where the sub-sample of participants was chosen because of high response rates of the care unit they worked at, might have biased the results due to the selection process, towards more positive and less negative ratings of job satisfaction, strain and stress of conscience. There were however, no major differences in a comparison with the baseline sample, indicating that there were no major threats of the external validity in this sense.

Reliability

Reliability refers to a common notion of the existence of error in measurements and the consequences of these errors depending on the context they are situated in, for example, in clinical settings errors might be fatal whereas in other settings less serious (Streiner and Norman 2008). As such the reliability is a property of adequacy and quality in the measurements. A measurement that is proven with non-reliable features thus cannot be inferred as valid, however an instrument with high reliable properties can be reliable without being valid, and thus no inference of the validity can be assumed from this (Polit and Beck 2008). Higher reliability is achieved when repeated measurements demonstrate low variation (Polit and Beck 2008), implying that the measurements under scrutiny are stable over time. In studies II-IV the dependent variables concerning job satisfaction, strain and stress of conscience might well enough vary over time and the criterion of stability thus becomes somewhat problematic (cf. Polit and Beck 2008). In studies II-IV multiple instruments were used for measuring both dependent and independent variables. The measurement of the dependent variables were psychometrically tested in study IV and proved overall to have acceptable properties, concerning the data quality, construct validity and reliability for total scores of the measurements (the psychometric properties of the instruments measuring the dependent variables are further discussed in the general discussion of the results). The reliability, in terms of the internal consistencies of the

instruments measuring the independent variables was good, i.e. Cronbach's alpha 0.7 (Streiner and Norman 2008) and indicate the adequacy of these instruments. However, the small time interval of 7-14 days in the investigation of the test-retest reliability could have affected the results in study IV. The participants might for example remember the questions when doing the re-test. However, the time frame is within the common interval of 2-14 days. The bias could be due to the instrument being unreliable itself, the responses when the test was re-administered being influenced by the first administration or, the concept could fluctuate rapidly over time such as variables related to mood tend to do (cf. Streiner and Norman 2008). Consequently, the trait of the concepts in this thesis could vary, for example, due to a new resident being admitted to the unit or shortages in staffing, and seems to be the most plausible reason for the test-retest reliability not showing good agreement between the two test points. This was especially apparent at item level for the instruments in this study (IV) and raises the question if these affective measurements are adequate to use when evaluating interventions. If the variation of job satisfaction, strain and stress of conscience is naturally wide, the magnitude of the effect has to be extensive if a true effect that is not just a consequence of the normal variation is to be found. However, when the test re-test reliability was investigated for total scores, i.e. all instruments but the general job satisfaction, showed an agreement well above acceptable agreement levels, thus implying a good stability of the instruments, adequate for use as a measurement over time.

General discussion of the results

This thesis aimed to investigate and explore NAs' job satisfaction, strain and stress of conscience working in residential care for older people. The results show that many aspects of the NAs work situation is associated with both high levels of job satisfaction and inversely to low levels of strain/stress of conscience. This was especially seen in terms of the importance of a positive caring climate, but also in terms of a high amount of organizational and environmental support, a high extent of personalized care provision and a positive leadership. Furthermore, health complaints in terms of feeling worried and restless and feeling physically exhausted after work were associated with low levels of job satisfaction and inversely with high levels of strain/stress of conscience. The importance of a positive caring climate for the staff work situation has been supported by other studies, showing it to be associated with high levels of satisfaction as well as low levels of job strain (e.g. Sjögren 2013). Furthermore, a high extent of personalized care has been found to be highly associated (explaining 40 % of the variance) with job satisfaction among Australian residential aged care staff (Edvardsson et al. 2011). A positive leadership has been found to be associated with both high levels of job satisfaction (Clegg 2001, Arvonen and Ekvall 1999) as well as

low levels of stress (Clegg 2001, McVicar 2003). These studies have, however, mainly addressed one or only a few aspects of positive and negative affectivities of the staff's work situation and have not taken inter-relationships into account. On the other hand there are some studies that take a wider range of interrelated aspects into account when exploring job satisfaction. For example Engström and co-workers (2011) found that underpinning aspects of job satisfaction such as cooperation, workload, expectations and demands, internal motivation and personal development were associated with, and explained 40 per cent of the variance of perceived stress symptoms among staff aged care (Engström et al. 2011). In this thesis only a few health complaints have been included, and thus inclusion of other health related aspects such as work related headache/stomach disorders etc. could explain more of what is associated with strain/stress of conscience. This could add important knowledge to the existing body of research. Furthermore a study by Tourangeau and co-workers (2010) explored a larger set of variables in a model of job satisfaction and turnover intentions among staff in long-term care. They found personal accomplishment, work group cohesion, empowerment and low levels of burnout being associated with high levels of job satisfaction. Some of their findings were in line with the results in this thesis. These aspects were not explicitly addressed on a conceptual level in the instruments which were used in studies II and III. However, in study I the NAs spoke of the importance of personal development, wanting to do a good job and the importance of the dynamics with residents, next of kin, colleagues and leaders, which seems to be related to the findings in the study by Tourangeau and co-workers (2010). Furthermore, the leadership was not associated with job satisfaction in the study by Tourangeau and co-workers (2010), which contradicts the finding in this thesis, which showed that the leadership was associated with both high levels of job satisfaction and low levels of strain/stress of conscience. The sample in their study was, however, from a different context, i.e. from the USA, as well as including a more heterogeneous sample and also including variables that were not addressed in this thesis, which could be a plausible explanation for the contradictory findings. Tourangeau and co-workers (2010) also showed that the staff turnover intention was connected to low levels of job satisfaction; however, this aspect was not addressed in this thesis. This thesis can thus be seen in many ways to complement the study by Tourangeau and co-workers, and provides implications of the need for further exploration of these findings in a common model. This could generate additional important knowledge and an even broader approach focusing the unique contribution and interrelationships of aspects important for the NAs' job satisfaction and strain/stress of conscience.

Furthermore, the results in study II showed that a positive general work climate was associated with the NAs job satisfaction (and not with strain/stress of conscience), and NAs feeling sad and depressed and having sleeping problems were associated with low levels of job satisfaction (and not with strain/stress of conscience). These findings

appear to support the argument of Hart and Cooper (Hart and Cooper 2001), that positive and negative affectivities towards work do not constitute both ends of the same continuum. This raises the question of the variance that remains unexplained in this thesis, which might concern those aspects that are related to job satisfaction and strain/stress of conscience respectively. Nevertheless, a large amount of the variance of job satisfaction, strain and stress of conscience was shared, indicating the opposite; meaning that aspects related to high satisfaction are inversely associated with low strain/stress of conscience and vice versa. It is thus difficult to interpret the interrelationships of the concepts of job satisfaction, strain and stress of conscience as they do not easily fit into current organizational theories. It can be seen, however, that some aspects seem to be interrelated both with positive and inversely negative affectivities of work, while other aspects are only associated with job satisfaction and not with strain/stress of conscience or vice versa. The interrelationships of aspects that are associated with the staff's work situation are thus complex and need to be the subject of further research.

The results in study III showed that the NAs' low education levels were associated with low levels of strain/stress of conscience (and not to high levels of job satisfaction), and working at a dementia-specific care unit and working daytime was associated with high strain/stress of conscience (and not to low levels of job satisfaction). In contrast to aspects associated with job satisfaction only, these aspects seem to be associated with extrinsic traits such as working at a dementia specific care unit of the NAs work. This is also supported by the Herzberg's (1959) theory of job satisfaction postulating that negative affectivities to work such as work characteristics (i.e. dementia-specific care units and working daytime, in this study) are related to more extrinsic traits such as the NAs' work conditions. Furthermore, in the study of Edvardsson and co-workers (2009a) the staff reported high levels of strain which is in line with the findings of this thesis that working in dementia-specific care facilities is associated with higher levels of strain. However, Edvardsson and co-workers also showed that higher education levels were associated with lower levels of job strain, which was the opposite of the results in this thesis. That study, however, only included dementia-specific care facilities and had a more heterogeneous sample including registered nurses, which was not included in this thesis, and thus might be the reason for the diverse results, implying that there can be different explanations and issues of importance for different work groups. On the other hand in a study by Brodaty and co-workers (2003) it was shown that more experienced staff perceived higher levels of strain. With this in mind more knowledge, whether it is derived from education or work experience or not, could make the staff be more aware of shortages and improvement areas of the care provision, which in turn could affect their levels of strain negatively being aware of the problems. High levels of demands have in turn been found to predict long term sickness absence (Clausen et al. 2012), which consequentially increases societal costs and a never ending vicious circle can be a fact.

Even though a causal relationship between the study variables cannot be established through the results in this thesis the implication is that several aspects of the staff's work situation are important and it seems evident that there is a need for increased promotive and preventive actions in order to provide the prerequisites for the staff to perform a good job.

In study I the NAs themselves described their experience of job satisfaction with a main focus on the encounter with the residents and the provision of high quality care. This coincides with situational organizational theories (e.g. Herzberg 1959, Hackman and Oldham 1976) that postulate intrinsic values being important for job satisfaction. The findings furthermore are supported by van Saane and co-workers (2003) in their review of instruments measuring job satisfaction which emphasise aspects such as work content, autonomy, communication, financial rewards, growth, promotion, co-workers, meaningfulness, feedback, workload and work demands as underpinning the construct of job satisfaction. However, what was not explicitly addressed in van Saane and co-workers review of job satisfaction were aspects of the NA-resident encounter. In study I it was the relational aspects in terms of 'caring about' residents that were experienced as deeply satisfactory by the NAs. These aspects were also seen as a prerequisite for doing a good job when 'caring for' the residents in terms of the everyday caring tasks. The NAs themselves referred to these care situations as the 'small things' in their everyday care, despite these things essentially being the fundamentals in nursing care (cf. Norberg and Ternstedt 2009), which indicates that the nursing care can be seen as being self-evident by the NAs. The most fundamental dimension of nursing care thus appears to be doubly overlooked; by researchers designing the questionnaires and by the NAs themselves underestimating the work they do. However, even if the care provision seems to be overlooked or even stigmatised by NAs, the results have confirmed that the NAs experience of job satisfaction focused on what is the core of Norberg and Ternstedt's (2009) model of nursing care. When mirroring the NAs experiences of job satisfaction against another qualitative study concerning staff experiences of strain in dementia care (Edberg et al. 2008), it was mainly organizational constraints that the NAs focused on, and aspects that can be related to the nurse-patient encounter were only first addressed after being prompted by the moderator (Edberg et al. 2008). Although there are similar aspects in this thesis that are important for the NAs experience of job satisfaction and strain, there is a greater emphasis on the nurse-patient encounter as being important for job satisfaction and on organizational and environmental constraints being important for the NAs experience of strain. Thus, if aspects that are associated with job satisfaction reflect the enhancement of the 'caring about' dimension, then strain seems to reflect the constraints hindering the 'caring for' dimension of the nursing care provision. Both perspectives of positive and negative affectivities are thus important in order for the NAs to provide the NAs with prerequisites perform do a good job.

Psychometric properties of four instruments

The psychometric properties of the instruments measuring the dependent variables in the thesis displayed different merits and problems (IV). The measurements used in this thesis were initially chosen because of their relevance and that they had previously been psychometrically investigated for a health care staff context. However, in the ongoing process of the thesis, the question arose as to whether the previous psychometric validation of the instrument measuring job satisfaction, strain and stress of conscience could be transferred to a homogeneous group of health care staff as the NAs working in residential care. In order to capture as much of the content of the concept of job satisfaction, both general and context-specific measurements were used. In addition the Strain in Dementia Care scale comprised items that were derived from the experiences of staff in dementia care, the staff spoke of desiring to do more than they could for the patients, which in turn could result in a troubled conscience (Edberg et al. 2008). As such, the inclusion of the stress of conscience questionnaire in study II-IV was made in order to add an explicit focus of a dimension of the staff's work that appears to be the consequence of a strenuous work situation for health care staff.

The convergent and divergent validity of the psychometrically investigated instruments in study IV came out as hypothesised. This meant that all the instruments measuring job satisfaction, strain and stress of conscience were correlated to some degree. Furthermore, the two instruments measuring job satisfaction correlated to a greater extent than for the instruments measuring strain and stress of conscience, which thus indicates convergent validity. The inverse correlations between the instruments measuring job satisfaction and the instruments measuring strain/stress of conscience on the other hand indicate the divergent validity. The reliability was high for all the four instruments, indicating the homogeneity of the construct. However, the alphas indicate a redundancy of items in all instruments except the Stress of Conscience Questionnaire, which implies a need for further reduction of items and development of the instruments. The test-retest reliability of all instruments except the Job Satisfaction Questionnaire showed a good agreement at the test points, indicating that the constructs are stable and adequate to use for tests over time.

There were however psychometric problems concerning the data quality of the instruments, the Psychosocial Aspects of Job Satisfaction had the highest level of internal missing values (33.9%). This could be, however, a consequence of the instrument including as many as 49 questions, which can increase the risk for the participants missing questions by mistake or finding the questions not applicable (cf. Streiner and Norman 2008). This is the plausible reason for the high level of missing

values concerning the items about praise and criticism from subordinates being as the NAs do not have any obvious subordinates. The rationale for not initially omitting these questions was that the instrument had been previously used for this work group and context, and no comparisons would be possible if the instrument was modified. Furthermore, it was noteworthy that approximately 80 per cent of the sample did answer these questions, which may indicate that there are informal hierarchal structures among the NAs, which could be of value for further research. The Stress of Conscience Questionnaire had problems with floor effects, indicating that the instrument is not sufficiently sensitive. This meant that no positive effects of an intervention could be shown for almost 17 per cent of the NAs due to the initial ratings of stress of conscience never occurring. These findings are somewhat inconsistent with previous research showing that staff found aspects related to stress of conscience being a major concern for staff in dementia care (Juthberg et al. 2008). One reason for the floor effect could be due the ethical dimension of the questions that might have influenced the NAs to answer the questions in a social desirable way (cf. Streiner and Norman 2008). However, the mean scores of stress of conscience in this study were exceedingly lower than in other studies (e.g. Glasberg et al. 2006, Juthberg et al. 2007), indicating that there was a selection bias for this sample. This could be due to the selection criteria for the residential care facilities in the intervention study including that they were stable with no organizational problems and biased the results towards more positive ratings and thus influenced the floor effects in this study.

Conclusions and clinical implications

In conclusion, the results of this thesis showed that job satisfaction, strain and stress of conscience among NAs working in residential care for older people and its relationship to demographic and work-related aspects are indeed a complex system of inter-related aspects. Even if this thesis does not provide all the answers, it can contribute to an understanding of the jigsaw puzzle of the NAs working life. A positive caring climate at the residential care unit stands out as one of the most important aspects related to both positive and negative affects towards work. However, the prerequisites for providing a good job in terms of a high extent of personalizing care, perceiving a high amount of organizational and environmental support and last but not least having leaders and managers with good leadership characteristics also seems as important for the NAs wellbeing at work.

When the NAs themselves recounted their experience of job satisfaction, they predominately focused on the core of nursing care i.e. the nurse-patient encounter, or rather the NA-resident encounter. This aspect is only included to a lesser extent in instruments measuring job satisfaction, which highlights the need for a critical review of the construct validity of instruments measuring job satisfaction in similar contexts. Even if the instruments measuring job satisfaction, strain and stress of conscience in this thesis each had psychometric problems, the one that stands out with the best psychometric properties was the Strain in Dementia Care Scale. The clinical implications of this thesis mainly concerns the important role that leaders and managers in residential care have in promoting a positive work environment and to prevent strenuous aspects of work. This concerns organizational aspects and the caring climate but foremost providing prerequisites for the NAs to perform a high quality care as this seems to be the key for satisfaction at work.

Further research

- The results in this thesis imply the need for supportive interventions that include positive and negative affectivities of the NAs working life, both concerning intrinsic and extrinsic aspects, as extrinsic working characteristics could prevent strain and stress of conscience while intrinsic characteristics and the general climate could enhance the NAs' job satisfaction. It also seems of utmost importance that such interventions also address the NAs' prerequisites to provide high quality care.
- There is a need of further research based on study designs with repeated measurements over time due to the cross-sectional design in this thesis limits conclusions concerning causalities.
- There is also a need for further development of the instruments used in this thesis, especially concerning job satisfaction. In order to increase the construct validity there seems to be a need to also include aspects related to the nurse-patient encounter and the quality of care provided.
- Another issue that needs to be further addressed in future research is the relatively high amount of floor/ceiling effects that affect the sensitivity of the instruments, as well as the weighting of the questions in the Strain in Dementia Care Scale and the Stress of Conscience Questionnaire. Even if the present twofold format seems important when addressing these issues, it can have major consequences for the data quality in terms of high levels of internal missing values. There is thus a need for further discussions and instrument development concerning the balance between weighting the items and its effect on the data quality.

Summary in Swedish

Svensk sammanfattning

Arbetsstillfredsställelse, påfrestning och samvetsstress bland vårdpersonal som arbetar på vård och omsorgsboenden för äldre personer

Äldrevården har de senaste decennierna förändrats från att äldre personer har vårdats på institution till att äldre personer i större utsträckning bor kvar i sitt eget hem. Detta leder till att den äldre personen inte flyttar till vård och omsorgsboende förrän hemsituationen blir ohållbar och behoven av kommunal vård och omsorg är omfattande. En följd av denna organisatoriska förändring av äldreomsorgen är att personer som vårdas på vård och omsorgsboenden idag har omfattande vård och omsorgsbehov, med högre grad av multisjuklighet och kognitiv svikt. Med detta taget i beaktande är det kanske inte så konstigt att forskningen kring vårdpersonalens situation de senaste decennierna har fokuserat på vårdpersonalens påfrestning i arbetet. Man har i dessa studier kommit fram till att påfrestning i arbetet bland annat är relaterat till olika viktiga aspekter så som vårdpersonalens ålder och yrkeserfarenhet, arbetsmiljö och ledarskapet på enheten samt den emotionella påfrestningen i arbetet. I tider med knappa resurser och fokus på slimmade effektiviserade organisationer finns det risk för att personalen har svårt att hinna med. När vårdpersonalen känner att de inte har möjlighet att utföra vård och omsorg som är förenligt med deras intentioner kan detta leda till dåligt samvete och i förlängningen till ökad påfrestning och samvetsstress. Trots den dystra bilden som målas upp av massmedia och en stor del av forskningen, skattar dock vårdpersonalen att de har hög grad av arbetsstillfredsställelse. Detta tyder på att deras upplevelse av påfrestning och arbetsstillfredsställelse inte har ett motsatsförhållande utan att det snarare är olika aspekter som kan vara viktiga för positiva och negativa upplevelser av arbetet var för sig. Av den forskning som har gjorts kring vårdpersonalens arbetsstillfredsställelse har flertalet studier fokuserat på de aspekter som är associerade med låg arbetsstillfredsställelse och mindre på det som bidrar till hög arbetsstillfredsställelse vilket kan bero att normen inom medicinsk forskning är fokus på problemen och det sjuka snarare än det friska och som kan generera hälsa. Det har dock visats att vårdpersonalen yrkeserfarenhet, graden av personcentrerad vård och vårdklimat på enheten är av betydelse även för vårdpersonalen arbetsstillfredsställelse. Det som dock är studerat i mindre utsträckning är statistiska modeller över hur mycket dessa aspekter tillsammans kan förklara

vårdpersonalens arbetstillfredsställelse och påfrestning/samvetsstress. Detta skulle kunna ge ökad kunskap av komplexiteten i vårdpersonalens upplevelse av arbetstillfredsställelse och påfrestning/samvetsstress.

När man använder enkäter som metod för att undersöka ett begrepp är det viktigt att enkätens frågor hänger ihop och innehåller de delar som begreppet handlar om. För att säkerställa detta behöver instrumentens (enkäterna) validitet och reliabilitet studeras, eftersom bristande psykometriska egenskaper hos instrument försvårar möjligheten att dra giltiga slutsatser av resultaten. Dessutom kan användandet av olika metoder i två studier validera varandras resultat. När det gäller vårdpersonalens upplevelse av sin arbetstillfredsställelse, har få studier genomförts. Genom att fråga vårdpersonalen själva om deras upplevelser av arbetstillfredsställelse kan man få viktig information som kan validera både enkäterna och resultaten som generas från dem. Således var det övergripande syftet med denna avhandling att undersöka och utforska arbetstillfredsställelse, påfrestning och samvetsstress bland vårdpersonal (d.v.s. undersköterskor och vårdbiträden) som arbetare på vård och omsorgsboenden för äldre personer. Avhandlingen är en sammanläggningsavhandling och består av fyra delarbeten med respektive delsyfte:

- I. Att utforska vårdpersonalens upplevelse av arbetstillfredsställelse på vård och omsorgsboenden.
- II. Att undersöka arbetstillfredsställelse och vilka faktorer som är relaterade, bland vårdpersonal som arbetar på vård och omsorgsboenden.
- III. Att undersöka påfrestning och samvetsstress och vilka faktorer som är relaterade, bland vårdpersonal som arbetar på vård och omsorgsboenden.
- IV. Att psykometriskt utvärdera fyra instrument som mäter vårdpersonalens arbetstillfredsställelse, påfrestning och samvetsstress på vård och omsorgsboenden.

Avhandlingen bestod av både kvalitativa (I) och kvantitativa studier (II-IV). Den kvalitativa studien (I) bestod av sex fokusgruppsintervjuer med 36 vårdpersonal (35 undersköterskor och ett vårdbiträde) som arbetade på vård och omsorgsboenden för äldre personer i södra Sverige. De transkriberade intervjuerna analyserades med konventionell innehållsanalys. De kvantitativa studierna II och III bestod av frågeformulär som besvarades av 226 undersköterskor och vårdbiträden som arbetade på vård och omsorgsboenden i en större stad i södra Sverige. Avseende låg, moderat och hög arbetstillfredsställelse samt låg och hög påfrestning och samvetsstress gjordes för vårdpersonalens personliga uppgifter så som till exempel ålder, kön och utbildning. Dessutom gjordes jämförelser avseende personalens känsla av sammanhang, person-centrerad vård, vårdklimat, vårdkvalitet, generellt arbetsklimat och ledarskap. Dessutom undersöktes om dessa aspekter var associerade med vårdpersonalens arbetstillfredsställelse, påfrestning och samvetsstress (II-III). I studie

IV undersöktes instrumentens validitet och reliabilitet genom ett mindre urval av vårdpersonalen i studie II och III ($n=114$) som besvarade frågeformulären avseende arbetstillfredsställelse, påfrestning och samvetsstress vid två tillfällen.

Resultatet i studie I visade att det som vårdpersonalen först och främst upplevde som tillfredsställelse i arbetet skedde i mötet, det vill säga när de kunde *skapa betydelsefulla relationer med boende och deras anhöriga*. Detta handlade om att vårdpersonalen kände en speciell kontakt med den boende och dennes anhöriga och kände att de fick ta del av den andres livsvärld. Det var också viktigt för vårdpersonalen att kunna vara i nuet med den boende för att de betydelsefulla relationerna skulle kunna skapas. Vårdpersonalen kände också arbetstillfredsställelse när de fick *förutsättningar att använda och utveckla sin kompetens*. Det handlade om att balansera sitt personliga engagemang i arbetet som oftast sågs som positivt men också kunde förvandlas till en negativ känsla. Att hantera svåra omvårdnadssituationer och lyckas vända dessa situationer till något gott för den boende var också en viktig del i användandet och utvecklingen av den egna kompetensen. Att bli bekräftad av de boende, deras anhöriga, kollegor och ledare skapade en synergi där vårdpersonalen ansträngde sig ännu mer. Förutsättningar för att växa som i sin yrkesroll var att få handledning när det var svårt att tolka och förstå och i förlängningen hantera boende som upplevdes vara aggressiva eller utåtagerande. Dessa tillfällen gav möjlighet till diskussion och reflektion. Vidare var det viktigt att få utvecklas genom att gå på föreläsningar och utbildningar. Vårdpersonalen upplevde också arbetstillfredsställelse när de arbetade i *en harmonisk och inspirerande miljö*. När vårdpersonalen kände sig som en del i en gemenskap där samarbetet med kollegorna innebar att de kunde lita på varandras förmåga och vilja att ge god vård och omsorg. Humor var en viktig ingrediens och gjorde tillvaron ljusare för både vårdpersonalen, de boende och deras anhöriga. Även den fysiska utomhus och inomhusmiljön var viktig. När man hade en gemensam värdegrund kring hur god vård ska ges och när man värdesatte varandras olikheter och kunskaper i ett tillåtande arbetsklimate med utrymme för personliga olikheter och preferenser, kändes miljön både harmonisk och inspirerande.

Resultaten i studie II och III visade att ett positivt vårdklimat var den faktor som förklarade mest av vårdpersonalens skattning av hög arbetstillfredsställelse, och låg påfrestning/samvetsstress. Andra faktorer som var relaterade till hög arbetstillfredsställelse och låg påfrestning/samvetsstress, var en hög grad av organisatoriskt och miljömässigt stöd, personcentrerad vård och ett positivt ledarskap. Däremot var hälsoproblem relaterat till låg arbetstillfredsställelse och hög påfrestning/samvetsstress. Det generella klimatet var relaterat till hög arbetstillfredsställelse men inte till påfrestning/samvetsstress medan låg utbildning och att arbeta på demensenheter var relaterat till hög påfrestning/samvetsstress men inte till arbetstillfredsställelse.

Den psykometriska utvärderingen av instrumenten som mätte vårdpersonalens arbetstillfredsställelse, påfrestning och samvetsstress i studie IV visade på flera brister.

Instrumentet som mätte den generella arbetstillfredsställelsen hade bristande stabilitet vid upprepade tester med två veckors mellanrum. Instrumentet som mätte tillfredsställelse med vården hade brister i homogeniteten i de underliggande faktorerna och instrumenten som mätte påfrestning och samvetsstress hade både brister avseende sensitiviteten eftersom golveffekterna var stora. Dessutom bidrog viktningen av frågorna i dessa instrument till att det interna bortfallet blev högre.

En metodologisk svaghet i denna avhandling är att studie II och III byggde på tvärsnittsdata, vilket innebär att resultaten inte kan svara på om det är de relaterade faktorerna som orsakar arbetstillfredsställelse, påfrestning och samvetsstress eller tvärt om. En annan metodologisk svaghet är att de som har deltagit i de olika studierna förmodligen tillhör en grupp vårdpersonal som är motiverade att delta och som arbetare på relativt stabila enheter. Detta begränsar överförbarheten av studiernas resultat, såväl nationellt som internationellt. Det vi dock kan utläsa av resultaten i studie II och III är framförallt att ett positivt vårdklimat men också en hög grad av organisatoriskt och miljömässigt stöd, en hög grad av personcentrerad vård och ett positivt ledarskap är av betydelse för hög arbetstillfredsställelse och låg påfrestning/samvetsstress. Detta är i linje med flertalet av de studier som tidigare undersökt detta och verifieras också när vårdpersonalen själva beskriver vad de upplever som tillfredsställande i arbetet. Det som dock inte täcks av instrumenten i de kvantitativa delstudierna I-IV är vikten av att få den där speciella kontakten i "mötet" med de boende och deras anhöriga. Detta var det mest centrala för att vårdpersonalen skulle känna arbetstillfredsställelse i studie I och tydliggör att det vårdpersonalen är mest tillfredsställd med handlar om kärnan av omvårdnad det vill säga relationen och mötet mellan vårdare och patient.

Samtidigt visar resultaten också på att de vardagliga situationerna och mötena mellan vårdpersonal och boende ses som självklara och i viss mån nedvärderas till "de små sakerna" och "det lilla", när det i realiteten är i dessa situationer det stora sker både för personalen själva i form av arbetstillfredsställelse men också för vårdkvaliteten och för livskvaliteten för de boende. Detta kan i sin tur ställas emot att studier som visar att vårdpersonals upplevelse av påfrestning inte primärt handlar om mötet med vårdtagaren utan att det främst är organisatoriska hinder som är fokus. Således tycks det vara flera aspekter som är relaterade till både positiva och negativa upplevelser av arbetet men de har olika tonvikt och vissa aspekter är enbart relaterade till arbetstillfredsställelse eller påfrestning/samvetsstress.

När det gäller den psykometriska utvärderingen av arbetstillfredsställelse, påfrestning och samvetsstress i studie IV hade instrumenten brister när man tittade på detaljnivå, dock så är ju frågeformulär konstruerade för att ett set med frågor som rör ett fenomen är mer robust än en enstaka fråga. När man använde instrumenten på totalskalenivå i studie IV var instrumentet som mäter personalens skattning av påfrestning det som hade bäst psykometriska egenskaper. De problem som detta

instrument hade i form av många som svarade det lägsta svarsalternativet, det vill säga golveffekter försvann när frågorna transformerades till en totalsumma. En modifiering av instrumentets svarsalternativ skulle dock sannolikt minska golveffekterna på frågenivå och öka sensitiviteten ytterligare.

Således visar denna avhandling att det mest centrala när vårdpersonalen själva beskriver hur de upplever sin arbetstillfredsställelse, sker i mötet med de boende och deras anhöriga. De resultat som kom fram genom att vårdpersonalen besvarade frågeformulär fångar dock inte den dimensionen av omvårdnaden. Däremot bekräftade resultaten av vårdpersonalens upplevelse av arbetstillfredsställelse det som framkom som relaterat till hög arbetstillfredsställelse och lång påfrestning/samvetsstress. Det var framför allt ett positivt vårdklimat följt av en hög grad av organisatoriskt och miljömässigt stöd, en hög grad av personcentrerad vård och ett positivt ledarskap. Det som var relaterat till låg arbetstillfredsställelse och hög påfrestning/samvetsstress var hälsoproblem. Utvärderingen av instrumenten visade på en del brister som dock reducerades när instrumenten utvärderades på totalskalenivå. Strain in Dementia Care Scale (SDCS) var det instrumentet som hade bäst psykometriska egenskaper.

Acknowledgements

This thesis was carried out at the Department of Health Sciences, Faculty of Medicine, Lund University. I would like to express my sincere gratitude to everybody who helped and supported me through the process of my doctoral work and studies. In particular I would like to thank:

All *the participants* in the studies, for sharing invaluable experiences, insights of the ‘little things’ that in essence are the great things of job satisfaction and quality of care in residential care for older people. Furthermore, I want to thank all the *managers* who facilitated and made it possible for the participants to take part of the studies during working hours, and *the coordinators* in respective city district for managing the data collection.

My supervisor *Anna-Karin Edberg*, at the department of Health and Society, Kristianstad University and the Swedish Institute for Health Sciences (Vårdalinstitutet). Thank you for guiding me when my confidence was low, sharing your knowledge and showing me the way to cope with both professional and personal aspects of ‘research life’. During the doctoral studies you gave me the possibility to travel around the world: Canada, Singapore and South Korea as well as inviting me to scientific retreats in your lovely home in Arkelstorp. Thank you for showing me the possibility and synergies of hard work and pleasure combined.

My assisting supervisors, Associate Professor *Ulf Jakobsson* for making statistics make sense to me and for having faith in me managing to do ‘the job’ and for always having pragmatic answers to my critical and anxious questions concerning the statistics in my thesis.

My assisting supervisor *Lennart Minthon* for introducing me to the Memory Clinic research group and for inspiring discussions about how to implement the findings of this thesis into future practice.

My co-authors *Ellinor Edfors* and *Ingela Beck* for your support and for sharing the devotion for aged care and the work-situation of NAs working in residential care.

The *co-workers* in the Strain project beside my main supervisor, *Mike Bird* and *Katrina Anderson* for interesting talks in the process and development of the Strain in Dementia Care Scale. A special thanks to *Mike* and his wife *Kirsten* for your hospitality at our scientific retreat at Bangor University, *Wales*.

All *PhD-students* in the seminar group at the Department of Health Sciences that with their critical eyes helped me to improve my papers. Through these seminars the process of an emerging scientists and critical friend has evolved. Special thanks to *Ingalill Rahm Hallberg* for admitting me to the seminar group, and *Ulf Jakobsson* and *Jimmie Kristensson* that among others supervised the seminars.

All the *PhD students and co-workers* of the Swedish Institute of Health Sciences (Vårdalinstitutet) for having outstanding post-graduate courses and workshops with valuable lectures and discussions in an inspiring environment. A special thanks to Professor *Gerd Ahlström*, Director of the institute and to *Anna Blomgren*, *Niklas Frost* and *Magnus Hovde* for outstanding administrative and technical support.

All the *co-workers and participants* of the workshops held by the Swedish Brainpower Consortium. I especially want to thank *Bengt Winblad* and *Gunilla Johansson* for outstanding work-shops and for making me feel welcome and being a part of something great. It has been inspiring to be a part of a dementia specific network where all share the same interests from biomedical research, IT, medicine and the care for persons with dementia etc. I want to especially thank *Helle Wijk* and *Hanna Falk* for your hospitality and scientific discussions as well as all the fun we had together at the SBP workshops, and during other scientific retreats and international conferences.

All the *colleagues and friends* at the department of Health Care Science for everyday discussion about research and life. Thank you all for great laughs during coffee breaks.

All the *directors and staff* at the Memory Clinic at Skånes University Hospital for encouraging me and giving me the support and means during my doctoral studies. A special thanks to *Helena Åkesson*, ward manager and *Christer Nilsson*, director of the Psychogeriatric Clinic, Lund University hospital at the time my doctoral studies began. Without the encouragement and support from you, I would not even have considered this course of action possible.

Patricia Shrimpton, *Christina Nilsson-Possada* for revising the language in the papers and a special thanks to *David Brunt* for revising the language in the papers and framework of the thesis.

Dan Lindberg through your generosity, my everyday life during my doctoral studies became easier to manage. I could afford buying equipment as well as going to national and international workshops and conferences without it affecting my family and private life.

Vårdförbundet and *Maggie Stephens foundation* for travel grants during my doctoral studies.

My *dear friends, old and new ones* that put out with me being absent both in body and in spirit but still were there for me whenever I called. A special thanks to my friends and neighbours, *Mats and Susanne Johansson* without your everyday help with babysitting and just being around and never turning down spontaneous get-togethers helped me through rough times.

My *family and in-laws* thank you all for your support and for believing in me. A special thanks to my father *Oddvar Orrung* for always showing an interest in my research field and sending my notes and articles that could be of interest for me. A special thanks to my mother *Barbro Orrung* that came to the rescue whenever I needed help with babysitting, transcribing interviews or when I needed a speaking partner.

Last but certainly not least I would like to thank my husband *Johnny* and children *Oskar and Amanda* for putting up with me in the darkest hours as well as being a part of and contributing to the brightest of moments in my life. It was through your love and support that I managed to finish the thesis.

The thesis was financially supported by the Swedish Brainpower Consortium, the Faculty of Medicine at Lund University, Vårdalinstitutet, King Gustaf V and Queen Victoria's Foundation, the Dementia Foundation, the Memory Clinic, Skåne University Hospital and the Solstickan Foundation.

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