

Gørill Haugan

**Self-transcendence, well-being,
and nurse-patient interaction
in cognitively intact nursing
home patients**

Thesis for the degree of Philosophiae Doctor

Trondheim, March 2013

Norwegian University of Science and Technology
Faculty of Social Sciences and Technology Management
Department of Social Work and Health Science



NTNU – Trondheim
Norwegian University of
Science and Technology

NTNU

Norwegian University of Science and Technology

Thesis for the degree of Philosophiae Doctor

Faculty of Social Sciences and Technology Management
Department of Social Work and Health Science

© Gørill Haugan

ISBN 978-82-471-4229-5 (printed ver.)
ISBN 978-82-471-4230-1 (electronic ver.)
ISSN 1503-8181

Doctoral theses at NTNU, 2013:66

Printed by NTNU-trykk

CONTENTS

ACKNOWLEDGEMENTS	3
SUMMARY	4
NORSK SAMMENDRAG	5
LIST OF PAPERS	7
DEFINITIONS AND KEY CONCEPTS	8
ABBREVIATIONS	9
1. INTRODUCTION	9
1.1. THE NURSING HOME SETTING AND POPULATION	12
2. THE “FOURTH AGE” – PSYCHOSOCIAL DEVELOPMENT	15
3. THE SELF-TRANSCENDENCE THEORY	18
3.1 THREE MAJOR PROPOSITIONS	18
3.2 CONNECTEDNESS - THE ESSENCE OF SELF-TRANSCENDENCE	19
3.3 EMPIRICAL RESEARCH ON SELF-TRANSCENDENCE	20
3.4 THE PARTICULAR CONTRIBUTION OF THE SELF-TRANSCENDENCE CONSTRUCT IN LONG-TERM NURSING HOME CARE	20
4. WELL-BEING/QUALITY OF LIFE IN NURSING HOMES	22
5. NURSE-PATIENT-INTERACTION	28
5.1 A HOLISTIC NURSING APPROACH	28
5.2 THEORY OF HUMAN CARING	29
5.3 CARING AND THE NURSE-PATIENT-INTERACTION	29
6.0 SUMMING UP: WHAT IS KNOWN AND WHAT IS YET UNKNOWN?	31
6.1 WHAT IS ALREADY KNOWN	31
6.2 WHAT IS YET UNKNOWN	32
THE STUDY’S FOUR PAPERS	33
7. AIMS AND RESEARCH QUESTIONS	33
7.1 PAPER 1 – AN INVESTIGATION OF THE FACTOR STRUCTURE OF THE SELF-TRANSCENDENCE SCALE	33
7.2 PAPER 2 – THE RELATIONSHIPS BETWEEN SELF-TRANSCENDENCE AND GENERAL WELL-BEING	34
7.3 PAPER 3 – THE RELATIONSHIPS BETWEEN SELF-TRANSCENDENCE AND SPIRITUAL WELL-BEING	35
7.4 PAPER 4 – THE RELATIONSHIPS BETWEEN NURSE-PATIENT-INTERACTION AND SELF-TRANSCENDENCE	36
7.5 IN SUMMARY - HYPOTHESES TO BE TESTED IN THIS STUDY	37
8. MAIN METHODS	39
8.1 DESIGN AND ETHICAL CONSIDERATIONS	39
8.2 PARTICIPANTS	39
8.3 MEASURES	40
8.3.1 <i>The self-transcendence scale (Paper 1-4)</i>	40

8.3.2 <i>General well-being – the FACT-G questionnaire (Paper 2)</i>	41
8.3.3 <i>Spiritual well-being - the FACIT-Sp questionnaire (Paper 3)</i>	42
8.3.4 <i>The Nurse-Patient-Interaction Scale (Paper 4)</i>	43
8.3.5 <i>Background variables</i>	44
8.4 STATISTICS	44
8.4.1 <i>Reliability and validity</i>	45
8.4.2 <i>Validity and reliability of the scales</i>	46
9. MAIN RESULTS	49
9.1 PAPER 1	49
<i>A two-factor structure of the self-transcendence scale</i>	49
9.2 PAPER 2	50
<i>Self-transcendence affects physical, social, emotional, and functional well-being</i>	50
9.3 PAPER 3	51
<i>Self-transcendence affects spiritual well-being</i>	51
9.4 PAPER 4	52
<i>The nurse-patient-interaction affects self-transcendence</i>	52
9.5 DESCRIPTIVE ANALYSIS	53
9.6 SPIRITUAL WELL-BEING AFFECTS EMOTIONAL AND FUNCTIONAL WELL-BEING	54
9.7 SIGNIFICANT RELATIONSHIPS DISPLAYED IN THIS STUDY	55
10. DISCUSSION	57
10.1 THE FACTOR STRUCTURE OF THE SELF-TRANSCENDENCE SCALE	59
10.2 SELF-TRANSCENDENCE INFLUENCES MULTIDIMENSIONAL WELL-BEING	59
10.2.1 <i>Interpersonal self-transcendence</i>	60
10.2.2 <i>Intrapersonal self-transcendence</i>	63
10.2.3 <i>Self-transcendence – explanatory factor for well-being</i>	65
10.2.4 <i>Nurse-Patient-Interaction influences self-transcendence</i>	66
10.2.5 <i>Validation of relevant questionnaires</i>	68
The Self-Transcendence Scale (STS)	68
The Nurse-Patient-Interaction Scale (NPIS)	68
11. LIMITATIONS	70
12. PRACTICAL APPLICATIONS	72
13. SUGGESTIONS FOR FUTURE STUDIES	76
14. REFERENCES	77
THE STUDY PAPERS	90
PAPER 1	
PAPER 2	
PAPER 3	
PAPER 4	
SUPPLEMENTAL INFORMATION - APPENDIX	

ACKNOWLEDGEMENTS

This thesis has been carried out at the Norwegian University of Science and Technology, department of Social Work and Health Science. The dissertation research project was financed by Faculty of Nursing, Sør-Trøndelag University College, Norway. I would like to express my sincere appreciation to Faculty of Nursing and the Dean Anne Tveit for supporting this work.

I express my deepest gratitude to everyone who has been involved and who has supported me throughout this long-lasting working process. First, I am grateful to all the nursing home patients who were willing to participate in this study and willingly shared their experiences of living in a nursing home. Also, the leaders and the staff nurses in the 44 nursing homes did a wonderful job to select the potential participants for this study. I am grateful for all your help and kindness!

I express my deep gratitude to my supervisors, and my sincere gratitude goes specifically to:

Professor Geir Arild Espnes, ISH, NTNU, my main supervisor, for contributing as co-author of my papers and for your constant enthusiasm, constructive criticism, supervision, and encouragement during my work with this thesis. A special thanks for your wholehearted way of spreading positivity!

Associate Professor Toril Rannestad, ASP, HIST, my co-supervisor. Thank you for enthusiasm, encouragement, constructive criticism, supervision, and inspiring contribution as co-author, for your advice, as well as your warm support as a human being and colleague.

Associate Professor Helge Garåsen, FM, NTNU, my co-supervisor. Thank you for joining me on this exciting journey, and for your constructive criticism and contribution as co-author of my papers.

Associate Professor Randi Hammervold, TBS, HIST; thank you for never-failing belief in me and for your statistical supervision, advice, discussions as well as personal support. Thanks for your constructive contribution as a co-author of my papers.

All my friends, in particular Lars Inge Berge and Britt Karin Støen Utvær; thanks for willingly and patiently discussing methodological challenges during this scholarly work.

Throughout my dissertation, I have been part of a research and support working environment at the Research Centre for Health Promotion and Resources, HIST/NTNU. Thanks to all my good colleagues, both at the Research Centre and the Faculty of Nursing, HIST.

Finally, but not least, I am deeply grateful to my dear family for your great concern and support during these hard-working years: my daughters Line Maria and Ingelinn, and my son André for in your own very unique way making my life worth living, and making me proud to be your mum.

SUMMARY

Aim: The main aim of this study was to investigate and explore the associations between self-transcendence, multidimensional well-being, and nurse-patient-interaction among cognitively intact nursing home patients.

Background: A growing body of knowledge demonstrates self-transcendence as a developmental inner quality of personal maturity in later life. Self-transcendence is a correlate to well-being in various populations, and is particularly significant in vulnerable populations, such as nursing home patients. In the long-term care setting, much time is available for interaction between patients and staff nurses. Previous research demonstrates quality of nursing care and interaction with the staff nurses as core aspects contributing to well-being and thriving in nursing homes.

Methods: The sample comprised 202 cognitively intact nursing home patients from 250 potential participants representing 44 rural and urban nursing homes. The data were obtained from one-on-one interviews in private. Self-transcendence was assessed by the self-transcendence scale, multidimensional well-being by the FACT-G quality of life and FACIT-Sp spiritual well-being questionnaires, and the nurse-patient-interaction by the Nurse-Patient-Interaction Scale. Statistical analyses were mainly applied by means of advanced approaches such as Structural Equation Modeling (SEM).

Results: Compared to previous reported results, a considerably lower mean score (mean=42.5) on self-transcendence was found. A two-factor construct of self-transcendence, comprising interpersonal and intrapersonal self-transcendence was psychometrically superior to the previous reported one-factor structure. The Nurse-Patient-Interaction scale was developed for the present study, showing good psychometric properties ($\alpha=.91$, $\rho=.82$). From all 26 hypotheses of directional relationships tested, 14 were supported. Self-transcendence related significantly with social, emotional, functional, and spiritual well-being, and demonstrated significant mediated influence on physical well-being. Moreover, the nurse-patient interaction affected significantly intrapersonal self-transcendence.

Conclusions: By means of structural equation modeling this study could point out more specific information about the mechanisms involved in the relationships between self-transcendence, multidimensional well-being, and nurse-patient-interaction, and hence provide more specific guidelines for nursing interventions promoting well-being in nursing home patients. Finding ways to enhance individuals' both interpersonal and intrapersonal self-transcendence might be beneficial in that sense. The nurse-patient-interaction seems essential in this matter.

NORSK SAMMENDRAG

Mål: Studiens hensikt var å undersøke og utforske sammenhengene mellom self-transcendence og fysisk, sosial, emosjonell, funksjonell og åndelig velvære, samt i hvilken grad interaksjonen mellom pleier og pasient påvirker self-transcendence hos kognitivt klare pasienter i sykehjem.

Bakgrunn: Self-transcendence, et uttrykk for personlig modenhet, beskrives som et korrelat og forklaringsvariabel for velvære hos sårbare populasjoner. Langtidspasienter i sykehjem anses som svært sårbare; de har erfart mange tap både av fysiske funksjoner, sosiale relasjoner, og sitt hjem. Kvaliteten på omsorgen, og kvaliteter i pleier-pasient-interaksjonen påvirker pasientenes trivsel, velvære og livskvalitet.

Metode: Studiens utvalg består av 202 av 250 kognitivt intakte langtidspasienter i 44 sykehjem fra by- og landkommuner i Norge. Fordi denne populasjonen har vansker med å fylle ut spørreskjema på egen hånd, besøkte en forsker den enkelte informant i sykehjemmet for å hjelpe med utfyllingen. Anvendte spørreskjema var self-transcendence skala, livskvalitetsskjemaet FACT-G (fysisk, sosialt, emosjonelt, funksjonelt velvære), FACIT-Sp (åndelig velvære) og Nurse-Patient-Interaction skala som ble utviklet for denne studien. Statistiske analyser ble i hovedsak utført ved bruk av SEM-analyse (Structural Equation Modeling).

Resultater: Gjennomsnitt for self-transcendence (mean=42.5) var lavere sammenlignet med tidligere rapporterte studier. En 2-faktor-modell bestående av interpersonlig og intrapersonlig self-transcendence viste bedre tilpasning til data og var psykometrisk bedre enn 1-faktor-modellen. Som en del av studien ble Nurse-Patient-Interaction skala utviklet og testet; skalaen viste gode psykometriske egenskaper ($\alpha=.91$, $\rho=.82$). I alt 26 hypoteser om direkte sammenhenger ble testet ved hjelp av SEM, hvorav 14 hypoteser fant støtte i data. Self-transcendence var signifikant relatert til sosialt, emosjonelt, funksjonelt og spirituelt velvære, samt signifikant indirekte relatert til fysisk velvære, mediert via funksjonelt og emosjonelt velvære. Intrapersonlig self-transcendence var signifikant influert av pleier-pasient-interaksjonen.

Konklusjon: Studien gir anbefalinger og kan være en veiviser for praksis med tanke på å bidra til økt velvære og livskvalitet blant kognitivt intakte langtidspasienter i sykehjem. Å finne gode måter å øke den enkelte pasients self-transcendence, både interpersonlig og intrapersonlig, er ønskelig i så måte. Utvikling av spesifikke guidelines for god sykepleieintervensjon er ønskelig for å bidra til økt velvære hos den enkelte pasient i sykehjem. Likeså er det nødvendig å videreutvikle personalets kunnskaper om og evne til bevisst å anvende pleier-pasient-relasjonen på en helsefremmende måte.

LIST OF PAPERS

This thesis is based on the following four articles:

- I. Haugan G, Rannestad T, Garåsen H, Hammervold R, Espnes GA (2012) «**The Self-Transcendence Scale – An Investigation of the Factor Structure among Nursing Home Patients.**» *Journal of Holistic Nursing*, 2012 Sep;30(3):147-59. Epub 2011 Dec 27
- II. Haugan, G, Rannestad, T, Hammervold, R, Garåsen, H, Espnes, GA (2012) «**Self-Transcendence in Cognitively Intact Nursing Home Patients – A Resource for Well-Being** ». *Journal of Advanced Nursing*, 2012 published online: 14 AUG 2012, DOI: 10.1111/j.1365-2648.2012.06106.x *in press*
- III. Haugan G, Rannestad T, Garåsen H, Espnes, GA (2012): «**The Relationships between Self-Transcendence and Spiritual Well-Being in Cognitively Intact Nursing Home Patients.**». *International Journal of Older People Nursing*, doi: 10.1111/opn.12018 *in press*
- IV. Haugan, G, Rannestad, T, Hanssen, B, Espnes, GA (2012) «**Nurse-Patient-Interaction and Self-Transcendence in Cognitively Intact Nursing Home Patients.**». *Journal of Clinical Nursing*, Dec;21(23-24):3429-41

DEFINITIONS AND KEY CONCEPTS

- Nursing Home:** A nursing home is a collective living place for frail older people who do not require hospital care, but cannot be cared for adequately and safely at home.
- Nursing home patient:** A long-term nursing home patient is a person who lives in a nursing home receiving accommodation, nursing care, and other health care services from relevant health care professionals as physicians, physiotherapists, or occupational therapists. The term nursing home patients has been under discussion in Norway, and terms such as user, client, and resident have also been used. Because generally, high incidence of chronic illness and functional impairments characterize long-term care patients, representing complex medical states typified by many different simultaneously diagnoses and high mortality, the term patient has been chosen for the purpose of this thesis.
- Self-transcendence:** A developmental process of change toward maturity, characterized by striving for new and deeper understanding of life, oneself, meaning, and acceptance of the self, others, and death; all of which support well-being.
- Multidimensional well-being:** For the purpose of this thesis multidimensional well-being comprises physical, social, emotional, functional, and spiritual well-being.
- Nurse-patient-interaction:** The construct nurse-patient-interaction is based in nursing theories of human caring grounded in a holistic approach. Holistic nursing care implies intrinsic aspects of nursing that produces therapeutic results and well-being in the person being served.

ABBREVIATIONS

AGFI	Adjusted Goodness-of-Fit Index	NTNU	Norwegian University of Science and Technology
ASP	Avdeling for sykepleie [Faculty of nursing]	ρ_c	Composite Reliability
CFA	Confirmative Factor Analysis	PWH	Physical Well-Being
CFI	Comparative Fit Index	QoL	Quality of Life
EFA	Exploratory Factor Analysis	REM	Rapid eye movement sleep
EWB	Emotional Well-Being	RMSEA	Root Mean Square Error of Approximation
FACIT-Sp	Functional Assessment of Chronic Therapy-Spiritual well-being	RN	Registered Nurse (sykepleier)
FACT-G	Functional Assessment of Chronic Therapy-General quality of life	SD	Standard Deviation
FM	Faculty of Medicine	SEM	Structural Equation Modelling
FWB	Functional Well-Being	SRMS	Standardized Root Mean Square Residual
GFI	Goodness-of-fit Index	ST	Self-Transcendence
HRQoL	Health Related Quality of Life	ST-1	Interpersonal Self-Transcendence
ISH	Institutt for sosialt arbeid og helsevitenskap [Department of Social Work and Health Science]	ST-2	Intrapersonal Self-Transcendence
LPN	Licensed Practical Nurse (hjelpepleier/helsefagarbeider)	STS	Self-Transcendence Scale
NFI	Normed Fit Index	SWB	Social Well-Being
NH	Nursing Home	TBS	Trondheim Business School
NNFI	Non-Normed Fit Index	QoL	Quality of Life
NPIS	Nurse-Patient-Interaction Scale		

1. INTRODUCTION

The center of this thesis is the encountering of potential resources for increasing cognitively intact nursing home patients' well-being. Nursing home patients represent a particularly vulnerable group characterized by numerous losses, illnesses, and disabilities resulting in a sense of worthlessness. Providing nursing care for these patients is demanding, whilst previous research points out that the nurse-patient-interaction is crucial for nursing home patients' well-being and thriving. Thus, finding ways to improve quality of care and nursing home patients' quality of life/well-being is fundamental. Self-transcendence is found to be a correlate to well-being in vulnerable patients with advanced illnesses and at the end of life. Therefore, this thesis investigates the associations between self-transcendence, well-being, and nurse-patient-interaction among cognitively intact nursing home patients.

The following little story is part of one of my former qualitative works comprising 17 in-depth interviews with cognitively intact nursing home patients (Haugan Hovdenes 2002). A frail and disabled nursing home patient described her experience as follows:

'I am lying here, all day. No one comes in to see me, only if my bed or my diaper should be changed, they'll come into my room. When I get spontaneous diuresis – it's just as if they are crying: "Give the hell! Give a Damn!" And then they leave; they do not care about the person who is laying there...they just see the diaper, it is wet or it is not wet? Oh, what a treasure; they take the diaper and leave'.

The interviewer asks: "How does this affect you?"

"I feel like a thing, I am reduced to a thing, ohhh! There is nothing more than 'poor it is', and we are fed and have to say 'Thank you'! Thanks for every sentence...Yet, we are paying a lot for being here. 'What is it called?' she said. 'Thank you', we said obediently. Then you are reduced to a thing.... Ohhh, they are crazy! I get the urge to rebel - against the system. But they are doing the best they can, from whom they have got to be...'

This story along with a number of similar patient stories in nursing homes (NH), have inspired me in conducting this research. As a clinical nurse and lecturer teaching gerontological nursing at an advanced level, the appeal in the patients' voices and faces have created in me a desire to provide knowledge to the field of NH care. This story is about how the nurses are

present together with the patients, when performing the different nursing tasks. The story illustrates vital aspects of being frail, dependent on nursing care, and one might sense that the nurse-patient-interaction seems crucial for the patient's sense of loneliness, despair, and dignity; all of which are essential to the NH patient's well-being. Nurses are increasingly aware that good nursing care consists of more than the competent performance of a number of nursing activities, such as making the bed and shifting the wet diaper. However, for many nurses it is much less clear what this "more" means and what importance it has in nursing.

Thus, the present study is motivated by a search for new and alternative perspectives on how nurses can provide well-being among NH patients. Self-transcendence is described as a correlate and a vital resource for well-being in vulnerable populations. Therefore, this study focuses on self-transcendence in relation to multidimensional well-being, and nurse-patient-interaction among cognitively intact NH patients.

With advances in medical technology and improvements in the living standard globally, the life expectancy of people is increasing worldwide. In the next 30 years, the number of people over 65 in the world will almost double to 1.3 billion (Kinsella & He 2009). The most rapidly growing segment is people over 80. By 2050 the percentage of those 80 and older will be 31 percent, up from 18 percent in 1980 (OECD 1988). This huge shift to an older population globally has given rise to the notions of the "third" (65-80 years) and "fourth" (over 80 years old) ages in the life-span developmental literature (Baltes & Smith 2003). This differentiation of the last part of the life-span into two separate phases is important because of the characteristic patterns of gains (growth) and losses (decline) seen in the "young old" and the "old old" (Kirkevold 2010). For many of those in the fourth age (80+), issues such as physical illness and approaching mortality decimates their functioning and subsequently lead to the need for NH care.

A large proportion of older people will live for a shorter or longer time in a NH at the end of life. This group will increase in accordance with the growing population older than 65, and in particular for individuals older than 80 years. The proportion of older people with residence in long-term care institution is increasing worldwide: currently 1.4 million older adults in the United States live in long-term care settings, and this number is expected to almost double by 2050 (Zeller & Lamb 2011).

By 2011 in Norway, the segment of people 67 years and older was 13%, and by 2050 this segment will reach nearly 23%. Moreover, by 2060 this may rise to 1.5 million with life expectancy increasing to 90.2 years for men and 93.4 years for women (Statistics of Norway 2010a). Currently, about 7.2% of Norwegians older than 67 years and 9.1% of people older than

80 years are living in Norwegian NHs. In total 44.000 Norwegians were NH patients by 2010, and nearly 73% were 80 years and older (Statistics of Norway 2010b).

This study defines NH as a long-term primary health care facility that offers skilled and basic 24-hour nursing care for chronically ill and disabled humans in frail health. To qualify to enter a NH, individuals must demonstrate substantial dependence due to physical or mental impairment (Nygaard 2002). The medical states of these patients are often complex with multiple diagnoses; they might need medical treatment, not to cure their illnesses, but for palliation (Linton & Lach 2007). Because of the number in need of advanced care and treatment, knowledge about quality of life (QoL) and well-being in NHs are becoming more important in research and practice.

Moving to a NH results from numerous losses, illnesses, disabilities, loss of functions and social relations, and approaching mortality, all of which increases an individual's vulnerability and distress; in particular, loneliness and depression are identified as risks to the emotional well-being of older people (Routasalo *et al.* 2006, Savikko 2008). The NH life is institutionalized, representing loss of social relationships, privacy, self-determination, and connectedness. Depression in NH patients is three to four times higher than in community-dwelling older adults (Jongenelis *et al.* 2004), and older people lacking social and emotional support tend to be more depressed (Grav *et al.* 2012). Social support is described to be a vital resource for QoL among NH patients (Drageset 2004, 2009).

This study includes lucid older adults with NH residence of six months or longer, thus they are supposed to get through with the crisis of relocating. NH services and nursing care increasingly targets those elderly with the greatest needs in terms of personal daily activities, while services supporting their psychosocial and spiritual needs tend to be ignored (Vaarama & Tiit 2007). QoL in an institutionalized environment is often thought to be strongly compromised (Baltes & Smith 2003, Bickerstaff *et al.* 2003). Hence, the NH setting might represent fewer possibilities for developing and preserving self-transcendence and well-being than are found among same-aged older adults living at home (Nygren *et al.* 2005, Reed 1991a).

Therefore, finding new and alternative approaches to increase well-being among NH patients is highly warranted (Drageset 2009). Self-transcendence is a vital resource for well-being that could offer a positive approach among vulnerable populations and at the end of life (Baker 2008, Ellermann & Reed 2001, Hoshi 2008, Hsu 2009, Reed 2009a). However, research on self-transcendence in NHs is scarce, as well as research exploring the plausible relationships between self-transcendence and multidimensional well-being. Patients suffering from dementia represent a large group comprising 70-80% of NH patients (Nygaard *et al.* 2000), thus mentally

intact NH patients constitute a minority, and unfortunately their needs have largely been given less attention and priority. Although many NH patients suffer chronic illnesses and physical impairment, their mind and spirit might be a resource to well-being. The holistic wellness model views individuals holistically as bio-psycho-social-spiritual units in whom the body, mind, and spirit are interconnected and affect one another (Glaister 2001, Guzzetta 2005, Narayanasamy *et al.* 2004, Quinn 2005).

Consequently, within a holistic framework of body-mind-spirit as a whole, patients' mental or spiritual needs cannot be separated from their body and their physical needs. Spiritual nursing care responding to patients' inner thoughts, emotions, and experiences, can improve the patients' physical and mental well-being altogether (Carpenter *et al.* 2008, Krupski *et al.* 2006). Hence, the nurse-patient-interaction in NHs is important to NH patients' well-being. Recent research demonstrates that older patients prefer and expect nurses to be caring, good listeners, and professional (Finch 2005, 2006, Harrefors *et al.* 2009, Haugan Hovdenes 2002). This study gives attention to the NH patients' mentality/spirituality resources, suggesting that self-transcendence and the nurse-patient-interaction are resources for well-being in cognitively intact NH patients.

1.1. THE NURSING HOME SETTING AND POPULATION

In accordance with the trend worldwide, Norwegian NHs constitute an important part of the national health care system, and are primarily intended for the frail elderly population. However, in general some beds in NHs are allocated for respite and rehabilitation, often named "short term care", and most NHs do also offer regular units or wards for people with severe dementia (Kirkevold & Engedal 2006). Although several NHs have a special care unit for dementias, the majority of mentally impaired patients stay together with cognitively intact patients in general wards. Moreover, a substantial amount of cancer deaths (10 to 25%) currently occurs in NHs (Kane 2003, Kass *et al.* 1991, Kausch & Amer 2007), and special NH beds are intended for palliation and end-of-life care (Gill *et al.* 2011, Temkin-Greener *et al.* 2012, van Soest-Poortvliet *et al.* 2011). In Norway about 40% of all yearly deaths happen in NHs, 40% occur in hospitals and the remaining 20% at home or elsewhere (Statistics of Norway 2010c). Norwegian health care authorities encourage such use of NHs which might be a good alternative provided that adequate resources are allocated to meet the patients' needs. Due to increasing cancer incidence and an aging population, this group is expected to expand, resulting in an increasing demand on hospitals and NH beds.

Admission to private or public NHs is regulated by local authorities. According to the national targets within Norwegian long-term care (1997-2008), all NHs are expected to offer single rooms for all patients. Currently this aim is almost realized, but still some patients are sharing their room with another person. Moreover, NH patients are sharing environments such as dining room and living room. Sharing the same environments might be a great challenge that influences on the patients' well-being and ability to thrive (Fiveash 1998, Hauge & Heggen 2008). Relocation to a long-term NH care is a major life event. After moving to a NH, people can initially experience feelings of disbelief, loss, and sadness. The decision to relocate is often participated by confusion and crisis (Magilvy & Congdon 2000, Ryan & Scullion 2000), and is often made in haste in hospital settings with little preparation.

The NH population is generally marked of high age, physical impairment, and high mortality. In Norway the mean age is 85 years and yearly mortality is about 35%; 5-years survival is about 10% - while mean duration of residence in Norwegian NHs is about 2-3 years (Høie 2005). Generally, high incidence of chronic illness and functional impairments characterize long-term care patients, representing complex medical states typified by many different, simultaneous diagnoses; they require different types of medical treatment, not to cure their illness, but for palliation. The most common diagnoses are dementia (40-48%), stroke (15-19%), chronic heart disease (5-6%), hip fracture (3-4%), and arthritis (3%) (Nygaard 2002). About nine out of ten need help washing and dressing and are not capable of walking up a stairway, three of four can't feed themselves, and all need help getting to the lavatory, while two of three patients never read a paper (Høie 2005). Accordingly, the main function of NHs is to help with activities of daily living (ADL) such as dressing, feeding, and personal hygiene.

However, as well as addressing these basic needs, NH care also addresses people's mental, social, and emotional well-being. Loneliness, social exclusion, low self-esteem and self-worthiness, for example, are all possible consequences of frailty and disability for which NH care can help (Forder & Caiels 2011, Tomaka *et al.* 2006). NH care increasingly targets those elderly with the greatest needs in terms of personal daily activities, while services supporting their psychosocial and spiritual needs tend to be ignored (Vaarama & Tiit 2007). Depression in NH patients is three to four times higher than in community-dwelling older adults (Jongenelis *et al.* 2004), and older people lacking social and emotional support tend to be more depressed (Grav *et al.* 2012).

In Norway education of NH professionals is regulated by laws and regulations (Ministry of Health and Care Services 1988). The NH caring staff comprises some registered nurses (RN), but mostly licensed practical nurses (LPN), while some are unskilled. The quality of care and

nursing ethics are regulated by the Municipal Health and Care Act (Ministry of Health and Care Services 2012), additionally by the professional code of ethics for nurses in accordance with International Council of Nurses guidelines. NH care is both a treatment and a living situation. It encompasses both the health care and social support services provided to individuals with chronic conditions or disabilities.

In spite of the variety of physical and mental disabilities of the patients and the increasing level of acuity of NH patients, the staffs are often too poorly trained to meet the patients' needs (Harrington *et al.* 2012). A growing body of literature is examining the relationships between nurse staffing levels in NHs and quality of care provided to NH patients. Studies have demonstrated that a focus solely on numbers of nurses fails to address the influence of other staffing factors such as turnover, training and experience of staff, the staffing characteristic variables, management and care organization (Castle & Anderson 2011, Paulsen *et al.* 2004, Spilsbury *et al.* 2011). The long-term care environment is often characterized worldwide by rigid schedules of unregulated care providers with limited education and training (Kaasalainen *et al.* 2010, Mentis & Tripp-Reimer 2002). Moreover, challenges in handling elder abuse and inadequate care (abuse, violence, neglect and maltreatment) in NHs have occurred in many countries (Malmedal *et al.* 2009a, Malmedal *et al.* 2009b, Pickens *et al.* 2011, Sandmoe *et al.* 2011, Sciamberg *et al.* 2011). Consequently, the NHs are an important part of the national health care system, intended to provide competent care and treatment to vulnerable populations. Finding ways to improve quality of care and NH patients' QoL is crucial.

2. THE “FOURTH AGE” AND THE “NINTH” PSYCHOSOCIAL DEVELOPMENT STAGE

As previously stated, the differentiation of the last part of the life-span into two separate phases, the “third” and the “fourth” age, is important because of the characteristic patterns of gains and losses seen in the third (65-80 years) and fourth (>80 years) ages. This differentiation has also inspired the expansion of Erikson’s theory of psychosocial development across the life-span (Erikson 1950) to include a “ninth developmental stage”¹. Thus, the notion of the “fourth age” and the “ninth stage” in Erikson’s developmental theory are intimately related. Erikson’s theory divides the life-span into nine stages, each of which encompasses a developmental crisis that the individual must resolve to achieve increasing personal maturity and wisdom. Each stage presents the individual with two opposing “poles”. The task is to attain the positive developmental goal. The individual should either accomplish the developmental task positively and move toward greater psychosocial maturity and strength, or else must move on with a developmental “weakness” (Erikson 1964). According to this theory the crises in old age entails integrity versus despair, which is resolved by the development of inner resources as personal maturity and wisdom, qualities providing well-being. The ninth stage entails facing these former developmental conflicts once again, but in a new light.

As emphasized in the previous sections, elderly NH patients with residence of six months or longer face frailty, illnesses, disabilities and therefore demands, reevaluations, and daily difficulties. In accordance with Erikson’s developmental theory, these concerns can only be adequately discussed, and confronted, by designating a new ninth stage to clarify these particular challenges (Erikson 1998). Despair, which occurs during the eighth stage, is a close companion in the ninth; in general, staying in a long-term NH facility implies that further losses of physical ability and death are forthcoming. Erikson’s chart of developmental stages across the life-span (Figure 1) portrays the developmental strength/maturity versus weakness belonging to each particular stage (Erikson 1950).

¹In Erikson’s last book on the subject, *The Life Cycle Completed*, his wife Joan M. Erikson added a «ninth stage» that applied to people who had become very old. In the book she wrote: “Old age in one’s eighties and nineties brings with it new demands, reevaluations, and daily difficulties” (*The Life Cycle Completed*, p.105). Therefore the reference Erikson EH (1998) is an extended edition of Erikson’s final work involving new material by his wife Joan M. Erikson.

STAGE	<i>The opposing «poles» (conflicts) of each developmental stage.</i>							
9 OLD OLD	The ninth stage brings along these former developmental conflicts in a new light							
8 LATE ADULT								Ego integrity versus despair
7 ADULT							Generativity versus stagnation	
6 EARLY ADULT						Intimacy versus isolation		
5 PUBERTY					Identity versus role confusion			
4 LATENCE				Competence versus inferiority				
3 GENITAL			Initiative versus guilt					
2 ANAL		Autonomy versus doubt & shame						
1 ORAL	Fundamental trust/confidence versus distrust							

Figure 1. Psychosocial development; the stages of Erikson (1950)

The ninth stage brings about these former developmental conflicts in a new light: patients in long-term NH care are forced to mistrust (stage 1) their own capabilities; even the simple activities of daily living may represent difficulty and require care and assistance from others. Hence, one's autonomy (stage 2) is challenged, resulting in losing self-control, initiative and purpose, all of which are associated with guilt, shame, doubt, and anxiety (stage 3). Moreover, in early stages individuals are learning, exercising, and developing competencies that stimulate enthusiasm, meaningfulness, and well-being (stage 4). In the ninth stage this inner force toward continuing learning and growth might be frustrated, and as a consequence NH patients might be confused about their identity (stage 5). While residing in a long-term NH facility, sustaining one's identity and integrity might prove difficult. The sixth developmental stage concerns intimacy (Erikson 1998); due to impairments and loss of close relationships, NH patients may be unable to involve in meaningful relationships. In total, 19% of the participants in the present study had a living spouse; this may be the general situation worldwide. Many have few visitors from family and friends, as family members may have trouble regularly visiting NH patients in person (Tsai & Tsai 2012). Thus, isolation, loneliness, and depression might appear. A growing number of studies have indicated emotional distress including feelings of guilt, anger, anxiety,

depression, and continued burden among family members after NH placement (Gaugler *et al.* 2004), which may complicate the relationship between the NH patient and the family member. Furthermore, visiting a NH as a relative may be a positive experience of being paid attention to and being involved in an encounter with the staff nurses; however, some relatives describe feelings of insecurity and discomfort resulting from experiences of being ignored by the staff (Westin *et al.* 2009). Consequently, nurses need support during their encounters with relatives in order to optimize the ability to provide a positive outcome for NH patients (*ibid.*).

Generativity (stage 7) which comprises the major life involvement of active individuals is no longer expected when living in a NH. However, not being needed may be felt as a designation of uselessness, resulting in experiences of worthlessness. When no challenges are offered, a sense of stagnation may well take over. As formulated by Erikson (1998): “If one should withdraw altogether from generativity, from creativity, from caring for and with others entirely, that would be worse than death” (p.112). Nevertheless, this seems close to what NH patients experience in their daily life. Isolation, loneliness, uselessness, worthlessness, and depression are common features among NH patients, all of which are detrimental to their well-being (Barca *et al.* 2009, Choi *et al.* 2008, Maloney 2009).

The eight developmental crisis entails integrity versus despair, which is resolved by the development of maturity and wisdom (Erikson 1950). In accordance with Erikson (1998), wisdom rests in the capacity to see, look, and remember, as well as to listen, hear, and remember. Additionally, NH patients have experienced several losses of relationships; some of distant relationships and some of more profound and close relationships, such as parents, partners, friends, and even children. Accordingly, several experiences of losses, sorrow, and changes have to be coped with. Plus, as a part of living in a NH, daily experiences of peoples’ disabilities, illnesses, and death are present; there is a clear message that death is nearby. From these reflections of challenges of the ninth stage, the developmental work of the fourth age is to accept and adjust well to the changes in physical abilities and one’s life situation with sustained integrity and dignity, finding meaning, inner peace, and well-being in the face of difficulties.

3. THE SELF-TRANSCENDENCE THEORY

Self-transcendence is defined as a “characteristic of developmental maturity wherein there is enhanced awareness of the environment and an orientation toward broader life perspectives” (Reed 2008, p.107). The idea of self-transcendence is inspired by human developmental theory emphasizing maturity as the developmental task in later life (Erikson 1950). In accordance with this theory, the developmental crisis in old age entails integrity versus despair, and is resolved by the development of inner resources as personal maturity and wisdom, qualities providing well-being. Self-transcendence is a process of change toward maturity, characterized by striving for new and deeper understandings of life, oneself, meaning, and acceptance of the self, others, one’s life situation, and death. The developmental process of self-transcendence is stimulated by the challenges of aging and coming to terms with death. Adults with higher levels of self-transcendence do not seek absolute answers to questions in life, but seek meaning in life events as integrated within a moral, social, and historical context (Reed 2008).

3.1 THREE MAJOR PROPOSITIONS

The self-transcendence theory comprises three major propositions (Figure 2) based on three key concepts of vulnerability, self-transcendence, and well-being (Reed 2008). The first proposition states that persons facing end-of-own-life issues are more vulnerable than persons not facing such issues, and that self-transcendence is greater in vulnerable persons; the more vulnerable, the greater self-transcendence. End-of-own-life issues are interpreted broadly, as they arise with life events, illness, aging, and other experiences that increase awareness of personal mortality and vulnerability (Coward 2010). The second proposition contents that expansions of self-boundaries (the core of self-transcendence) are related to well-being (Reed 1991b). Depending on their nature, fluctuations in self-boundaries influence well-being positively or negatively across the life-span. For example, an increase in self-transcendence views and behaviors is expected to be positively related to mental health as an indicator of well-being in persons confronting end-of-life issues (Reed 1991b). Thirdly, personal and environmental factors function as correlates, moderators, or mediators of the relationships between the three basic concepts of vulnerability, self-transcendence, and well-being.

The theoretical concept of self-transcendence addresses an enhanced understanding of *well-being* in late adulthood (Reed 2008), regarded as a sense of feeling whole and healthy, in accordance with one’s own criteria for wholeness and health (ibid.). *Vulnerability* reflects the

existential experience of personal mortality. NH patients are considered a particular vulnerable population, while transcending many losses, illnesses, and facing death. Consequently, their self-transcending search for meaning, hope, and integrity is strongly challenged. Figure 2 portrays a model for the sets of relationships established in the self-transcendence theory.

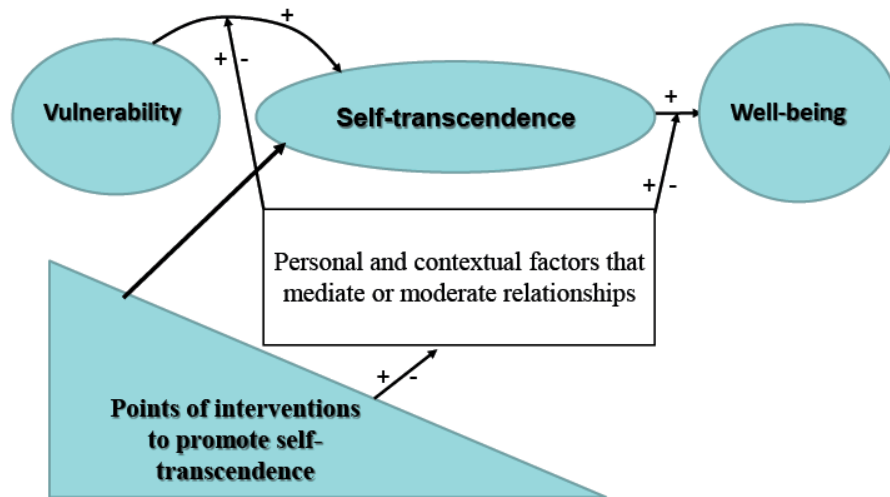


Figure 2. Model of self-transcendence theory from Reed (2008) Theory of Self-transcendence. In Smith & Liehr (eds 2008) Middle Range Theory for Nursing. Springer, New York. Used by permission.

3.2 CONNECTEDNESS - THE ESSENCE OF SELF-TRANSCENDENCE

The central core of self-transcendence is expansion of the self-boundaries through connectedness with the self, and between the individual, environment, and with a transcendent being (Reed 2008). Accordingly, self-transcendence refers to a multidimensional expansion of the self-boundaries intrapersonally (through self-acceptance and finding meaning in life), interpersonally (by reaching out to others or connecting with nature), transpersonally (by reaching out to a higher entity, being of purpose), and by temporality (by integrating one's past and future into the present; a dynamic process involving adaption to physical, emotional, and/or spiritual distress). Thus, self-transcendence comprises an interpersonal, intrapersonal, and a transpersonal aspect together with temporality: all of great impact for well-being in vulnerable people and at the end of life (Coward, 1991; Ellermann & Reed, 2001; Larson & Reed, 2007; Reed, 2009a, 2008; Reed & Coward, 2006; Runquist & Reed, 2007).

3.3 EMPIRICAL RESEARCH ON SELF-TRANSCENDENCE

Studies link self-transcendence to well-being in a variety of populations (Bickerstaff *et al.* 2003, Ellermann & Reed 2001, Hunnibell *et al.* 2008, Mellors *et al.* 1997, Reed 1991a). Self-transcendence is previously examined among vulnerable groups, particularly those who have experienced a life-changing diagnosis, such as AIDS (Kausch & Amer 2007, Mellors *et al.* 1997), cancer (Coward 1990, Coward & Kahn 2005) stem cell transplantation (Williams 2008), and in the homeless (Runquist & Reed 2007). Self-transcendence has also been explored in healthy populations (Baker 2008, Coward 1996) and in community-dwelling older adults (Hoshi 2008, Reed 1991a, Upchurch 1999); however, no studies are found in a NH population. Studies on various populations demonstrate a negative association between depression and self-transcendence (Bean & Wagner 2006, Ellermann & Reed 2001, Haugan & Innstrand 2012, Hsu 2009, Kausch & Amer 2007, Klaas 1998, Reed 1991a, 2009a, Runquist & Reed 2007, Stinson & Kirk 2006). Expressions of self-transcendence are positively related to emotional and mental well-being, health, and functioning in adults confronting personal mortality because of advanced age and/or chronic illness (Baker 2008, Chin-A-Loy & Fernsler 1998, Coward & Reed 1996, Mellors *et al.* 1997, Neill 2002, Nygren *et al.* 2005, Reed 1991a, Upchurch & Muller 2005).

3.4 THE PARTICULAR CONTRIBUTION OF THE SELF-TRANSCENDENCE CONSTRUCT IN LONG-TERM NURSING HOME CARE

Recent research has highlighted positive aspects of, and gains, associated with becoming old. Several studies state that as people mature in old age, they continue to grow, both intellectually and with regard to skills. Nonetheless, becoming old in Western societies has traditionally been associated with losses and declines of body and mind. Accordingly, limitations more than possibilities, have come to be the main concern in the care for older individuals.

Several studies have thus been focusing the personal power and driving forces of older individuals, searching for insight into how and why some older people demonstrate more strength and are more efficiently coping with and compensating the various losses and disabilities. Diverse concepts aimed at elucidating this type of inner strength have been described (Nygren *et al.* 2005); i.e. resilience, sense of coherence, purpose in life, and hope. In the light of this, highlighting the particular contribution of the self-transcendence construct into long-term NH care is justified.

As formerly described, self-transcendence refers to a multidimensional expansion of the self-boundaries intrapersonally, interpersonally, transpersonally, and by temporality. This notion of the “*expansion of self-boundaries*” inwardly, outwardly, and upwardly, along with the idea of *integrating ones past and future*, appear to be the genuine contribution of the self-transcendence construct into the clinical field of NH care. Moreover, the unambiguously empirical evidence of the significant relationship between self-transcendence and *well-being in vulnerable populations*, appear to provide a fundamental perspective in long-term NH care. Reed’s (2008) theory highlights environmental factors as mediators or moderators of the interrelationships between self-transcendence, vulnerability, and well-being. Consequently, *the nurse-patient-interaction comes to the front* recognized as a vital resource for NH patients’ well-being.

4. WELL-BEING/QUALITY OF LIFE IN NURSING HOMES

The concept of quality of life (QoL) is relatively new, emerging in the political debate in the end of the 1950s in the U.S. The main objective was then to assess the individual evaluation of the material welfare. Today QoL and well-being are concerned with what makes the “good life”, based on the individual’s cognitive and affective assessment. QoL is a central issue and universally desired patient outcome in nursing literature and research. Considerable nursing research on QoL of individuals with various health challenges is conducted – more than 1000 articles focusing on QoL are published annually (Emery *et al.* 2005). Despite a great number of research, the construct of QoL lacks clear or definitive demarcation (Anderson & Burkhardt 1999, Haas 1999): there is no consensus regarding definitions (Anderson & Burkhardt 1999, Emery *et al.* 2005, Haas 1999). Neither is a standard approach to QoL measurement given (Anderson & Burkhardt 1999, Joyce *et al.* 2003), which complicates the operationalization of the concept. Furthermore, although the established perspective provides valuable information about factors that inhibit QoL, information about how elders give rise to QoL remains elusive (Register & J. 2006).

The field of QoL has witnessed the formation of two relatively distinct, yet overlapping, perspectives and paradigms for empirical inquiry into well-being that revolve around two distinct philosophies. The first of these can be broadly labelled hedonism (Ryan & Deci 2001, Ryff *et al.* 2004) and reflects the view that well-being consists of pleasure or happiness. The second view is that well-being consists of more than just happiness; it lies instead in the actualization of human potentials, which has been called eudaimonism (*ibid.*). The two different traditions, eudaimonism and hedonism, are founded on distinct views of human nature and of what constitutes a good society, and are both rooted in the old Greek philosophical traditions (*ibid.*). Accordingly, they implicitly or explicitly, suggest different approaches to the enterprise of living and the sense of well-being.

The eudaimonic well-being which concerns the realization of personal potential, calls upon people to live in accordance with one’s true self (Ryan & Deci 2001). Thus, to find meaning in one’s existence (Frankl 1963), self-actualization (Maslow 1987), to become a fully functioning person (Rogers 1961), psychosocial development (Erikson 1998), and hence the self-transcendence theory (Reed 2008) drew on the eudaimonic view of well-being. Translating these ideas to the empirical level require developing operational measures of well-being; six key eudaimonic dimensions of well-being have been described (Ryff 1989, Ryff *et al.* 2004); *self-acceptance* (the capacity to see and accept one’s strengths and weaknesses), *purpose in life*

(having goals and objectives that give life meaning and direction), *personal growth* (feeling that personal talents and potential are being realized over time), *positive relations with others* (having close, valued connections with significant others), *environmental mastery* (being able to manage the demands of everyday life), and *autonomy* (having the strength to follow personal convictions, even if they go against conventional wisdom).

To view well-being as hedonic pleasure or happiness has a long history. The Greek philosopher Aristippus from the fourth century B.C., taught that the goal of life is to experience the maximum amount of pleasure, and that happiness is the totality of one's hedonic moments (Ryan & Deci 2001). Hedonism, as a view of well-being, has been expressed in many forms and has varied from a relatively narrow focus on bodily pleasures to a broad focus on desires and self-interest (ibid.). The famous Polish philosopher Wladyslaw Tartakiewicz (1976) provided an overview of the different views of happiness throughout the history. In earlier times, happiness meant good fortune, pleasure, and success, whereas the concept today is described as a kind of satisfaction with life. By defining well-being in terms of pleasure versus pain, hedonic research poses the target of maximising human happiness in terms of well-being. Research on hedonic well-being is rooted in ideas of pleasure, happiness, and the satisfaction of human appetites, consequently hedonic studies focus on what makes experiences and life pleasant and unpleasant. Most empirical research in this realm falls under the umbrella of "Subjective well-being", which has typically been defined in terms of three components: life satisfaction, the presence of positive affect, and the absence of negative affect (Ryan & Deci 2001).

Definitions of QoL have included both eudaimonic and hedonic aspects; subjective as well as objective indicators of physical, psychological, and spiritual phenomena related to humans' well-being are integrated. In accordance with relevant literature Rannestad (2005) summarizes the different definitions of QoL used within medical and nursing sciences as comprising:

- Physical well-being
- Psychological/Spiritual well-being
- Social/Interpersonal well-being
- Financial/material well-being

These correspond to the World Health Organization's definition of QoL, which is organized into four broad domains: physical, psychological, social relationships, and environment (Power *et al.* 1999, Skevington *et al.* 2004). The different domains have reciprocal influences on each other, and QoL constitutes wholeness in each human being (Rannestad 2005). Consequently, the experience of spiritual, emotional, and social well-being contributes to positive health in terms of

effective functioning of multiple biological systems, which are supposed to help keep the organism from succumbing to disease, or, when illness or adversity occurs, may help promote rapid recovery (Kirby *et al.* 2004, Ryff *et al.* 2004). Therefore, research suggests that spiritual and emotional well-being are resources in maintaining physical and functional well-being (*ibid.*). Spiritual, emotional, and social well-being comprise domains of self-acceptance, meaning and purpose in life, personal growth, positive relations with others, environmental mastery and autonomy (Kirby *et al.* 2004, Ryff *et al.* 2004). The relationships between NH patients and significant others have been described to be an important component impacting mental health, as well as the opportunity to provide nurturance for others (Drageset 2009).

The concept of spiritual well-being is closely related to the notion of spirituality. However, in spite of a rapidly growing body of literature focusing on human spirituality associated to health, there is a lack of consensus of how to define spirituality (Buck 2006, Egan & Swedersky 2005). A review (Unruh *et al.* 2002) described about 80 different definitions. The present study includes a broad concept of spirituality described as a personal search for faith, meaning, and inner peace through connections with others, nature, and a transcendent dimension of existence, and the experiences and feelings associated with that search (Peterman *et al.* 2002). Humans' spirituality is expressed and experienced in the context of caring connections with oneself, others, nature, and a life force or God (Buck 2006, Burkhardt & Nagai-Jakobsen 1994, Chiu *et al.* 2004, Miner-Williams 2006, Pesut 2008a). Accordingly, spiritual well-being seems closely related to connectedness (Unruh *et al.* 2002) which is the core of self-transcendence (Reed 2008). Spirituality and religiosity are often used synonymously but actually have different meanings; spirituality describes humans' search for meaning in life, whereas religion involves an organized entity with rituals and practices around higher power or God (Pesut 2008b, Tanyi 2002). However, spirituality might be related to religion for certain individuals, but for others, such as atheists, it may not be.

In recent decades, spiritual well-being has been found to be of central importance in many health care settings as researchers continue to study its effect upon health (Büssing Arndt *et al.* 2007, Koenig *et al.* 2004, Koenig *et al.* 1997, McCullaugh *et al.* 2000, Moreira-Almeida & Koenig 2008, Wachholtz *et al.* 2007). Research has documented the importance of spiritual well-being for physical and mental health outcomes; spirituality is of particular importance to well-being in the lives of many older adults (Knestrick & Lohri-Posey 2005, Wallace & O'Shea 2007) in NHs (Hicks 1999, Kane 2001, 2003, McKinley & Adler 2005, Touhy 2001, Touhy *et al.* 2005) and at the end of life (Daaleman *et al.* 2008, Hermann 2007, Mount *et al.* 2007, Touhy *et al.* 2005, Van Nordennen & Ter Meulen 2005). Spiritual well-being is described as a predictor of

overall NH satisfaction (Burack *et al.* 2012) as well as a significant predictor of physical well-being, moderating negative effects of frailty on physical well-being (Kirby *et al.* 2004). While the role of spirituality may differ among NH patients, spirituality may provide self-transcendence, purpose and meaning toward the end of life and provide a framework for coping with illness, losses, loneliness, despair, and death (Dwyer *et al.* 2008a, Hou & Chen 2008, Knestrick & Lohri-Posey 2005, Thomas *et al.* 2010). Research points out that meaning in life and spiritual well-being is derived through relationships and connectedness; by communication with others, self-reflection on responsibilities, inner dialogue, and completing unfinished business (Buck *et al.* 2009, Dwyer *et al.* 2008a, Haugan Hovdenes 2002, Mok *et al.* 2010).

Despite the fact that people aged 80 and over make up the fastest growing segment of the world's population, research on the characteristics of the "fourth age", the needs and attention of QoL from the perspective of institutionalized older people has been limited (World Health 2002). The attributes of QoL in NHs are different from those in acute medical care settings such as hospitals. The differences stem from the characteristics of the patients of NH, their care needs, the circumstances and settings in which the care is provided, the expected outcomes, and the fact that for long-term NH patients the NH is their home, not merely a temporary abode in which they are being treated for a medical problem. In fact, the long-term care facility represents the "last stop" on a persons' journey through life; the majority of patients in nursing homes die within two years from multiple medical pathologies (Hall *et al.* 2009).

Thus, QoL is a very important and valuable outcome goal, which is found to be intimately related to the quality of care. Because NH patients are frail, vulnerable, and dependent, QoL is intimately related to the quality of the nurse-patient-interaction; ergo the nurse-patient relationships (Haugan Hovdenes 2002).

Life quality in an institutionalized environment is often thought to be strongly compromised, and reaching the "fourth age" is seen as a phase of loss and decline (Baltes & Smith 2003). Previous research reports that 80% of female respondents age 75 and older said they would rather be dead than experience the loss of independence associated with entering a NH (Salkeld *et al.* 2000). Some insight to QoL and meaning in life of institutionalized older adults have been provided following different qualitative approaches; people living in care homes report the following interrelated themes as main resources for QoL: *sense of self, seeking solace and affirmation of self, preparing for death, the care environments, relationships with staff, peers, family/friends and God, and activities* (Haugan Hovdenes 2002, Hjaltadóttir & Gústafsdóttir 2007, Tester *et al.* 2004).

A recent study determined the components of QoL that are associated with NH patients' overall NH satisfaction and satisfaction with staff (Burack *et al.* 2012); eleven QoL domains were examined: autonomy, dignity, food enjoyment, functional competence, individuality, meaningful activity, physical comfort, privacy, relationships, security, and spiritual well-being. After accounting for cognitive and physical functioning, dignity, spiritual well-being, and food enjoyment remained predictors of overall NH satisfaction. Additionally, dignity remained a significant predictor of the NH patients' satisfaction with staff (*ibid.*). Dignity is also highlighted in previous research, pointing toward a desired move from a medical care to the concept of person-centred care (Harrefors *et al.* 2009, Jakobsen & Sorlie 2010, Jones 2010, Pleschberger 2007). The relevance and importance of dignity for all those involved in caring situations are highlighted (Franklin *et al.* 2006, Matiti & Cotrel-Gibbons 2006, Nordenfelt 2003), and the importance of relationships and self-worthiness is emphasized with regard to dignity (Johnson 1998, Matiti *et al.* 2007, Wadensten & Ahlström 2009). A recent qualitative study of dignity of dying in NHs, differentiated dignity into intrapersonal dignity and relational dignity, socially constructed by the act of recognition (Pleschberger 2007).

Furthermore, studies demonstrate that positive relationships, quality of care and caregivers were the core aspect contributing to thriving and well-being in long-term NH patients (Bergland & Kirkevold 2006, Haugan Hovdenes 2002, Nakrem *et al.* 2011). However, a field study of the NH as a home revealed that the social interaction between the residents in the living room was fragile and collapsed when staff members were out of the room; *communicative collapse* was the main concept describing the essential aspects of the patient's relationships. As a consequence, the NH patients' were searching for contact with the staff (Hauge 2004, Hauge & Heggen 2008). This study displayed that the patients who were able to move around on their own "ran away" from the living room as soon as the staff left it, whereas the immobile patients were left in forced relationships with people they didn't have anything in common with. Besides, the ambiguous characteristics of the common living room scarcely invite to personal and close relations (*ibid.*). Hence, the nurse-patient-interaction appears to be vital to patients QoL.

A new QoL model for older adults is based on the idea of QoL as reflected by the degree to which a person enjoys the important possibilities of his/her life (Raphael *et al.* 2010a). The enjoyment of important possibilities occurs in three major life domains: *being*, *belonging*, and *becoming*. "*Being*" reflects "who one is" and comprises three subdomains of physical, psychological, and spiritual being (Raphael *et al.* 2010b). The "*Belonging*" domain concerns the person's fit with his or her environments, comprising three subdomains: physical, social, and community-belonging. Finally, the "*Becoming*" dimension refers to activities carried out in the

course of daily living, including those to achieve personal goals, hopes, and aspirations. Also, the becoming domain covers three subdomains: practical; leisure; and growth becoming. These are describing, respectively, day-to-day activities such as domestic and volunteer activities; activities primarily for enjoyment promoting relaxation and stress reduction; and finally, the maintenance or improvement of knowledge and skills, and adapting to change (ibid.).

In the past 20 years in Europe and North America the development of tools measuring QoL and Health Related QoL (HRQoL) has increased exponentially. In spite of this, specific tools measuring HRQoL and global QoL in long-term NH patients are limited. Hardly any instruments suitable for this population are translated into Norwegian, which is the first language for the informants in this study. Very few relevant QoL questionnaire validated for Norwegian NH populations are provided.

5. NURSE-PATIENT-INTERACTION

Nursing theories and models continue to be a positive influence on nursing practice, and science-based practice is used to deliver qualitative nursing care. Nursing theories then, are ethical endeavors. The framework of clinical nursing research has shifted from an illness to a wellness model of health care (Guzzetta 2005, Wang 2011). Nursing is not necessarily based upon a reversal of disease processes, but more upon a moving forward, to gain a sense of well-being in the absence or presence of disease – described as a health promotion approach (Raphael *et al.* 2010b). Reed (2009b) argues that good nursing involves a process that is developmental, progressive, and sustaining, and by which well-being occurs. This perspective of promoting health and well-being is fundamental in nursing and a major nursing concern in long-term NH care (Drageset 2009, Nakrem *et al.* 2011).

5.1 A HOLISTIC NURSING APPROACH

The holistic wellness model views individuals holistically as bio-psycho-social-spiritual units in whom the body, mind, and spirit are interconnected and affect one another (Guzzetta 2005, Quinn 2005). The potential interconnection among mind-body-spirit gives a new meaning to care. It is the inseparability of the body, mind, and spirit that speaks to the power of caring. Because long-term NH patients are frail and suffer from several illnesses and disabilities, which are not going to be treated and restored, the body-mind-spirit interconnection inspires nurses while providing caring opportunities for well-being and health promotion. Thus, in the area of evidence-driven practice focusing on science of the nursing profession, a reemphasis on the art of nursing may become increasingly important (Caruso *et al.* 2008, Nåden & Eriksson 2004).

The nursing discipline's understanding of how a nursing process is manifested has shifted. The mid-20th century's rather mechanistic conception of nursing as a process external to patients and conducted by the nurse, has been replaced by the view of nursing as a relational process and practice (Reed 2009b). The importance of establishing the nurse-patient relationship as an integral component of nursing practice has been well documented (Halldorsdottir 2008, Nåden & Eriksson 2004, Rchaidia *et al.* 2009). International well accepted nursing theorists describe nursing as a participatory process that transcends the boundaries between patient and nurse and can be learned and knowingly deployed to facilitate well-being (Eriksson 1995b, Martinsen 1993, Neuman 1995, Reed 2009b, Travelbee 1979, Watson 1988).

5.2 THEORY OF HUMAN CARING

Well acknowledged theories of human caring are based on a holistic approach and perceive human beings as connected to each other in the caring process; central to this holistic perspective of caring is the notion of how one defines what it means to be human, what it means to care, and what it means to heal. There is a science of caring with ethical and philosophical implications central to the basics of nursing, implying intrinsic aspects of nursing that produces therapeutic results and well-being in the person being served (Eriksson 1987b, 1995a, b, Martinsen 1993, Reed 2009b, Travelbee 1979, Watson 2007).

Caring involves a conscious intentional responsibility involving sensitivity, respect, and a high moral and ethical commitment. The postmodern era of practice has transformed nursing from acts of doing (tasks and technology) and knowing how, to acts of engaging in a caring relationship that integrates the doing and knowing with the primary focus of attending to the meaning of being, experienced by the individuals (Arman 2007, Clarke *et al.* 2009, Lukose 2011, Reed 2010, Smith 2004, Warelow *et al.* 2008, Watson & Foster 2003). Thus, because caring is central to all that nurses do, then all nurses have to address the *being* piece of practice. Consequently, the focus is on individuals, what is meaningful for the patients, and their QoL. The emphasis of care is on the nurse-patient relationship (Eriksson 1987b, Halldorsdottir 2008, Martinsen 1993, Reed 2009b, Walker 2009, Watson 1988). The consciousness and intentionality of how a NH nurse chooses to be present in a caring moment are guided by the values of human care within the context of the NH facility.

5.3 CARING AND THE NURSE-PATIENT-INTERACTION

The caring relationship between the nurse and the patient is fundamental to nursing theory and practice; it is a special kind of a human care relationship, a union with another person, in high regard for the whole person and his/her being-in-the-world (Eriksson 1987b, 1995a, b, Martinsen 1989, 1993, Reed 2009b, Travelbee 1979, Watson 2007). Caring nurses engage in person-to-person relationships with the patients as unique persons. Good nursing care is defined by the nurses' way of "being present" together with the patient while performing nursing activities, in which attitudes, morals, and competence are inseparably connected (Halldorsdottir 2008, Levy-Malmberg *et al.* 2008, Liveng 2011, Martinsen 1993, Watson 2008). The caring nurse is present and respectful, sincere, friendly, sensitive and responsive to the patient's feelings of vulnerability; the nurse-patient-interaction intends to help patients gain a sense of wholeness, hope, faith, trust, comfort, safety, and enhanced well-being (Eriksson 1995a, Martinsen 1993,

Reed 2008, Watson 2008). The nurses' recognition of patients' feelings leads to self-actualization through self-acceptance for both the nurse and the patient. As nurses acknowledge their sensitivity and feelings, they become more genuine, authentic, and sensitive to others (Haugan Hovdenes 1999, Haugan Hovdenes 2002, Watson 1979).

The development of a helping-trust relationship between the nurse and the patient is crucial for caring. A trusting relationship promotes and accepts the expression of both positive and negative feelings. It involves congruence, empathy, non-possessive warmth, positive regard, empowerment and effective communication (Halldorsdottir 2008, Haugan Hovdenes 2002, Medvene & Lann-Wolcott 2010, Nåden & Eriksson 2004). Congruence involves being real, honest, genuine, and authentic. Empathy is the ability to experience and, thereby, understand the other person's perceptions and feelings and to communicate those understandings (Watson 2008). Non-possessive warmth is demonstrated by a moderate speaking volume, a relaxed open posture, and facial expressions that are congruent with other communications (*ibid.*). Effective communication has cognitive, affective, and behaviour response components (*ibid.*). Thus, nurses must recognize that intellectual and emotional understandings of a situation differ.

As the main nursing focus in NHs is well-being, NH caring is less dependent on curing. This focus on well-being allows the patient to determine personal needs and provides opportunities for personal growth. Feeling listened to is a lived experience of human-becoming, and has been found to be significant to health and well-being (Finch 2006, Kagan 2008). Non-judgmental recognition with which patients feel valued and loved in spite of the always-present possibilities of rejection and hurt is described as the essence of feeling listened to (Haugan Hovdenes 2002, Kagan 2008). Through active listening and being authentically present, the nurse can come to know the patients and their families in relation to what they believe is important to them. Presence, intentionality, and conscious choice of action are key elements embedded in each caring moment (Bernick 2004, Haugan Hovdenes 2002, Watson 2008). The staff nurses' way of being present when interacting with the patients, results in quite different patient experiences; a sense of fulfillment and growth or a sense of stagnation and elimination (Haugan Hovdenes 2002). Because of NH patients' large dependency, they often reveal feelings of fear and desperation over the actions of staff and express a lack of negotiation about how best to meet an elderly person's needs and desires, which is experienced as insulting and as a threat to the sense of self (Franklin *et al.* 2006, Haugan Hovdenes 2002). Hence, maintaining dignity in the relationships with staff nurses is a main QoL domain for NH patients (Burack *et al.* 2012, Dwyer *et al.* 2008b, Hall *et al.* 2009, Medvene & Lann-Wolcott 2010).

6.0 SUMMING UP: WHAT IS KNOWN AND WHAT IS YET UNKNOWN?

Cognitively intact NH patients, transcending many losses, illnesses, and facing mortality, are a particularly vulnerable population. When facing advanced age, few remaining social contacts, other losses, and physical decline requiring NH care, individuals may experience existential suffering and feelings of loneliness, meaninglessness, and worthlessness. As independence and functional abilities are challenged, self-esteem and self-confidence weaken. Consequently, the NH patients' dignity might be at stake.

6.1 WHAT IS ALREADY KNOWN

Self-transcendence is seen as a correlate to and an explanatory factor of vulnerable patients' well-being. In summary, the self-transcendence theory and previous research propose the following three sets of relationships: (1) increased vulnerability is related to increased self-transcendence, (2) self-transcendence is positively related to well-being in vulnerable populations, and (3) personal and contextual factors may influence and mediate the relationships between vulnerability and self-transcendence and between self-transcendence and well-being (Reed 2008). Self-transcendence includes a psycho-social-spiritual force toward personal maturity that is distinct from the more self-absorbed strivings for self-esteem and intimacy typical in earlier developmental phases (Erikson 1950). Therefore, self-transcendence enhances an individual's searching for new and broader perspectives, meaning, and well-being and allows him or her to overcome ego concerns (Reed 2008).

Well-being/QoL in an institutionalized environment is often strongly compromised, and the fourth age is seen as a phase of loss, decline, and vulnerability (Baltes & Smith 2003). Contextual factors, such as the nurse-patient-interaction and nursing interventions, may influence and mediate the relationships between vulnerability, self-transcendence, and well-being (Reed 2008). Previous research demonstrates sense of self, relationships, the care environment, activities, dignity, and spiritual well-being to be significant to NH patients' well-being and satisfaction with NH and staff (Burack *et al.* 2012, Haugan Hovdenes 2002, Tester *et al.* 2004). Professional caring takes place in person-centred nurse-patient-interaction fostering dignity, faith, hope, trust and confidence, safety, and comfort comprising feeling understood, respected, listened and attended to, and a sense of well-being (Halldorsdottir 2008, Kagan 2008, Nåden & Sæteren 2006, Watson 2005, 2007). Hence, a measurement of how NH patients perceive the

nurse-patient-interaction should comprise the above-mentioned elements. The Nurse-Patient-Interaction Scale (Appendix 4) is based in these relational caring qualities.

6.2 WHAT IS YET UNKNOWN

Self-transcendence has not previously been assessed in cognitively intact long-term NH patients, as well as never been used in a Norwegian population. Consequently, it remains to discover how the self-transcendence scale might perform in a cognitively intact NH population in Norway. Will the dimensionality of the self-transcendence scale perform in accordance with previous research using a one-dimensional construct of self-transcendence? Thus, an investigation of the psychometric properties including the factor structure of self-transcendence in this particular population is necessary. Moreover, to the author's knowledge, previous research on self-transcendence and well-being has not been conducted by means of advanced statistical analyses, such as SEM-analyses. Confirmatory factor analysis and SEM enable one to (1) examine whether the measure used is appropriate for the population included in the current study (psychometric properties), (2) construct validation, as well as (3) to test whether relationships expected on theoretical grounds actually appear in the data (Harrington 2009). Besides, no studies have examined the relationships between self-transcendence and multidimensional well-being in this particular population.

Furthermore, nurse-patient-interaction has not previously been examined in NHs; nor do we know if nurse-patient-interaction influence on self-transcendence in cognitively intact NH patients. Since the theory of self-transcendence contends that contextual factors may influence and mediate the relationships between vulnerability, self-transcendence, and well-being, the nurse-patient-interaction possibly might influence on patients' well-being, mediated by self-transcendence. Consequently, it is highly warranted to provide empirical evidence regarding these relationships, in terms of providing nursing care supporting and increasing well-being.

THE STUDY'S FOUR PAPERS

7. AIMS AND RESEARCH QUESTIONS

The main aim of this study was to explore the associations between self-transcendence and physical, social, emotional, functional, and spiritual well-being in cognitively intact NH patients. A second aim was to explore whether self-transcendence is associated to the nurse-patient interaction in NHs, and consequently, to explore if the nurse-patient-interactions affects patients' well-being, mediated by self-transcendence. The specific aims and research questions were:

7.1 PAPER 1 – AN INVESTIGATION OF THE FACTOR STRUCTURE OF THE SELF-TRANSCENDENCE SCALE

The aim of this study was to examine the dimensionality of the Norwegian version of the Self-Transcendence Scale comprising 15 items. Reed's empirical nursing theory of Self-Transcendence provided the theoretical framework; self-transcendence includes an interpersonal, intrapersonal, temporal, and transpersonal aspect. Earlier research considers self-transcendence as a one-dimensional construct (Coward & Kahn 2005, Coward & Reed 1996, Ellermann & Reed 2001, Hunnibell *et al.* 2008, Reed 1992, Runquist & Reed 2007). However, results from exploratory and confirmatory factor analyses in the present study raised questions about the dimensionality of the self-transcendence scale. Hence, the dimensionality of the self-transcendence scale was investigated before the associations between self-transcendence, well-being, and the nurse-patient-interaction were tested. The research questions guiding the study were as follows: (1) *How well does a one-factor model fit the data?* (2) *How well do the hypothesized two- and four-factor solutions fit? The following hypotheses were formulated:*

Hypothesis 1: A one-factor model of self-transcendence fits well with the data.

Hypothesis 2: A two-factor model of self-transcendence fits well with the data.

Hypothesis 3: A four-factor model of self-transcendence fits well with the data.

Hypothesis 4: The two-factor model fits better than the four-factor model.

7.2 PAPER 2 – THE RELATIONSHIPS BETWEEN SELF-TRANSCENDENCE AND GENERAL WELL-BEING

The aim of this study was to investigate the interrelationships between self-transcendence and NH patients' physical, social, emotional, and functional well-being. The research question guiding the study was: "Which specific dimensions of well-being are affected by interpersonal and intrapersonal self-transcendence?" Based on the theoretical and empirical knowledge of the positive associations between self-transcendence and well-being, we hypothesized that interpersonal self-transcendence would affect social well-being, and that intrapersonal self-transcendence would affect emotional well-being. Possible indirect and total effects between the constructs seemed less than obvious. However, since the previous self-transcendence literature considers self-transcendence as one dimension associated generally with mental-emotional well-being, it seemed important to test all possible links between self-transcendence and well-being. Accordingly, the following hypotheses were formulated:

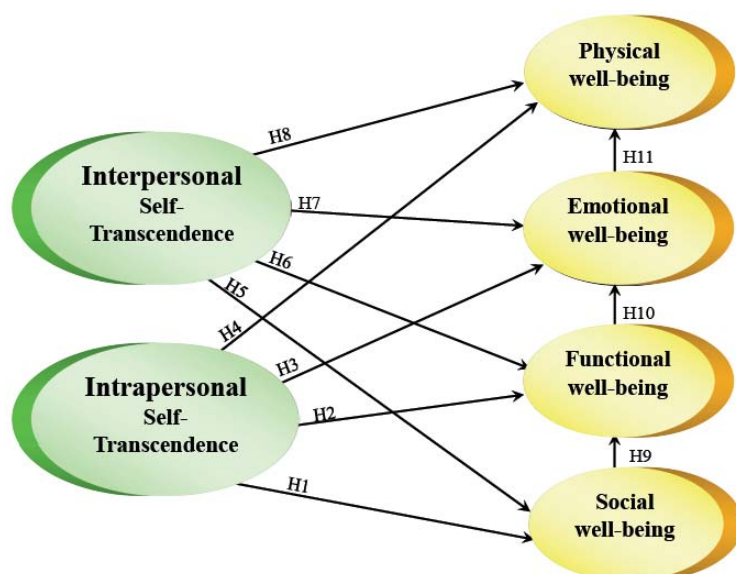
Hypotheses 1-4: Interpersonal self-transcendence positively affects physical, social, emotional, and functional well-being.

Hypotheses 5-8: Intrapersonal self-transcendence positively affects physical, social, emotional, and functional well-being.

Hypothesis 9: Social well-being positively affects functional well-being.

Hypothesis 10: Functional well-being positively affects emotional well-being.

Hypothesis 11: Emotional well-being positively affects physical well-being.



The hypotheses 1-4 demonstrate the associations between interpersonal self-transcendence and physical (H1), emotional (H2), functional (H3), and social (H4) well-being, whereas the hypotheses 5-8 express the associations between intrapersonal self-transcendence and physical (H5), emotional (H6), functional (H7), and social (H8) well-being.

Figure 3. Figure 3 portrays the hypotheses tested in paper 2.

7.3 PAPER 3 – THE RELATIONSHIPS BETWEEN SELF-TRANSCENDENCE AND SPIRITUAL WELL-BEING

The aim of this study was to test whether self-transcendence affects cognitively intact NH patients' spiritual well-being. The original factor analysis of the FACIT-Sp supported two factors; meaning/peace and faith (Peterman *et al.* 2002). However, more recent investigations have shed new light. Results indicate that a three-factor-construct comprising meaning, peace, and faith is psychometrically superior, allowing a more complex examination of the construct (Canada *et al.* 2008, Murphy *et al.* 2010, Peterman *et al.* 2011, Whitford & Olver 2011). Thus, the present study applied this previous documented three-factor-solution. The research question was: *Do the specific self-transcendence dimensions relate to spiritual well-being in cognitively intact NH patients?* The following hypotheses of the associations were formulated:

Hypotheses 1-3: Interpersonal self-transcendence positively affects spiritual well-being (meaning, peace, and faith).

Hypotheses 4-6: Intrapersonal self-transcendence positively affects spiritual well-being (meaning, peace, and faith).

Hypotheses 7: Faith positively affects meaning.

Hypothesis 8: Inner peace positively affects meaning.

The hypotheses 1-3 display the associations between interpersonal self-transcendence and meaning (H1), peace (H2), and faith (H3), whereas the hypotheses 4-6 express the associations between intrapersonal self-transcendence and meaning (H4), peace (H5), and faith (H6).

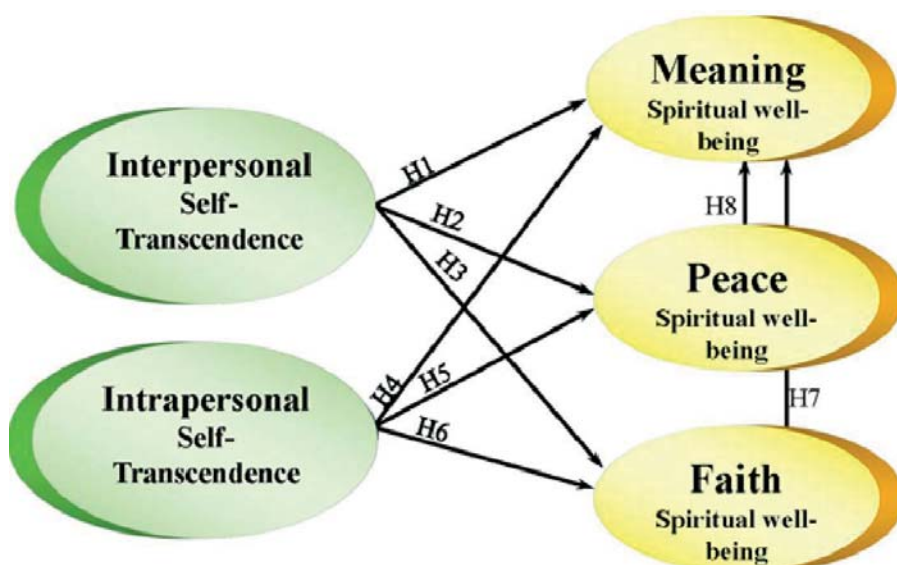


Figure 4. Figure 4 shows the hypotheses tested in paper 3.

7.4 PAPER 4 – THE RELATIONSHIPS BETWEEN NURSE-PATIENT-INTERACTION AND SELF-TRANSCENDENCE

The aim of this study was to test whether nurse-patient-interaction affects cognitively intact NH patients' interpersonal and intrapersonal self-transcendence. A subsequent aim was to test the psychometric properties of the Nurse-Patient-Interaction Scale (NPIS) comprising 14 items. Based on the theoretical and empirical knowledge of self-transcendence as connectedness, plus nursing as a caring relational practice and interaction with patients, we hypothesized that patients' experiences of the nurse-patient-interaction would affect self-transcendence among cognitively intact NH patients. Our research questions were: 1. *To what degree does the Nurse-Patient-Interaction Scale (NPIS) demonstrate sound psychometric properties in cognitively intact NH patients?* 2. *Does the nurse-patient-interaction affect cognitively intact NH patients' interpersonal and intrapersonal self-transcendence?* The following hypotheses were formulated:

Hypothesis 1: The nurse-patient-interaction positively affects interpersonal self-transcendence in cognitively intact NH patients.

Hypothesis 2: The nurse-patient-interaction positively affects intrapersonal self-transcendence in cognitively intact NH patients.

Hypothesis 3: Intrapersonal self-transcendence positively affects interpersonal self-transcendence in cognitively intact NH patients.

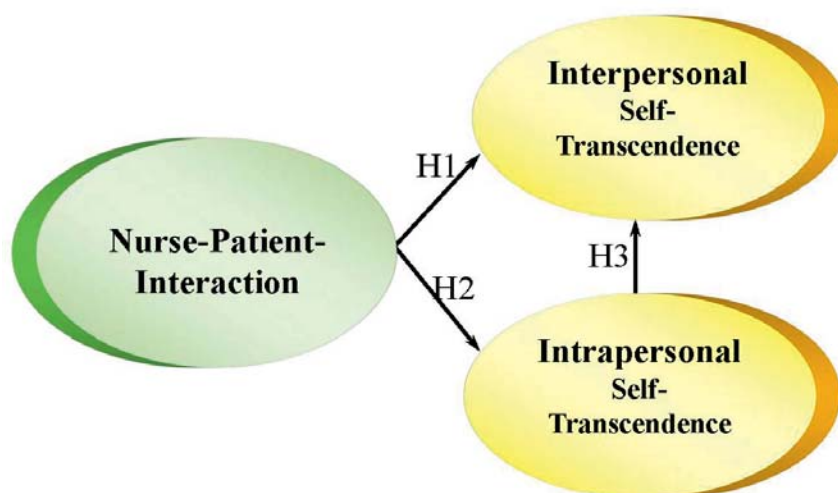


Figure 5. Figure 5 portrays the hypotheses tested in paper 4.

7.5 IN SUMMARY - HYPOTHESES TO BE TESTED IN THIS STUDY

Summarized, this study tested the relationships between interpersonal and intrapersonal self-transcendence with physical, social, emotional, functional, and spiritual well-being. Thereafter, the relationships between nurse-patient-interaction and patients' interpersonal and intrapersonal self-transcendence were tested. Figure 6 puts together and shows the 26 specific hypotheses of associations between the latent constructs involved in this study, tested by means of 3 SEM-models published in paper 2, 3 and 4. Paper 1 investigated the factor-structure of the self-transcendence construct among NH patients revealing two substantial factors:

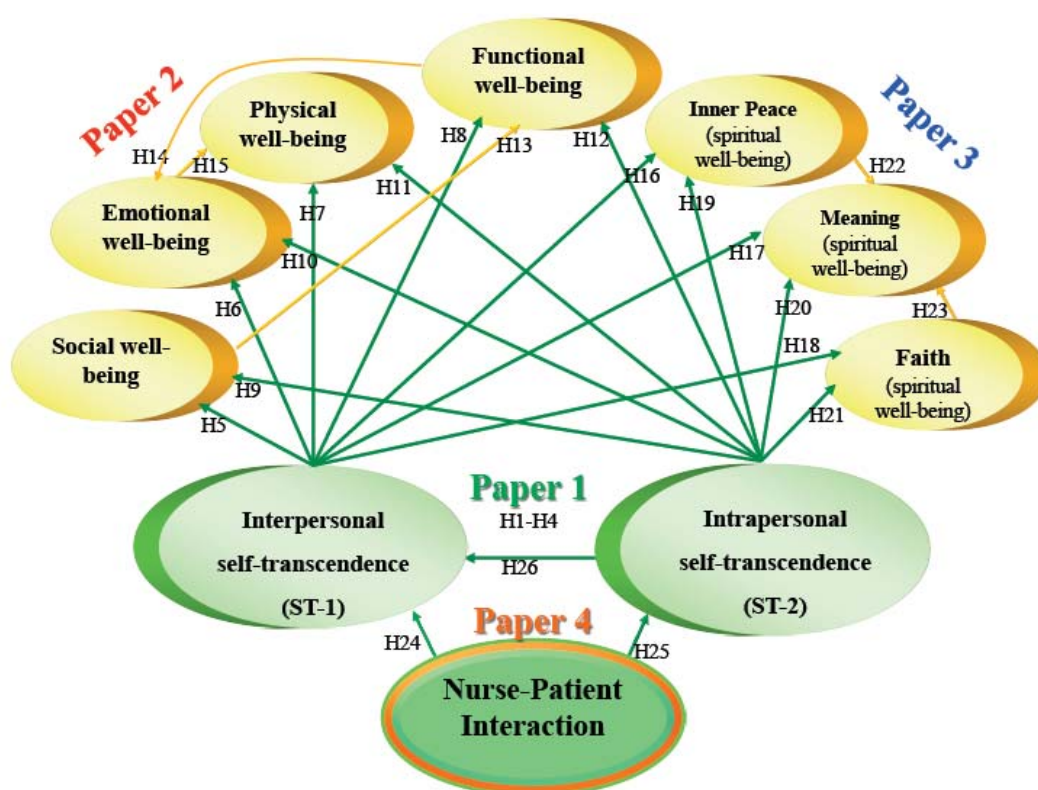


Figure 6. The specific hypotheses tested among cognitively intact NH patients in paper 2-4. Paper 1 is an investigation of the factor structure of the self-transcendence scale revealing two substantial factors; 1. Interpersonal self-transcendence and 2. Intrapersonal self-transcendence.

As demonstrated in Figure 6, in sum the following hypotheses were tested in this study:

PAPER 1:

Hypothesis 1: A one-factor model of self-transcendence fits well with the data.

Hypothesis 2: A two-factor model of self-transcendence fits well with the data.

Hypothesis 3: A four-factor model of self-transcendence fits well with the data.

Hypothesis 4: The two-factor model fits better than the four-factor model.

PAPER 2:

Hypothesis 5: Interpersonal self-transcendence positively affects social well-being.

Hypothesis 6: Interpersonal self-transcendence positively affects emotional well-being.

Hypothesis 7: Interpersonal self-transcendence positively affects physical well-being.

Hypothesis 8: Interpersonal self-transcendence positively affects functional well-being.

Hypothesis 9: Intrapersonal self-transcendence positively affects social well-being.

Hypothesis 10: Intrapersonal self-transcendence positively affects emotional well-being.

Hypothesis 11: Intrapersonal self-transcendence positively affects physical well-being.

Hypothesis 12: Intrapersonal self-transcendence positively affects functional well-being.

Hypothesis 13: Social well-being positively affects functional well-being.

Hypothesis 14: Functional well-being positively affects emotional well-being.

Hypothesis 15: Emotional well-being positively affects physical well-being.

PAPER 3:

Hypothesis 16: Interpersonal self-transcendence positively influences inner peace.

Hypothesis 17: Interpersonal self-transcendence positively influences meaning.

Hypothesis 18: Interpersonal self-transcendence positively influences faith.

Hypothesis 19: Intrapersonal self-transcendence positively influences inner peace.

Hypothesis 20: Intrapersonal self-transcendence positively influences meaning.

Hypothesis 21: Intrapersonal self-transcendence positively influences faith.

Hypothesis 22: Inner peace positively influences meaning.

Hypothesis 23: Faith positively influences meaning.

PAPER 4:

Hypothesis 24: The nurse-patient-interaction positively affects interpersonal self-transcendence.

Hypothesis 25: The nurse-patient-interaction positively affects intrapersonal self-transcendence.

Hypothesis 26: Intrapersonal self-transcendence positively affects intrapersonal self-transcendence in cognitively intact NH patients.

8. MAIN METHODS

8.1 DESIGN AND ETHICAL CONSIDERATIONS

The study employed a cross-sectional design. The data were collected in 2008 and 2009 in the central part of Norway from 250 NH patients who met the inclusion criteria: (1) local authority's decision of long-term NH care; (2) residential time six months or longer; (3) informed consent competency recognized by responsible doctor and nurse; and (4) capable of being interviewed. The NH patients were approached by a head nurse they knew well. The nurse presented them with oral and written information about their rights as participants and their right to withdraw at any time. Each participant provided informed consent.

This population have difficulties completing a questionnaire on their own; therefore, one-on-one interviews were conducted by three trained researchers in private. Researchers with identical professional background were chosen (RN, MA, trained and experienced in communication with elderly, as well as teaching gerontology at an advanced level) and trained to conduct the interviews as identically as possible. Statistical correlational tests showed no differences between responses based on interviewers. The questionnaires relevant for the present study were part of a battery of nine questionnaires comprising 130 items. Interviewers held a large-print copy of questions and possible responses in front of the participants to avoid misunderstandings.

Approval by the Norwegian Social Science Data Services was obtained for a license to maintain a register containing depersonalized personal data (Ref.no 16443) and likewise approval was attained from The Regional Committee for Medical and Health Research Ethics in Central Norway (Ref.no. 4.2007.645) as well as the Management Unit of the 44 NHs.

8.2 PARTICIPANTS

The total sample consisted of 202 (80.8%) of 250 long-term NH patients representing 44 NHs. Long-term NH care was defined as 24-hour care; short term care patients, rehabilitations patients and patients having dementia were not included. Participants' ages ranged from 65 to 104 years, with a mean of 86 years ($SD=7.65$). The sample consisted of 146 women (72.3%) and 56 men (27.7%), where the mean age for women was 87.3 years and 82 years for the men. In total, 38

(19%) were married/cohabitating, 135 (67%) were widows/widowers, 11 (5.5%) were divorced, and 18 (19%) were single. The duration of time of NH residence when interviewed was 2.6 years for both sexes (range 0.5-13 years); 117 were in rural NHs, and 85 were in urban NHs. In all, 70.4% were not depressed, and nearly 88% had no anxiety disorder. Regarding religiosity 58 (28.7%) perceived themselves as very religious, 106 (52.5%) as somewhat religious and 38 (18.8%) were not religious at all. The four papers are based on this sample.

In structural equation modelling (SEM) there is no universal agreement about how large a sample is large enough, and no easy way to determine the sample size needed for confirmative factor analysis (CFA) (Harrington 2009, Kline 2005, Schumacker & Lomax 2004). A sufficient power analysis is dependent on the ratio between the total number of variables (error measurements, observed and latent variables) and the sample size; one observed variable per 10 subjects is given as a rule of thumb, however a ratio of 5:10 has also been suggested (Bentler & Chou 1987). A rough guideline is given; samples less than 100 are considered “small”, 100 to 200 “medium”, and may be an acceptable minimum sample size if the model is not too complex, while greater than 200 is “large”, and probably acceptable for most models (Harrington 2009, Kline 2005, Schumacker & Lomax 2004). Because of statistical power and study logistics we planned to include a minimum of 200 patients.

8.3 MEASURES

8.3.1 THE SELF-TRANSCENDENCE SCALE (PAPER 1-4)

Self-transcendence was assessed by items from the Self-Transcendence Scale (STS). The STS was developed from the 36-item Developmental Resources of Later Adulthood Scale (Reed 1986, 2008), that intended to identify intrapersonal, interpersonal, transpersonal, and temporal experiences characteristic of later life, reflecting expanded boundaries of self (Reed 2009a). The STS comprises 15 items measuring characteristics of a matured view of life representing the extent to which a person expands personal boundaries. Each item is rated on a four-point Likert-type scale from 1.0 (*not at all*) to 4.0 (*very much*), with higher scores indicating higher self-transcendence (Appendix 1). In previous studies, Cronbach’s α ranged from .80 to .88 (Reed 1991a, 2009b, Runquist & Reed 2007). Content validity is adequate, based on a thorough review

of empirical and theoretical literature (Reed 2008). Support for construct validity has been found in the relationships of self-transcendence scores to other measures (Coward 1990, 1991, 1996).

The STS was translated into Swedish and back into English, and the back-translated version was then approved by the instrument constructor (Nygren *et al.* 2005). The Swedish version demonstrated internal consistency of .70-.85 (*ibid.*), and was translated into Norwegian for the purpose of the present study. The Swedish and Norwegian language and culture are nearly identical in all aspects that matter in this study. The STS is virtually unchanged in the Norwegian version, but the words are spelled in Norwegian and the meanings have been checked. The two-factor-construct of self-transcendence (paper 1) was used; the item “letting go of my past losses” (ST15) which is reversed scored, loaded extremely low ($\lambda=0.11$) and demonstrated $R^2=0.02$. This item was uncorrelated; therefore, there might be some translation issues and this item was dismissed. The items “Having hobbies and interests I can enjoy,” “Being involved with other people”, “Sharing my wisdom or experience with others”, “Helping others in some way”, “Having an ongoing interest in learning”, “Able to move beyond things that once seemed so important”, and “Finding meaning in my spiritual beliefs” were indicators for interpersonal self-transcendence, while the items “Accepting myself as growing older”, “Adjusting well to my present life situation”, “Adjusting well to changes in my physical abilities”, “Finding meaning in my past experiences”, “Accepting death as a part of life”, “Letting others help me when I may need it”, and “Enjoying my pace of life” constituted the intrapersonal self-transcendence construct. Cronbach’s α in current study was .72 (all 15 items), while α for interpersonal self-transcendence (seven items) was .76 and .65 for intrapersonal self-transcendence (seven items) (Table 1). Composite reliability (ρ_c) displayed good values; .77 and .67 respectively; values greater than 0.60 are desirable whereas values ≥ 0.70 are good (Diamantopolous & Siguaw 2008, Hair *et al.* 2010).

8.3.2 GENERAL WELL-BEING – THE FACT-G QUESTIONNAIRE (PAPER 2)

General well-being was assessed by the Functional Assessment of Chronic Therapy General QoL (FACT-G) questionnaire (Cella *et al.* 1993, Webster *et al.* 2003), which is divided into four well-being domains: physical, social/family, emotional, and functional well-being. Accordingly, it does not comprise the QoL domain of spiritual well-being. The FACT-G questionnaire was developed and validated by Cella *et al.* in an English-speaking culture (USA) over the course of 10 years (1987-1997) (Cella *et al.* 1993). The FACT-G is a 27-item, general QoL-measure

considered appropriate for use with patients who have cancer (Cella *et al.* 1993), and has also been used and validated in populations with other chronic-illness conditions (e.g. HIV/AIDS, multiple sclerosis) as well as in the general population (using a slightly modified version) (*ibid.*). Each item is rated on a 5-point Likert-type scale from 0 (*not at all*) to 4 (*very much*) (Appendix 2); higher scores indicate better QoL/well-being. A review of 78 published studies reporting Cronbach's α reliability coefficient reported an average FACT-G reliability score as .88 (subscales ranged from .71 to .83); the FACT-G demonstrated acceptable reliability evidence across observed studies, without substantial variability due to scale or demographic characteristics (Victorson *et al.* 2008). In the present study, FACT-G Cronbach's α was .80.

8.3.3 SPIRITUAL WELL-BEING - THE FACIT-SP QUESTIONNAIRE (PAPER 3)

Spiritual well-being was assessed by the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp), which is part of the larger FACIT measurement system (Cella *et al.* 1993) of which the FACT-G is the core instrument. The FACIT-Sp (Appendix 3) is a companion scale to the FACT-G, and was developed by Peterman *et al.* (2002) with input of cancer patients, psychotherapists, and religion/spiritual experts (e.g., hospital chaplains) who were asked to describe aspects of spirituality and/or faith that contributed to QoL; it was developed to describe aspects of spirituality and/or faith that contributed to well-being (Peterman *et al.* 2002). Spirituality is found to supply unique information to peoples' QoL, which is not already supplied by the other QoL domains (Brady *et al.* 1999).

The original instrument comprises two subscales; one measuring a sense of meaning and peace, and the other assessing the role of faith during illness. The scale is designed to provide a measure of spiritual well-being that could be employed in research with people with chronic and/or life-threatening illnesses (*ibid.*). Each item is rated on a 5-point Likert-type scale from 0 (*not at all*) to 4 (*very much*) (Appendix 3); higher scores indicating better spiritual well-being. Previous research demonstrates that the FACIT-Sp is a psychometrically sound measure of spiritual well-being for people with cancer or other chronic illnesses (Brady *et al.* 1999, Cotton *et al.* 1999, Peterman *et al.* 2002).

Recent studies (Canada *et al.* 2008, Murphy *et al.* 2010, Peterman *et al.* 2011, Whitford & Olver 2011) have demonstrated a three-factor-solution comprising meaning, peace, and faith providing a psychometrically better fit than the two-factor-solution. The three-factor-construct is also likely to provide more specific information on some of the mechanisms involved in the

relationships between spiritual well-being and total well-being/health-related quality of life (Canada *et al.* 2008, Murphy *et al.* 2010, Peterman *et al.* 2011, Whitford & Olver 2011). Hence, the present study applied the three-factor construct of spiritual well-being.

8.3.4 THE NURSE-PATIENT-INTERACTION SCALE (PAPER 4)

Since no relevant and validated scale measuring nurse-patient-interaction in frail, cognitively intact long-term NH patients was found, the Nurse-Patient-Interaction Scale (NPIS) was developed for the present study. The intention was to identify essential characteristics of NH patients' experiences of communicating and interacting with the staff nurses. Consequently, the scale covers domains that identify fundamental relational qualities stressed in the nursing care literature (Eriksson 1995a, b, Levy-Malmberg *et al.* 2008, Martinsen 1993, Nåden & Eriksson 2004, Nåden & Sæteren 2006, Watson 1988). Nursing is the art of caring, based in caring relationships seeking to preserve humanity and sustain human dignity, unity, and wholeness (Levy-Malmberg *et al.* 2008, Martinsen 1993, Watson 2007). The art of nursing occurs in nurse-patient-interaction fostering dignity, faith, hope, trust and confidence, safety, comfort comprising feeling understood, respected, listened and attended to, and a sense of well-being (Halldorsdottir 2008, Kagan 2008, Nåden & Sæteren 2006, Watson 2005, 2007).

A measurement of how NH patients perceive the nurse-patient-interaction should comprise the above-mentioned elements. The items of the NPIS were developed to measure the NH patients' ability to derive a sense of well-being and meaningfulness through the nurse-patient-interaction (Halldorsdottir 2008, Haugan Hovdenes 1998, 2002, Hollinger-Samson & Pearson 2000, Rchaidia *et al.* 2009); examples of NPIS-items include having confidence in the staff nurses; experiences of being respected and recognized as a person; being listened to and taken seriously; nurse-patient-interaction make patients feel well, satisfied, cared about and included in decisions; and satisfaction with the nurses' communication. Content validity is based on a thorough literature review of empirical and theoretical literature in order to specify the domains and the items. As part of instrument development, all items were scrutinized for content and face validity by a panel of six experts in the area of NH care and instrument development. Additionally, the instrument was pilot tested with three nursing students, then with three older retired nursing teachers (aged 73-75 years), and finally with three NH patients for content validity resulting in minor word changes for some items. The NPIS is a 10-point scale ranging

from 1 (*not at all*) to 10 (*very much*); higher numbers indicating better nurse-patient-interaction (Appendix 4).

8.3.5 BACKGROUND VARIABLES

Background data included age and duration of time of NH residence when completing the questionnaire, gender, stay in hospital during the last three months, and religiosity. Religiosity was measured by the following two questions: “Do you consider yourself a religious person?” (with possible responses of “*very much*”, “*slightly*”, or “*not at all*”) and “How often do you attend religious services?” (“*regularly*”, “*sometimes*”, and “*never*”). Moreover, we assessed if the patient was residing in an urban or a rural NH.

8.4 STATISTICS

Data were analysed by descriptive and correlational statistics using the PASW Statistics, version 18 (SPSS Inc., Chicago, IL). Exploratory Factor Analysis (EFA) was carried out in order to explain as much of the total variance as possible with as few factors as possible. A good rule of thumb for the minimum loading is 0.32 (Tabacknick & Fidell 2001), which equates to approximately 10% overlapping variance with the other items in that factor. A “crossloading” item loads at 0.32 or higher on two or more factors. Confirmatory Factor Analysis (CFA) using LISREL 8.8 for Windows was used in order to test the fit of the previously reported and hypothesized factor structure of the STS and the FACIT-Sp Spiritual well-being questionnaire within our data. CFA provides a comprehensive method for the quantification and testing of theories, which explicitly takes into account measurement error that is ubiquitous in most disciplines. CFA typically contain latent variables, which are not measured directly, but are estimated from several measured variables (indicators) each of which is predicted to “tap into” the latent variables; 0.30 is given as a desired loading (Harrington, 2009). A major issue is evaluation of model fit. The conventional overall test of fit is the chi-square (χ^2), which measures the distance (discrepancy) between the sample covariance matrix and the fitted covariance matrix. Thus, the χ^2 might be seen as a badness-of-fit measure; a small χ^2 corresponds to good fit (Jøreskog & Sörbom 1995).

Structural equation models (SEM) of the hypothesized relations between the latent constructs were tested by means of LISREL 8.8 (Jøreskog & Sörbom 1995). Using SEM accounts for random measurement error and the psychometric properties of the scales in the

model are more accurately derived. Since the standard errors are estimated under non-normality, the Satorra-Bentler scaled chi-square statistic was applied as a goodness-of-fit statistic, which is the correct asymptotic mean even under non-normality (Jøreskog *et al.* 2000). Model fit adequacy was assessed by χ^2 -statistics and various fit indexes; these are overall summary statistics that are meant to quantify something akin to variance accounted for (Hu & Bentler 1999). In line with the rules of thumb of conventional cut-off criteria (Schermelleh-Engel *et al.* 2003), the following fit indices were used to evaluate model fit: chi-square (χ^2), the root mean square error of approximation (RMSEA) and the standardized root mean square residual (SRMS) with values below 0.05 indicating good fit, whereas values smaller than 0.08 are interpreted as acceptable (Hu & Bentler 1998, Schermelleh-Engel *et al.* 2003). Further we used the comparative fit index (CFI) and the non-normed fit index (NNFI) with an acceptable fit at 0.95, and good fit at 0.97 and above, the normed fit index (NFI) and the goodness-of-fit index (GFI) with acceptable fit at 0.90, and good fit at 0.95. For the adjusted GFI (AGFI), acceptable fit was set to 0.85 and good fit at 0.90 (*ibid.*). Missing data was low in frequency; for the self-transcendence scale only 5.9% had some missing data, 4.0% was missing for the nurse-patient-interaction scale, while 12% for the FACT-G QoL and the FACIT-Sp questionnaires. Missing data were handled by the listwise procedure.

8.4.1 RELIABILITY AND VALIDITY

Before examining the hypothesized relationships in the SEM analysis, the measurement models were tested by confirmatory factor analysis (CFA). The CFA provided a good fit to the observed data for the latent constructs involved in this study. The measurement models for

- the two-factor construct of self-transcendence ($\chi^2=41.98$, $p<0.025$, RMSEA=.056, SRMR=0.056, NFI=0.92, CFI=0.97, GFI/AGFI=0.94/0.90, factor loadings between 0.39-0.78), (**Paper 2, 3 and 4**),
- the four-factor construct of multidimensional well-being ($\chi^2=54.57$, $p<0.024$, RMSEA=.027, SRMR=0.058, NFI=0.91, CFI=0.99, GFI/AGFI=0.95/0.92, factor loadings between 0.46-0.94, except from one loading SWB9=0.26), (**Paper 2**),
- the three-factor construct of spiritual well-being ($\chi^2=42.82$, $df=24$, $p<0.0047$, RMSEA=0.070/ $p=0.14$, SRMR=0.068, NFI=0.93, CFI=0.96, GFI/AGFI=0.94/0.88, factor loadings between 0.41-0.82), (**Paper 3**), and

- the nurse-patient interaction ($\chi^2=28.02$, $df=20$, $p<0.11$, $RMSEA=0.045/p=0.54$, $SRMR=0.036$, $NFI=0.98$, $CFI=1.00$, $GFI/AGFI=0.94/0.89$, factor loadings between 0.69-0.80) showed good fit (*Paper 4*).

All factor loadings were significant ($p<0.05$) and loaded positively and clearly on their intended latent variable. Cronbach's α and composite reliability (ρ_c) (Table 1) indicated acceptable reliability while values greater than .70 and .60 respectively, are desirable (Diamantopolous & Siguaw 2008, Hair *et al.* 2010).

Table 1. Latent constructs involved in this study; Cronbach's α and composite reliability¹

Construct	Items	Cronbach's α	Composite reliability
ST-1 (Inter-personal Self-Transcendence)	5	.76	0.77
ST-2 (Intra-personal Self-Transcendence)	4	.66	0.67
PWB (Physical Well-being)	3	.68	0.64
SWB (Social Well-being)	3	.65	0.70
EWB (Emotional Well-being)	3	.54	0.60
FWB (Functional Well-being)	3	.62	0.65
SPWB-Meaning (Spiritual well-being)	3	.72	0.75
SPWB-Peace (Spiritual well-being)	3	.66	0.72
SPWB-Faith (Spiritual well-being)	3	.62	0.61
NPIS (Nurse-patient interaction)	8	.91	0.91

Note. ¹Composite reliability $\rho_c = \frac{(\sum\lambda)^2}{(\sum\lambda)^2 + \sum(\theta)}$ (Hair *et al* 2010)

8.4.2 VALIDITY AND RELIABILITY OF THE SCALES

The major aim of this thesis was to test the associations between self-transcendence and well-being and nurse-patient-interaction. However, since the self-transcendence scale has not previously been applied in a Norwegian sample, a necessary part of this research was the translation of the self-transcendence scale into Norwegian. Accordingly, validity, reliability, and the factor structure of the self-transcendence scale were examined in this NH population (paper

1). Moreover, since a proper measure of NH patients' experiences of the nurse-patient-interaction was not available at the moment this study was conducted, the Nurse-Patient-Interaction scale (NPIS) was developed for this study. Consequently, the psychometric properties of the NPIS had to be investigated (paper 4). In light of this, it seems reasonable to shed some light of the notion "psychometric properties".

There are two broad types of psychometric properties that a scale must have in order to be considered a good measure; these are reliability and validity. Reliability is the measure's ability to measure the construct of interest consistently. Cronbach's alpha is a measure of internal consistency, that is, how closely related a set of items are as a group, and is a commonly used index of scale reliability. Cronbach's alpha is a function of the number of items and the average inter-correlation among the items. The value .7 is commonly used as a cut-value (Field 2005).

Traditional statistical analysis of scores (i.e. multiple regression and path analysis) on instruments used, does not adjust for measurement error, which has been investigated and found to have serious consequences (Schumacker & Lomax 2004). Structural equation modelling (SEM) accounts for the measurement error of variables, that is, factor analysis creating latent variables used in SEM. Factor analysis attempts to determine which sets of observed variables share common variance-covariance characteristics that define theoretical constructs or factors (latent variables). In exploratory factor model approaches, we seek to find a model that fits the data, so we specify different alternative models, hoping to ultimately find a model that fits the data and has theoretical support (ibid.). In confirmatory factor analysis (CFA), we seek to statistically test the significance of a hypothesized factor model, that is, whether the sample data confirm the model (ibid.).

In SEM the assessment of the measurement model is to determine the validity and the reliability of the measures used to represent the constructs of interest. The measurement model is a CFA-model defining the relationships between the latent variables and the observed variables, which are indicated by the factor loadings. Therefore, the factor loading is referred to as a validity coefficient (ibid.). The observed variable measurement error is defined as that portion of the observed variable score that is measuring something other than what the latent variable is hypothesized to measure. Measurement error could be the result of (1) an observed variable that is measuring some other latent variable; (2) unreliability; or (3) a higher order factor (Schumacker & Lomax 2004). Validity reflects the extent to which an indicator actually measures what it is supposed to measure, while reliability refers to the consistency of measurement, i.e. the extent to which an indicator is free of random error. All indicator loadings are significant (at $p < 0.05$ or better), as indicated by t-values well in excess of 1.96 in absolute

terms. This provides validity evidence in favour of the indicators used to represent the constructs of interest; validity is concerned with the extent to which scores accurately define the construct (Diamantopolous & Siguaw 2008, Schumacker & Lomax 2004). The reliability of the indicators is examined by looking at the squared multiple correlations (R^2) of the indicators; a high R^2 denotes high reliability for the indicator concerned. In addition, to assess the reliability of the individual indicators, a composite reliability² value for each latent variable can be calculated (also known as construct reliability). To do this the completely standardized solution is used; a composite reliability $>.6$ is desirable (Diamantopolous & Siguaw 2008, Hair *et al.* 2010). If a construct cannot account for a substantial amount of variance in the individual indicators, it cannot possibly capture a substantial amount of variance in the set of indicators.

$$^2 \text{ Composite reliability } \rho_C = \frac{(\sum \lambda)^2}{(\sum \lambda)^2 + \sum(\theta)} \quad (\text{Hair et al 2010})$$

ρ_C = composite reliability

λ = indicator loading

Θ = indicator error variances (i.e. variances of the δ 's (Theta Delta) or ϵ 's (Theta Epsilon))

Σ = summation over the indicators of the latent variable

9. MAIN RESULTS

9.1 PAPER 1

A TWO-FACTOR STRUCTURE OF THE SELF-TRANSCENDENCE SCALE

Title: “*The Self-Transcendence Scale – An Investigation of the Factor Structure among Nursing Home Patients*”. *Journal of Holistic Nursing*, 2012 Sep;30(3):147-59. Epub 2011 Dec 27

Reed’s (2008) empirical nursing theory of self-transcendence provided the theoretical framework, promoting that self-transcendence includes an interpersonal, intrapersonal, temporal, and transpersonal aspect. Data were collected from 250 potential participants representing 44 rural and urban NHs in central Norway. In total, 202 of 250 (81.2%) long-term cognitively intact NH patients who filled the inclusion criteria attended.

Exploratory Factor Analysis (EFA) revealed four internally consistent dimensions of self-transcendence, explaining 50.65% of the variance. Moreover, while self-transcendence is seen as a correlate to well-being, statistical analyses revealed a paradox since the variables most strongly correlated to well-being, showed low factor loadings and extremely low squared multiple correlations (R^2) inside confirmatory factor analysis (CFA), when assessing the one-factor solution. Hence, the dimensionality of the self-transcendence scale was investigated, hypothesizing a possible two- and four-factor solution. CFA indicated that both the hypothesized two-factor and four-factor models fit significantly better than the one-factor model.

The present study concludes that the hypothesized two-factor solution ($\chi^2=108.99$, $df=89$, $p=0.074$, $RMSEA=0.034$, $SRMR=.68$, $NFI=.87$, $NNFI=.97$, $CFI=.98$, $GFI=.92$, and $AGFI=.88$) reveals significantly better fit and reliability than the one-factor-solution. A two-factor structure is also theoretically meaningful while suggesting one interpersonal and one intrapersonal self-transcendence factor; the latter including the transpersonal and the temporal self-transcendence aspects. And as such, it provides a less complex and more practical model from a clinical point of view.

The hypothesized four-factor model also fits significantly better than the one-factor model, but too much uncertainty was related to the possible four-factor structure. Therefore, we conclude on the two-factor solution as the most accurate and reasonable model found in this particular sample of cognitively intact NH patients. This two-factor construct comprising interpersonal and intrapersonal self-transcendence, is used in the further analyses of the associations between self-transcendence, multidimensional well-being, and the nurse-patient-interaction presented in the papers 2, 3, and 4.

SELF-TRANSCENDENCE AFFECTS PHYSICAL, SOCIAL, EMOTIONAL, AND
FUNCTIONAL WELL-BEING

Title: Self-Transcendence in Cognitively Intact Nursing Home Patients: A Resource for Well-Being. *Journal of Advanced Nursing*, published online: 14 AUG 2012, DOI: 10.1111/j.1365-2648.2012.06106.x, *in press*

QoL and well-being for long-term NH patients are described as strongly compromised (Baltes & Smith 2003, Salkeld *et al.* 2000). Issues such as loss, illness, and approaching mortality decimate functioning, and NH patients' loss of independence, privacy, and feelings of isolation and loneliness, and lack of meaningful in-house activities are identified as risk factors for well-being (Routasalo *et al.* 2006, Savikko 2008). Finding new and alternative approaches to increase well-being among NH patients is highly warranted. Self-transcendence is considered a developmental process of maturity in adulthood and a vital resource for well-being at the end of life, hence self-transcendence could be a useful approach.

Data was collected from a sample of 202 cognitively intact NH patients in central Norway, using the FACT-G QoL questionnaire and the self-transcendence scale. The FACT-G comprises the physical, social, emotional, and functional QoL. The relationships between self-transcendence and spiritual well-being were investigated in a separate study (paper 3). Correlational analysis displayed an inverse relationship between self-transcendence and age.

By involving a two-factor construct of self-transcendence this study provides a more complex examination of the relationships between self-transcendence and multidimensional well-being. The SEM-model tested included nine self-transcendence items and twelve FACT-G items, showing a reasonable fit ($\chi^2=234.59$, $df=177$, $p=0.024$, $RMSEA=.041$, $SRMR=.71$, $NFI=.86$, $NNFI=.95$, $CFI=.96$, $GFI=.88$, and $AGFI=.85$). If pairs of correlated error variances were included in the model, the fit was further increased.

By exploring the plausible relationships between interpersonal and intrapersonal self-transcendence and physical, social, emotional, and functional well-being, this study provides evidence that self-transcendence affects all dimensions of well-being in cognitively intact NH patients. Thus, self-transcendence appears to be a potentially vital resource for cognitively intact NH patients' multidimensional well-being.

Our results indicate a lower self-transcendence score (mean=42.5) than previously reported among elderly populations, with means like 50 (Chin-A-Loy & Fernsler 1998), 49 (Reed 1991a), 48 (Upchurch 1999), 47 (Nygren *et al.* 2005) and 46 (Klaas 1998). The present study disclosed a negative relationship between self-transcendence and age with self-transcendence mean score=45 for the group ages 65-75, which is more in line with those reported earlier, while groups ages 76-90 (ST-mean 42.9) and 91-104 (ST-mean 41.25) reported considerably lower self-transcendence. This supports the idea that not age, but rather a poorer self-transcendence-capacity, explains these findings.

9.3 PAPER 3

SELF-TRANSCENDENCE AFFECTS SPIRITUAL WELL-BEING

Title: The Relationships between Self-Transcendence and Spiritual Well-Being in Cognitively Intact Nursing Home Patients. *International Journal of Older People Nursing*, doi: 10.1111/opn.12018, *in press*

Spiritual well-being has become of central importance in many health care settings as researchers continue to study its effect upon health and well-being. Spiritual well-being is understood as particularly important to well-being in the lives of many older adults (Knestrick & Lohri-Posey 2005, Wallace & O'Shea 2007), in NH patients (Burack *et al.* 2012, Hicks 1999, Jones 2010, Touhy 2001, Touhy *et al.* 2005) and at the end of life (Daaleman *et al.* 2008, Hermann 2007, Mount *et al.* 2007). The measurement of the influence of self-transcendence on spiritual well-being in cognitively intact NH patients has not been previously published.

In accordance with recent research this study used the three-factor solution of the FACIT-Sp spiritual well-being scale comprising meaning, peace, and faith, providing a psychometrically better fit (Canada *et al.* 2008, Murphy *et al.* 2010, Peterman *et al.* 2011) than the original two-factor solution of meaning/peace and faith (Peterman *et al.* 2002). Besides, the three-factor solution allows a more complex examination of the construct. A SEM-model of the hypothesized associations between spiritual well-being and self-transcendence was tested, comprising the three-factor construct of spiritual well-being and a two-factor construct of self-transcendence. The present study shows that both interpersonal and intrapersonal self-transcendence have statistical significant influence on NH patients' spiritual well-being comprising meaning, inner peace, and faith.

THE NURSE-PATIENT-INTERACTION AFFECTS SELF-TRANSCENDENCE

Title: Self-Transcendence and Nurse-Patient-Interaction in Cognitively Intact Nursing Home Patients. *Journal of Clinical Nursing*, 2012 Dec;21(23-24):3429-41

The concept of self-transcendence has been studied in various disciplines, but is of particular interest to nursing. The theoretical concept of self-transcendence addresses an enhanced understanding of well-being in late adulthood (Reed 2008): it is described as a quality inherent in every human being, a dynamic process involving adaption to past physical, emotional, and spiritual distress, and as such a powerful coping mechanism. When experiencing difficulties and significant challenges, self-transcendence can lead to personal transformation and provide well-being and improved QoL (Runquist & Reed 2007, Teixeira 2008). Despite that personal and environmental factors function as correlates, moderators, or mediators of the relationships between vulnerability, self-transcendence and well-being, yet the nurse-patient-interactions' potential influence on self-transcendence in NH patients has not been published.

The Nurse-Patient-Interaction Scale (NPIS) comprising 14 items was designed to assess cognitively intact NH patients' experiences of communicating and interacting with the staff nurses, and covers domains that identify essential relational qualities stressed in the nursing care literature (Nåden & Eriksson 2004, Watson 1979, 2007, Wikberg 2007). The items were developed to measure the NH patients' ability to derive a sense of well-being and meaningfulness through the nurse-patient relationships (Burack *et al.* 2012, Haugan Hovdenes 2002, Nakrem *et al.* 2011, Wadensten & Ahlström 2009, Wright 2010).

Exploratory factor analysis supported a one-dimensional structure; the component matrix revealed only one component, and factor loadings from 0.43 to 0.80, with good R²-values. Intern consistency was calculated by Cronbach's α to 0.91. Confirmatory factor analysis testing the one-factor model of the NPIS gave significant estimates with standardized factor loadings between 0.40 to 0.79, good R²-values, and fit measures all showing a good fit: χ^2 (92.32, df=77; p-value=0.11236), RMSEA (0.032), NFI (0.97), NNFI (0.99), CFI (1.00), GFI (0.90), AGFI (0.86) and the SRMR (0.045). Composite reliability was .82, conveniently exceeding the desirable 0.60 threshold (Diamantopolous & Siguaw 2008).

A SEM-model including the latent constructs of interpersonal and intrapersonal self-transcendence and the one-dimensional nurse-patient-interaction indicated statistical significant influence of nurse-patient-interaction on both interpersonal and intrapersonal self-transcendence. Direct effects on intrapersonal and indirect effects (mediated) on interpersonal self-transcendence were disclosed. Hence, facilitating caring nursing interventions and “Being-in-relation within a caring paradigm” (Watson 2005, 2007) can be significantly beneficial to elderly patients’ self-transcendence and multidimensional well-being. Nursing as a caring relationship is about promoting the inner healing journey individuals make with self and others. And this happens when nurses are practicing within a caring-nursing approach, where the unity of the body-mind-spirit is the focus (Levy-Malmberg *et al.* 2008, Martinsen 1993, Watson 2007). Caring nursing behaviour signifies the vital and ultimate qualitative caring presence, which promotes self-transcendence and multidimensional well-being.

9.5 DESCRIPTIVE ANALYSIS

Means and standard deviations for self-transcendence, multidimensional well-being, and nurse-patient-interaction are displayed in Appendix 1-4, respectively. Our results displayed a lower self-transcendence score (mean=42.5) than previously reported among elderly populations, besides a negative relationship between ST and age for both genders in rural and urban NHs. T-tests for equality of means (data not shown) for the ten latent constructs involved in this study showed no significant differences between rural and urban NHs, as well as between men and women. One-way anova (data not shown) revealed no significant differences between ages, sorted by three groups (A. Younger than 80; B. 80-89 years old; C. 90 and older) on the ten latent constructs involved. Accordingly, the sample in the present study seems homogeneous regarding the latent constructs assessed.

However, the correlations between faith and interpersonal and intrapersonal self-transcendence differed significantly (data not shown) among rural and urban NHs; faith related significantly solely to interpersonal self-transcendence in rural NHs, while faith was significantly related to both interpersonal and intrapersonal self-transcendence in urban NHs.

9.6 SPIRITUAL WELL-BEING AFFECTS EMOTIONAL AND FUNCTIONAL WELL-BEING

The four papers included in this thesis did not embrace the associations between meaning, peace, and faith (spiritual well-being) and emotional, functional, social, and physical well-being. However, yet unpublished results discovered significant correlations. As shown in Table 2, in particular emotional well-being and peace ($r^2=.422^{**}$), functional well-being and peace ($r^2=.605^{**}$) and functional well-being and meaning ($r^2=.484^{**}$) are strongly correlated. These associations are not yet tested by means of SEM-analysis; however correlational analysis shows that these relationships seem significant as well.

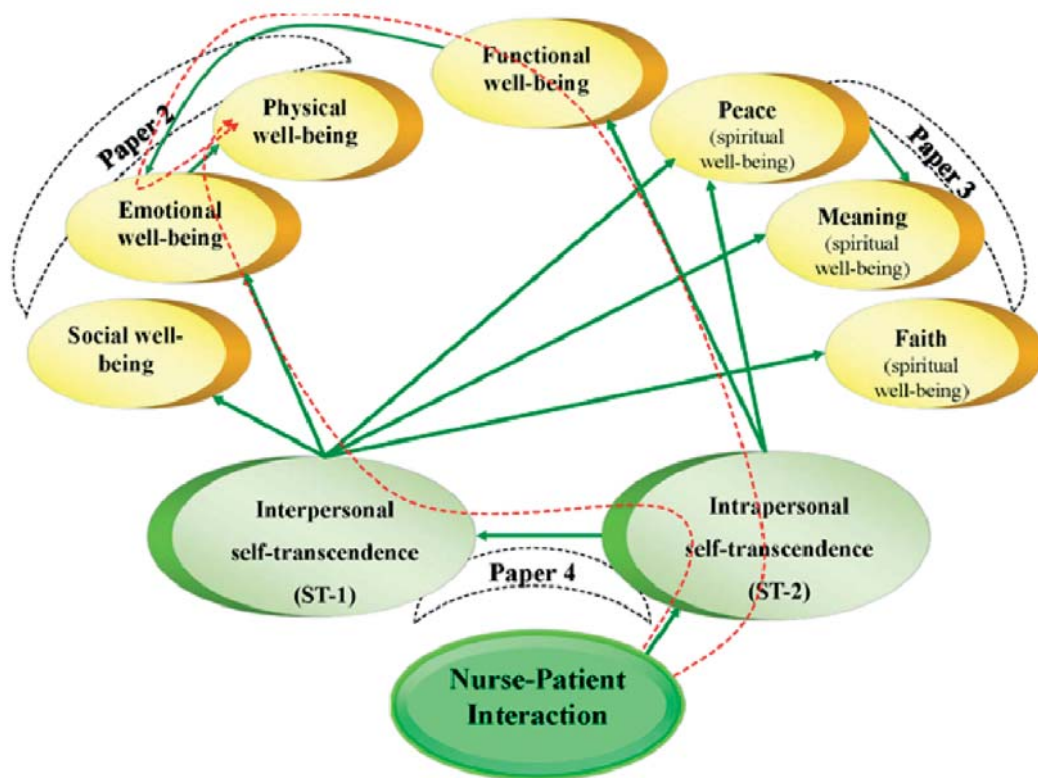
Table 2. Pearson's Correlation coefficient between spiritual well-being and physical, social, emotional and functional well-being

		Correlations			
		PWB	SWB	EWB	FWB
FAITH_3item	Pearson	-.063	.356 ^{**}	.081	.212 ^{**}
	Correlation				
Meaning_3item	Pearson	.180 [*]	.359 ^{**}	.289 ^{**}	.484 ^{**}
	Correlation				
Peace_3item	Pearson	.163 [*]	.239 ^{**}	.422 ^{**}	.605 ^{**}
	Correlation				
SPWB	Pearson	.233 ^{**}	.317 ^{**}	.469 ^{**}	.625 ^{**}
Meaning/Peace	Correlation				

Note: ^{**}Correlation is significant at the 0.01 level. ^{*}Correlation is significant at the 0.05 level. PWB=Physical well-being. SWB=Social well-being. EWB=Emotional well-being. FWB=Functional well-being.

9.7 SIGNIFICANT RELATIONSHIPS DISPLAYED IN THIS STUDY

Figure 7 is summing up and puts together the eleven latent constructs involved in this study and shows the significant relationships and influences between the eleven latent constructs. The model portrayed in Figure 7 is not statistical tested in the form as it is portrayed here; Figure 7 is meant to draw a picture of all significant relations demonstrated by means of the three independently SEM-analyses in the study.



Note: Figure 7 puts together the significant relationships found by means of three different SEM-models illustrated as direct and mediated influences: —→ = direct, - - - → = mediated influence. **Figure 7.** Significant relationships and influences demonstrated in the present study.

The green arrows in Figure 7 display directional influences between the latent variables, whereas the red slim lines specify the suggested mediated influences (indirect effects). Figure 7 shows that significant relationships displayed by means of the green arrows, are demonstrated between interpersonal self-transcendence and social and emotional well-being, whereas intrapersonal self-transcendence significantly was associated with emotional and functional well-being (paper 2). Moreover, the associations between functional and emotional well-being was significant along with the relationship between emotional and physical well-being (paper 2). Interpersonal self-

transcendence also significantly related to inner peace, meaning, and faith, while intrapersonal self-transcendence significantly affected inner peace (paper 3). Also the influence between peace and meaning was significant (paper 3). Looking at the nurse-patient-interaction, Figure 7 displays that that nurse-patient-interaction significantly influences interpersonal and intrapersonal self-transcendence (paper 4). Also, intrapersonal self-transcendence significantly affects interpersonal self-transcendence (paper 4). The red slim lines specify the suggested mediated influences uncovering that both interpersonal and intrapersonal self-transcendence influence on physical well-being, mediated by functional and emotional well-being. Accordingly, the nurse-patient-interaction might influence all well-being dimensions, mediated by intrapersonal and interpersonal self-transcendence.

10. DISCUSSION

The main aim of the present study was to investigate the interrelationships between self-transcendence (interpersonal and intrapersonal) and physical, social, emotional, functional, and spiritual well-being, as well as the relationships between self-transcendence and nurse-patient-interaction. By doing so we sought to contribute to a holistic nursing perspective of promoting well-being in NH patients in six ways.

1. By exploring the plausible relationships between interpersonal and intrapersonal self-transcendence and multidimensional well-being, the present study supplies empirical knowledge of ST and thus extends the growing body of self-transcendence-knowledge.

2. Research focusing on self-transcendence among NH patients is still in its infancy. The link between self-transcendence and well-being has formerly been identified in persons approaching end of life through normal aging (Coward & Reed 1996, Reed 1991a), demonstrating the importance of self-transcendence to well-being in older adults (Daaleman *et al.* 2001, Wachholtz *et al.* 2007). To the authors' knowledge, the relationships between self-transcendence and physical, social, emotional, functional, and spiritual well-being in NH patients are not previously documented. Neither, is the association between self-transcendence and nurse-patient-interaction reported formerly. A notable strength of this research is the empirical examination of models and measures that have not been empirically tested previously.

3. By involving a two-factor construct of self-transcendence, the present study provides a more complex examination of the relationships between self-transcendence, well-being, and nurse-patient-interaction. By examining the plausible relationships and the influences of interpersonal and intrapersonal self-transcendence on physical, social, emotional, functional, and spiritual well-being in cognitively intact NH patients, new approaches to nursing interventions can emerge. By means of advanced statistical analyses involving a two-factor construct of self-transcendence, the present study could point out more specific information about the mechanisms involved in the relationships between well-being and self-transcendence and provide more specific guidelines for nursing interventions promoting well-being. The present study suggests that finding ways to enhance both the individual's intrapersonal and interpersonal self-transcendence might be beneficial in this matter.

4. This study shed light on the nurse-patient-interaction affecting both interpersonal and intrapersonal self-transcendence, and thus suggesting mediated influences of nurse-patient-interaction on the relationships between self-transcendence and multidimensional well-being. As

part of this effort, a questionnaire designed for the cognitively intact NH population measuring essential aspect of patients' experiences of the nurse-patient-interaction was generated.

5. Hence, this study provides validation of relevant questionnaires for this particular NH population. This study supplies empirical knowledge to the rather new documentations of the three-factor construct of the FACIT-Sp questionnaire measuring spiritual well-being, and to the two-dimensionality of the self-transcendence scale, and

6. by providing knowledge about the level of interpersonal and intrapersonal self-transcendence in cognitively intact NH patients in 44 NHs in central Norway.

Our results indicate a negative association between self-transcendence and age, and a lower self-transcendence mean score (mean 42.5) than previous reported among elderly populations. Although the participants in Reed's study (1991a) were ages 85-100, their reported self-transcendence-level was 49. Similarly, Upchurch (1999) reported a self-transcendence-level at 48 for adults ages 65-93, and Klaas (1998) studied elderly 75 years and older, reporting a mean of 46. This supports the idea that not age, but rather a poorer self-transcendence-capacity, explains our findings. Cognitively intact NH patients possibly represent a particular vulnerable population characterized by severe illnesses and physical impairments causing a poorer self-transcendence capacity than community-dwelling elderly. Also, the NH setting might represent fewer possibilities for developing and preserving self-transcendence than are found among same-aged older adults living at home (Nygren *et al.* 2005, Reed 1991a). The present study includes older adults with NH residence of six months or longer; NH services and nursing care have tended to ignore the psychosocial and spiritual needs (Haugan Hovdenes 2002, Vaarama & Tiit 2007) essential to self-transcendence. Moving to a NH results from numerous losses, illnesses, and functional impairments, all of which increase an individual's vulnerability and decimate individuals QoL. Drageset (2009) concluded that NH patients had lower HRQoL than the general population, and that a sense of competence and self-esteem were important for vitality. The NH life is institutionalized, representing loss of social relationships, privacy, self-determination, and connectedness. Additionally, rates of depression in NH patients are three to four times higher than in community-dwelling older adults (Jongenelis *et al.* 2004), and the elderly who lack social/emotional support report more depression (Grav *et al.* 2012). These aspects might explain the lower self-transcendence scores in the present study compared to the community-based samples in previous studies.

10.1 THE FACTOR STRUCTURE OF THE SELF-TRANSCENDENCE SCALE

This study investigated the factor-structure of the self-transcendence scale, demonstrating a two-factor construct psychometrically superior to the previously presented one-factor solution (paper 1). The two-factor solution is based in the self-transcendence theory, stating self-transcendence as expansion of self-boundaries interpersonally, intrapersonally, transpersonally, and by temporality. Thus, the two-factor construct comprises an interpersonal and an intrapersonal self-transcendence dimension, the latter comprising the transpersonal and temporal dimensions seen as intra-facets. The described two-factor construct makes available a more complex examination of the mechanisms involved in the interrelationships of self-transcendence and other human dimensions, such as well-being and nurse-patient-interaction. This two-factor structure might constitute an easy, but also more specific guideline for clinical caring practice in NHs. Noticing an interpersonal and an intrapersonal dimension might be helpful guiding staff nurses' awareness toward supporting patients' self-transcendence.

10.2 SELF-TRANSCENDENCE INFLUENCES MULTIDIMENSIONAL WELL-BEING

In sum, the research questions aimed to investigate the plausible relationships between interpersonal and intrapersonal self-transcendence and physical, social, emotional, functional, and spiritual well-being, and the nurse-patient-interaction. In all 26 different hypotheses were tested from which 14 were supported; explicitly the hypotheses H2-H6, H12, H14-H19 and H25-H26 (Figure 6, p.37) were supported. These are:

H2 *Hypothesis 2*: A two-factor model of self-transcendence fits well with the data.

H3 *Hypothesis 3*: A four-factor model of self-transcendence fits well with the data.

H4 *Hypothesis 4*: The two-factor model fits better than the four-factor model.

H5 *Hypothesis 5*: Interpersonal self-transcendence positively affects social well-being.

H6 *Hypothesis 6*: Interpersonal self-transcendence positively affects emotional well-being.

H12 *Hypothesis 12*: Intrapersonal self-transcendence positively affects functional well-being.

H14 *Hypothesis 14*: Functional well-being positively affects emotional well-being.

H15 *Hypothesis 15*: Emotional well-being positively affects physical well-being.

H16 *Hypothesis 16*: Interpersonal self-transcendence positively influences inner peace.

H17 *Hypothesis 17*: Interpersonal self-transcendence positively influences meaning.

H18 *Hypothesis 18*: Interpersonal self-transcendence positively influences faith.

H19 *Hypothesis 19*: Intrapersonal self-transcendence positively influences inner peace.

H25 *Hypothesis 25*: The nurse-patient-interaction positively affects intrapersonal self-transcendence in cognitively intact NH patients.

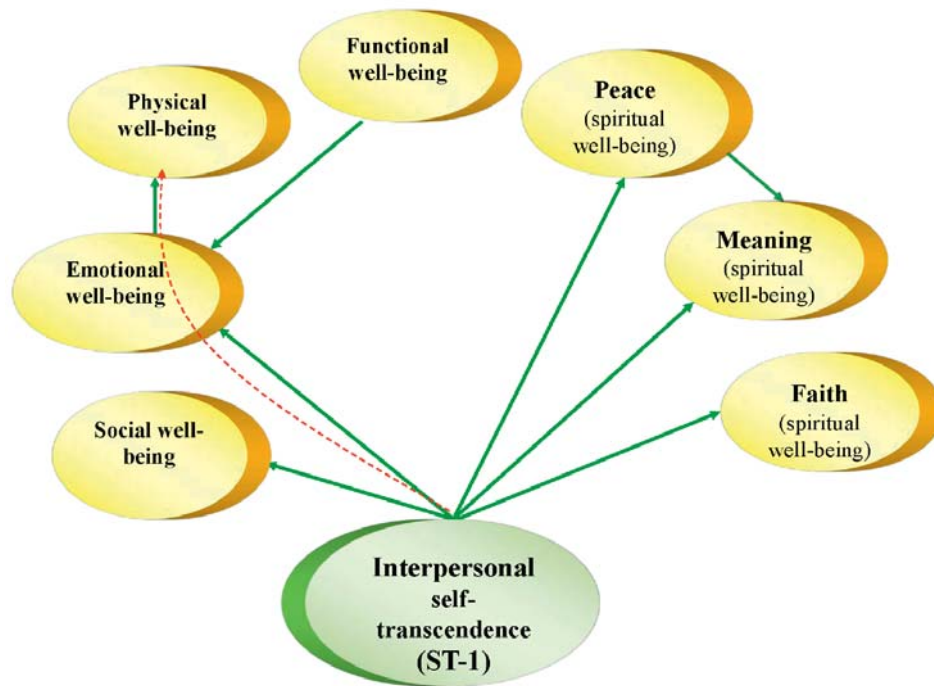
H26 *Hypothesis 26*: Intrapersonal self-transcendence positively affects intrapersonal self-transcendence in cognitively intact NH patients.

Since CFA revealed two self-transcendence factors (paper 1: interpersonal and intrapersonal), directing the attention to how the two self-transcendence dimensions might differ in their ways of relating to multidimensional well-being and nurse-patient-interaction would be of interest.

10.2.1 INTERPERSONAL SELF-TRANSCENDENCE

Figure 8 (p.61) portrays how interpersonal self-transcendence related to well-being; interpersonal self-transcendence, comprising involvement with other people, sharing wisdom, and helping others, as well as an ongoing interest in learning, relates directly to NH patients' social and emotional well-being. This is theoretically reasonable and in accordance with previous findings (Bickerstaff *et al.* 2003, Ellermann & Reed 2001, Reed 1991a). Interpersonal self-transcendence comprises exactly the *inter*-dimension, respectively social relationships and interaction with other people. Experiences of connectedness and closeness to family and friends, which is usually important to an individual's emotional well-being, are essential aspects of social well-being. Accordingly, interpersonal self-transcendence also related (statistically) directly to emotional well-being, comprising feelings such as sadness, nervousness, and discomfort. Therefore, involvement with others, sharing wisdom, helping, and learning are negatively associated with such negative feelings; hence, interpersonal self-transcendence is related to positive feelings. The causality for this association might be reciprocal; people with positive feelings are more likely to engage with others, while engaging with others can make individuals feel better.

The QoL domain of "belonging" with one's environments (Raphael *et al.* 2010a, Raphael *et al.* 2010b) seems closely related to interpersonal self-transcendence, which is essentially namely *inter-connectedness*. Belonging and connectedness are strongly interrelated. Therefore, offering and facilitating NH patients' possibilities for "belonging"—thus, connecting and involving – are crucial to QoL in NH patients. Accordingly, interpersonal self-transcendence is vital for well-being in NH patients.





Note:  = direct influence.  = mediated influence.

Figure 8. Direct and mediated influence of interpersonal self-transcendence on well-being.

Moreover, interpersonal self-transcendence affects spiritual well-being comprising the three dimensions of faith, meaning, and peace. Hence, involving, learning, helping, and sharing are vital for meaning; also individuals in NHs are in need of meaningful activities and meaningful relationships (Bergland & Kirkevold 2006, Harrefors *et al.* 2009, Haugan Hovdenes 2002).

Furthermore, faith connects individuals to a church representing transpersonal and interpersonal relationships, which possibly embodies involvement with others in the church or the community of believers. Accordingly, patients' faith or spiritual beliefs might provide relationships involving communication, support, helping, and sharing one's wisdom; providing a sense of communion that is vital for well-being. Moreover, these relationships might represent opportunities for learning and growth, both of which are essential to interpersonal self-transcendence. Additionally, faith provides belongingness to a church or some kind of a group. Therefore, it is reasonable that interpersonal self-transcendence was clearly related to faith.

In spite of demographic analysis revealing only 18.8% perceived themselves as not religious at all; 28.7% were very religious and 52.5% were somewhat religious, a low mean score for faith was displayed. This indicates, in accordance with former research (Pesut 2008a, b, Tanyi 2002), that perceiving oneself as somewhat religious might be quite another issue than

finding strength in one's faith; the latter requiring an intimate relationship to a Divinity. Also, this might suggest that opportunities for facilitating and supporting individuals' faith are scarce in NHs. Moreover, it is possible that for elders at this stage of their lives, inner spiritual experiences might replace the more organizational aspects of religion (McKinley & Adler 2005).

In addition, faith was associated significantly solely to interpersonal self-transcendence in rural NHs, while faith was significantly related to both interpersonal and intrapersonal self-transcendence in urban NHs. Accordingly, intrapersonal ST comprising acceptance and adjustment might be less related to faith in rural NHs, possibly indicating that rural NHs include more possibilities for meaningful involvement, separately from the church setting. Rural districts often comprise one single NH resulting in closer understanding between NH patients and their family/friends visiting the NH. Therefore, meaningful involvement is more likely to happen. Nevertheless, yet this difference between rural and urban NHs was significant, it might be caused at random; hence further investigations are needed before conclusions can be drawn.

The association between interpersonal self-transcendence and inner peace does not seem that straight forward. Nevertheless, involving, learning, helping, and sharing might contribute to individuals experiencing inner peace and harmony by reducing stressors such as feelings of loneliness, uselessness, worthlessness, and meaninglessness. Consequently, patients' experiences of dignity and also the "being" domain of a person's QoL will be supported— all of which are likely to bring along experiences of inner peace (Mahlungulu & Uys 2004, Raphael *et al.* 2010a, Raphael *et al.* 2010b, Villagomez 2005).

Thus, involvement with others, learning, helping, and sharing wisdom are potential resources for inner peace. Individuals who do not involve, learn, help, and share, might feel lonely, worthless, and useless representing negative impacts on inner peace and harmony. This is in accordance with former research highlighting opportunities to provide nurturance for others to be vital for NH patients' QoL, as well as a sense of competence and self-esteem (Drageset 2009). Involving, helping, and sharing wisdom might contribute to a sense of competence, nurturing others, and consequently increased self-esteem and self-acceptance. By involvement etc., individuals in general feel more alive, vitalized, and perhaps as though they are still growing. As an inner developmental resource self-transcendence implies a process of change and growth (Reed 2008, Teixeira 2008). Consequently, involvement, learning, helping, and sharing might facilitate personal growth toward new and deeper understandings of life, death and ones' life situation. When no challenges are offered, a sense of stagnation may well take over.

Within Erikson's model of human psychosocial development (Erikson 1950), the eighth developmental crisis entails integrity versus despair, which is resolved by the development of

maturity and wisdom, qualities providing well-being (Erikson 1964). Consequently, relationships for involvement and communication seem even more evident to NH patients' self-transcendence and well-being. Self-transcendence (inter- and intrapersonal) constitutes a developmental process toward personal maturity and wisdom (Reed 2008). In accordance with Erikson (1998) wisdom rests in the capacity to see, look, and remember, as well as to listen, hear, and remember. Accordingly, NH patients' well-being requires incentives in somewhat substantial terms to see, hear, and remember. Hence, the interpersonal perspective is fundamental.

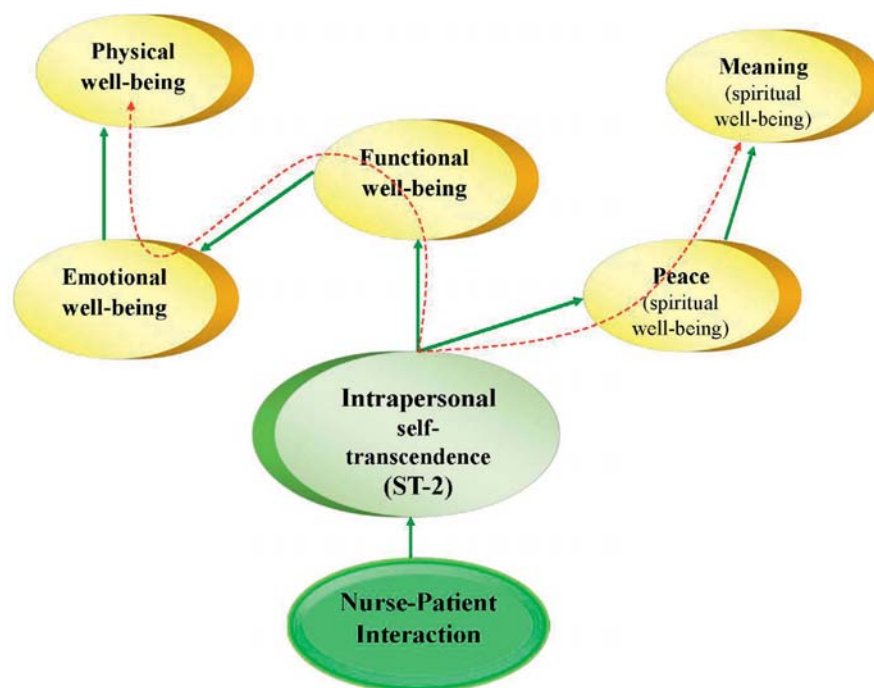
10.2.2 INTRAPERSONAL SELF-TRANSCENDENCE

Figure 9 (p. 64) portrays the significant relations between intrapersonal self-transcendence, well-being, and nurse-patient-interaction demonstrated by means of the three SEM-models tested in the present study. As portrayed in Figure 9, this study revealed significant associations between nurse-patient-interaction and the intrapersonal aspect of self-transcendence, which in turn demonstrated significant influences on functional well-being. Figure 9 also points out that functional well-being is significantly related to emotional well-being, which significantly influenced on physical well-being. Hence, intrapersonal self-transcendence mediated by functional and emotional well-being, significantly influenced on physical well-being (displayed by means of the slim red arrows). Moreover, since the nurse-patient-interaction significantly affected intrapersonal self-transcendence, it is possible that nurse-patient-interaction affects functional, emotional, and physical well-being mediated by intrapersonal self-transcendence. Furthermore, Figure 9 displays that intrapersonal self-transcendence is significantly related to inner peace, which in turn significantly was associated to meaning. Thus, mediated by inner peace, intrapersonal self-transcendence was associated with meaning. Accordingly, it might be that nurse-patient-interaction mediated by intrapersonal self-transcendence affects NH patients' sense of inner peace, and thereby also meaning.

In accordance with previous research (Reed 1992, Runquist & Reed 2007, Teixeira 2008) intrapersonal self-transcendence relates directly to functional well-being, comprising the patients' experience of their overall QoL, their ability to enjoy life, and acceptance of their situation. Intrapersonal self-transcendence comprises aspects such as self-acceptance, adjustment to life situation and physical disabilities, and letting others help. Thus, the directional influence on functional well-being seems evident and in accordance with previous research (Hjaltadóttir & Gústafsdóttir 2007, Tester *et al.* 2004, Wadensten & Ahlström 2009); acceptance, QoL, and the

ability to enjoy life (functional well-being) relate logically to the extent of self-acceptance, adjustment, and letting others help (intrapersonal self-transcendence). If a NH patient doesn't accept, adjust, and let others help, enjoying life in the NH will be difficult.

Intrapersonal self-transcendence clearly affected the peace-factor belonging to spiritual well-being. Consequently, the experience of inner peace and harmony is closely related to intrapersonal self-transcendence comprising self-acceptance and adjustment, which connects to the QoL domain of "being" (Raphael *et al.* 2010a, Raphael *et al.* 2010b). Inner peace and harmony results from self-acceptance and adjustment, hence intrapersonal self-transcendence contributes to the ability of enjoying one's "being" or "who I am" (Harrefors *et al.* 2009, Hjaltadottir & Gustafsdottir 2007, Tester *et al.* 2004). Enjoying one's "being" requires social and emotional support, kindness, acceptance, and confirmations from the caring environment. Accordingly, the nurse-patient-interaction showed significant direct influence on intrapersonal self-transcendence, and a mediated impact (by intrapersonal, Figure 7) on interpersonal self-transcendence. Figure 9 portrays the significant relations between intrapersonal self-transcendence and well-being demonstrated by means of the three SEM-models tested in the present study.





Note:  = direct influence.  = mediated influence.

Figure 9. Direct and mediated influences of intrapersonal self-transcendence on well-being.

We supposed that the experiences of strength derived from one's faith positively would affect patients' intrapersonal self-acceptance by experiences of self-acceptance and adjusting well (Ellison & Levin 1998). However, this relationship was not supported in the SEM-analysis; intrapersonal self-transcendence and faith were not significantly related. Surprisingly, faith did not relate significantly to peace and meaning. Nevertheless, faith significantly influenced meaning at the 10%-level. Thus, NH patients' spiritual faith might positively contribute to individuals' meaning. Total effects of intrapersonal self-transcendence on physical, emotional, functional, and spiritual well-being (papers 2 and 3) were disclosed. Directional effects from functional well-being to emotional well-being, and from emotional to physical well-being revealed (paper 2), indicating that intrapersonal self-transcendence indirectly affects physical well-being, mediated by functional and emotional well-being (Figures 7 and 9). Accordingly, intrapersonal self-transcendence not only influences vulnerable patients' functional, emotional, and spiritual well-being, but their physical well-being as well. Intrapersonal self-transcendence comprises adjustment to changes in physical abilities/frailties, hence this influence is reasonable and comprehensible within the holistic perspective of body-mind-spirit as a whole based on the premise that each of these elements is interconnected and that one affects the others (Glaister 2001, Guzzetta 2005, Narayanasamy *et al.* 2004, Quinn 2005, Ryff *et al.* 2004). Preliminary findings on a sample of aging women demonstrates that self-acceptance, meaning in life, self-growth, and positive relations with others correlate with lower levels of daily cortisol, pro-inflammatory cytokines, cardiovascular risk, and longer duration REM sleep compared with those showing lower levels of these aspects of well-being (Ryff *et al.* 2004).

10.2.3 SELF-TRANSCENDENCE – EXPLANATORY FACTOR FOR WELL-BEING

Self-transcendence (inter- and intra-) was positively associated with all well-being dimensions included in this study. These findings are in accordance with previous research on QoL in NHs; while sense of self (intrapersonal), seeking solace and affirmation of self (intrapersonal), the care environments (both intra- and interpersonal), relationships with staff, peers, family/friends (interpersonal) and God (transpersonal=intra), dignity, meaning and inner peace, and activities (interpersonal) are reported as the main domains for QoL in long-term NH patients (Burack *et al.* 2012, Haugan Hovdenes 2002, Hjaltadóttir & Gústafsdóttir 2007, Tester *et al.* 2004). Therefore, concluding on self-transcendence as a significant resource, and thus an explanatory factor for well-being, seems comprehensible and in accordance with previous research. Previous research

in long-term NH patients demonstrates positive relationships, quality of care and caregivers as vital for thriving and well-being (Bergland & Kirkevold 2006, Haugan Hovdenes 2002, Nakrem *et al.* 2011).

The perspective that QoL is reflected by the degree to which a person enjoys the important possibilities of his/her life (Raphael *et al.* 2010a) seem comprehensible with the self-transcendence theory contending self-transcendence as an explanatory factor of well-being among older adults. The enjoyment possibilities occur in the three life domains of being, belonging, and becoming (*ibid.*). The “being” part corresponds to the intrapersonal self-transcendence, while the “belonging” aspect seems closely related to interpersonal self-transcendence. The “becoming” QoL domain referring to activities carried out in the course of daily living, including those to achieve goals, hopes, and aspirations, enjoyment, and adapting to changes (Raphael *et al.* 2010b) appears as close to both the interpersonal and intrapersonal self-transcendence; activities like hobbies, involving, learning, helping and sharing wisdom contribute to enjoyment and meaning, and thereby intrapersonal stressors such as experiences of loneliness, uselessness, worthlessness, and meaninglessness can be reduced and relieved.

10.2.4 NURSE-PATIENT-INTERACTION INFLUENCES SELF-TRANSCENDENCE

NH patients represent a particular vulnerable population (Pleschberger 2007), consequently their needs for support, empathic caring involving sensitivity, respect, and a high moral and ethical commitment (Watson 2001, 2003, 2007) are undoubtedly evident. Dignity is also highlighted as a significant predictor of the NH patients’ satisfaction with staff (Burack *et al.* 2012). Dignity is related to the inner sense of self (Nordenfelt 2003, Wadensten & Ahlström 2009) and feelings of worthiness; feeling valuable and important in relation to others (Haddock 1996, Johnson 1998), in particular in relation to staff (Franklin *et al.* 2006, Haugan Hovdenes 2002). In the light of the ninth developmental stage (Erikson 1998, Erikson *et al.* 1986) NH patients are facing difficulties such as disabilities causing increased dependency, experiences of escalated inadequacy, and thus decreased self-esteem and self-confidence. Furthermore, the ninth stage brings along enhanced awareness of one’s own mortality and also losses of vital social relationships. All of these encounters result in intensified experiences of vulnerability. Acceptance of the self and adjusting well to one’s disabilities that come with aging and illnesses are associated with the experience of being whole and integrated, and defined as the sense of well-being (Eriksson 1987a, Reed 2008). Hence, both intra- and inter-personal self-transcendence seem vital to NH patients’ sense of self

and dignity. This result is also comprehensible with recent research differentiating experiences of dignity among NH patients into intrapersonal and relational dignity (Pleschberger 2007).

From all of these, the caring environments, the nurse-patient-interaction, and relationships become visible as an imperative for self-transcendence and well-being in long-term NH patients. Reed's (2008) theory highlights environmental factors as mediators or moderators of the interrelationships between self-transcendence, vulnerability, and well-being. The nurse-patient-interaction emerges to be such a vital mediator of these relationships. Results from this study demonstrate that nurse-patient-interaction significantly affects intrapersonal self-transcendence, and display a mediated (by intrapersonal) influence on interpersonal self-transcendence among cognitively intact NH patients. Depression is three to four times higher in NH patients than in community-dwelling older adults (Jongenelis *et al.* 2004), and is likely to be a close companion with feelings of social isolation, loneliness, and worthlessness. Thus, nurse-patient-interaction seems crucial for NH patients' well-being and thriving, as well as for preventing depression and anxiety (Haugan *et al.* 2012). Accordingly, positive staff engagement have been found to be a correlate to NH patients' interest and pleasure of participating in an organized group activity (Meeks & Looney 2011). Based in internationally well-acknowledged nursing theories of caring (Levy-Malmberg *et al.* 2008, Martinsen 1993, Reed 2009b, Travelbee 1979, Watson 1988, 2008), professional nursing care is materialized in a special kind of human care relationship, a union with the other person, in high regard for the whole person and his/her being-in-the-world. Professional nursing care is grounded in a "Being-in-Relation within a Caring paradigm", meaning that caring nurses engage in person-to-person relationships with the patients as unique persons, producing therapeutic results and well-being in the person being served (*ibid.* all). Professional nursing care is defined by the nurses' way of "being present" together with the patient while performing nursing activities, in which attitudes, moral, and competence are inseparately connected. When offering NH patients professional nursing care, both interpersonal and intrapersonal self-transcendence will be supported. Facilitating possibilities for connectedness, both intrapersonal and interpersonal, might increase NH patients' well-being.

10.2.5 VALIDATION OF RELEVANT QUESTIONNAIRES

THE SELF-TRANSCENDENCE SCALE (STS)

The present study concludes that the hypothesized two-factor solution reveals significantly better fit and reliability than the one-factor solution (paper 1). A two-factor structure is theoretically meaningful while suggesting one interpersonal and one intrapersonal self-transcendence factor, the latter including the transpersonal and the temporal self-transcendence aspects. From a clinical point of view, the two-factor construct comprising an interpersonal and an intrapersonal dimension of self-transcendence might provide an easier guideline to clinical nursing practice; this two-factor construct might help nurses be attentive to NH patients' needs in terms of focusing both the interpersonal and the intrapersonal experiences. The present study demonstrates that intrapersonal self-transcendence significantly influences NH patients' well-being. Moreover, this study also included statistical data on the staff nurses' acknowledgement of their NH patients' level of self-transcendence. The data demonstrated that nurses' awareness of their patients' interpersonal self-transcendence corresponded well with their patients' self-reported level of interpersonal self-transcendence (data not shown). Conversely, this was not the case regarding the intrapersonal aspect of self-transcendence. As a matter of fact, about 50% of the staff nurses scored "I don't know" for the intrapersonal items (data not shown). Knowing the patients' level of intrapersonal self-transcendence (e.g. self-acceptance, meaning) requires a nurse-patient-interaction characterized by closeness and meaningful dialogue on a deeper personal level. Intrapersonal experiences have to be communicated and shared, whereas interpersonal self-transcendence can be observed without having a deeper conversation with the NH patients; staff nurses might observe the NH patient, e.g. involvement with others, or engagement in hobbies and interests. In the light of this, a two-factor structure of self-transcendence might increase staff's awareness of not only the interpersonal but also the intrapersonal self-transcendence aspects when assessing NH patients' needs for nursing care and interventions.

THE NURSE-PATIENT-INTERACTION SCALE (NPIS)

NH patients' relations to the staff nurses have occurred to be a very powerful influence on patients' meaning in life and well-being (Clarke *et al.* 2003, Finch 2006, Haugan Hovdenes

2002, Heliker 2009, Hollinger-Samson & Pearson 2000, McGilton & Boscart 2007, Pipe *et al.* 2010). Thus, access to reliable questionnaires measuring NH patients' experience of the nurse-patient-interaction is fundamental. The NPIS was developed for use in the present study (paper 4); we intended to specify items representing experiences of caring moments that could increase patients' sense of well-being, derived through the interaction with the staff nurses. Both EFA and CFA supported a one-dimensional structure, and the CFA revealed a good fit with the data. The NPIS-items showed strong reliability, except for the items NPIS10: "I often get hurt or sad from how the nurses interact with me" and NPIS14: "Interaction with nurses is the most important to my thriving". Item NPIS10 indicates that to some extent the nurses hurt patients' feelings, while item NPIS14 reveals the highest mean-score displaying that patients' interaction and relationships to staff nurses are extremely important for the patients' thriving. The low R^2 -values for item NPIS10 and NPIS14 suggest that these items are less relevant in explaining the variance in self-transcendence, probably because they are too obvious.

Frail and disabled NH patients' might feel vulnerable and very dependent in relation to the staff nurses; most NH patients experience great dependency as well as great gratitude to the staff nurses. The mean age in the present study was 86 years, representing the NH patients' great amount of life experience, which they realize that the younger staff nurses do not yet possess. Rather than being critical, the patients may want to focus on sympathy, acceptance, tolerance, gratitude, and understanding toward the staff nurses and hence transcending the self-boundaries. However, internal consistence measured by Cronbach's α and composite reliability was strong; besides the factor loadings and the R^2 -values were good. The NPIS demonstrated sound psychometric properties in our study population; good content validity and internal consistency.

11. LIMITATIONS

Some limitations must be considered. Effective samples in this study were N=190 (paper 1 and 2), N=185/186 (paper 3) and N=192/193 (paper 4). These samples are considered as “medium”, near the limit for “large” samples (>200). However, larger samples would significantly increase the statistical power of the tests. Nevertheless, models with moderate sample sizes should be analysed if a greater sample is unavailable and if convergence problems or improper solutions, such as negative variances estimates or Heywood cases do not occur (Schermelleh-Engel *et al.* 2003). Such problems did not arise here.

Due to sample size and complexity of the SEM-model tested, spiritual well-being was investigated in a separate study (paper 3). Given a larger sample, including spiritual well-being together with physical, social, emotional, and functional well-being in the SEM-model tested (paper 2), might have provided more accurate estimates regarding the interrelationships between self-transcendence and multidimensional well-being.

In addition, the sample in this study was not a representative unbiased indication of the cognitively intact NH population. As a result, a sampling error might be a possible bias. However, the sampling was conducted by the responsible doctor and nurse at each ward, in accordance with the inclusion criteria. The fact that as much as 44 different NHs were involved decreases the probability of bias due to culture differences among different NHs. Also, the sample comprises 117 participates from 16 rural and 85 participants from 28 urban NHs, which is a strength. Nevertheless, this study addressed the cognitively intact NH patients. Consequently, the participants in the present study might have severe physical illnesses and impairment, which probably might have influenced how they responded. Thus, the associations found in this study need further investigation.

The cross sectional design does not allow us to determine conclusions regarding causality. A longitudinal design would have strengthened the study by allowing changes to be assessed and compared over time.

The fact that researchers assisted participants completing the questionnaires might have introduced some bias into the respondents' reporting, although statistical tests showed no significant differences between responses based on interviewers. The STS and the FACT-G were part of a battery of nine questionnaires comprising 130 items. Thus, frail NH patients might tire when completing the questionnaires, representing a possible bias in their reporting. To avoid this, experienced researchers were carefully selected and trained to conduct the interviews following a standardised procedure, including short breaks at specific points during the process.

Although the FACT-G has been validated for other chronic-illness conditions as well as for the general population (Cella *et al.* 1993), it might not work so well for this NH population. Four items were excluded and the measurement model reduced accordingly, but still some items showed low R^2 . A cross-cultural validation of the FACT-G for the NH population is of great interest. Paper 2 in the present study using the FACT-G QoL questionnaire showed lower values than the recommended value of 0.90 for the normed fit index (NFI=0.88) and goodness-of-fit index (GFI=0.88). This, along with the low self-transcendence-scores, indicates that interrelationships cannot be made with certainty. However, both NFI and GFI are sensitive to small samples, underestimating fit for samples less than 200, and thus should not be relied on solely (Kline 2005, Sharma *et al.* 2008). The NNFI in paper 2 was 0.97 indicating good fit. Moreover, the AGFI adjusts the GFI based upon degrees of freedom and showed acceptable fit ($AGF \geq 0.85$). The CFI is a revised form of NFI, which takes into account sample size and performs well even when samples are small (Hooper *et al.* 2008); CFI ≥ 0.95 is presently recognized as indicative of good fit (Hu & Bentler 1999). In the present study CFI was between 0.96 and 0.99; accordingly the models and the interrelationships documented and described in the papers 1-4 were supported.

The Nurse-Patient-Interaction Scale (NPIS) was designed to assess patients' experiences of the nurse-patient-interactions. This recently developed scale has not been validated previously. Therefore, further testing and validating are highly warranted.

12. PRACTICAL APPLICATIONS

The main aim of this study was to investigate the interrelationships between self-transcendence and multidimensional well-being and nurse-patient-interaction in cognitively intact NH patients. Our results indicate that self-transcendence (inter and intra) is associated with spiritual, functional, emotional, and social well-being, and indirectly influences physical well-being mediated by functional and emotional well-being. Moreover, this study reveals that nurse-patient-interaction significantly affects intrapersonal self-transcendence, which influences interpersonal self-transcendence.

Thus, the potential for self-transcendence and well-being are important considerations in NH care; most patients have suffered numerous losses that challenge their self-transcending capacity and their well-being, all of which increase patients' vulnerability. Most of the NH patients are in need of care and assistance because of physical decline and other limitations. Self-acceptance and adjustment, which are essential aspect of intrapersonal self-transcendence, seem necessary and thus vital for well-being (Ryff *et al.* 2004). Facing advanced age, few remaining social contacts, other losses, and physical decline requiring NH care, individuals may experience threats to their connectedness, representing life experiences that manifest existential suffering and feelings of loneliness and worthlessness. Accordingly, it might prove difficult to maintain one's self-acceptance and well-being. Adjusting well to one's disabilities and life situation requires energy; transformation and adjustment are exhausting. At the same time, fatigue and pain are common symptoms among NH patients. In this particular sample about 55% reported fatigue and about 50% had pain (data not shown). Hence, it seems evident that NH patients' life situation is demanding.

Previous research suggests that emotional and spiritual well-being are resources for maintaining physical well-being (Kirby *et al.* 2004, Ryff *et al.* 2004). The present study suggests that intrapersonal self-transcendence is a vital resource for emotional and spiritual well-being, both of which positively affect physical well-being. Nevertheless, research points out that NH care supporting patients' emotional and spiritual needs tend to be ignored (Vaarama & Tiit 2007). Consequently, nursing interventions that facilitate intrapersonal self-transcendence are a potential resource for multidimensional well-being.

Furthermore, this study revealed that the nurse-patient-interaction is vital for patients' intrapersonal self-transcendence. However, facilitating the self-transcendence intra-aspect requires a nurse-patient-interaction involving personal closeness and dialogue on a deeper meaningful level. The staff nurses have to be more deeply involved in their patients' inner

experiences and provide stimulation of reflections and connection to patients' inner thoughts and emotions. Hence, providing communication training programs for staff seems required. The nurse-patient-interaction is a potential resource for connectedness, supporting NH patients' self-acceptance, adjustment, and wellbeing.

The present study did also bring to light that interpersonal self-transcendence is a vital resource for social, emotional, physical, and spiritual well-being among cognitively intact NH patients. Facilitating hobbies, helping others, learning, and sharing wisdom could increase meaning in life, inner peace, and acceptance of the self, death, and the pace of life, helping patients in adjusting well to this life situation, all of which contribute to well-being. However, the interpersonal aspect of self-transcendence comprising involvement in other people, sharing wisdom, and helping others in some way, along with involving in hobbies, interests, and learning might require a certain level of energy and less physical illness and impairments. The patients' scores on self-transcendence were decreasing by higher age (shown in paper 2); this decrease was mostly related to the inter-personal aspects. Thus, when facilitating interpersonal self-transcendence nurses have to be aware of physical variables such as patients' fatigue and pain.

Nurses may promote interpersonal self-transcendence by facilitating cognitively intact patients' connections with others, family, and friends. Therefore, there is a need to invite relatives into encounters with nurses in NHs, which is found to be positive (Westin *et al.* 2009) giving relatives positive feelings when visiting the NH; they felt valuable in their roles as relatives and even felt a sense of community with the nurses (*ibid.*). Moreover, the feeling of being invited and the sense of community with nurses also seemed to contribute to and facilitate the care of the NH patients (*ibid.*). Hence, to facilitate interpersonal self-transcendence, NH nurses need time for patients' family members involving them in the care, talking, and listening to them.

Studies have confirmed positive relationships, quality of care, and caregivers as core aspects contributing to thriving and well-being in NH patients (Bergland & Kirkevold 2006, Haugan Hovdenes 2002, Nakrem *et al.* 2011). However, caring for older NH patients is demanding. The landscape of long-term care is changing in the western world with higher patient acuity and evolving patients profiles, including a larger number of palliative patients, patients with mental illness, substance abuse, and mental retardation mostly because of lessening the pressure on hospitals, and the closure of other institutions that previously provided this kind of care (Kaasalainen *et al.* 2010). However, the resulting changes in care needs for NH patients have not been reflected in changes in staffing patterns or the provision of continuing education for staff, which are described as barriers to improving QoL in NHs (*ibid.*). Furthermore,

challenges in handling elder abuse and inadequate care (abuse, violence, neglect and maltreatment) in NHs have occurred in many countries (Malmedal *et al.* 2009a, Malmedal *et al.* 2009b, Pickens *et al.* 2011, Sandmoe *et al.* 2011, Sciamberg *et al.* 2011). Consequently, finding ways to improve quality of care and NH patients QoL is crucial. Providing continuing education for NH staff including concepts such as vulnerability, NH patients' needs, dignity, self-transcendence (inter- and intra-), self-acceptance, self-worthiness, well-being, and nurse-patient-interaction, along with how to deal with fatigue and pain seem imperative. Well-being is a complex construct involving physical, emotional, functional, social, and spiritual dimensions. Hence, staff nurses need deeper holistic insights into how these dimensions interact and affect each other, in order to promote health and well-being.

Such holistic knowledge also seems useful concerning the professional caring culture at the ward; caring for older people in NHs is demanding. To improve quality of care, caring for staff's health, well-being, and learning conditions seem necessary. NH caregivers' experiences of work satisfaction and work dissatisfaction have been explored (Häggerström *et al.* 2004); staff's experiencing of betrayal whilst let down in several ways, their experience of failing in paying enough attention to the NH patients, along with experiences of insufficiency facing overwhelming demands from several directions contributed to dissatisfaction, whereas experience of work satisfaction resulted from being given support in various ways (*ibid.*). However, the NH staff's experience of work dissatisfaction overshadowed the experience of work satisfaction (*ibid.*).

Studies examining the relationships between nurse staffing levels in NHs and quality of care provided have shown that a focus solely on numbers of nurses fails to address the influence of other fundamental staffing factors such as turnover, training and experience, staffing characteristic variables, management, and care organization (Castle & Anderson 2011, Spilsbury *et al.* 2011). A systematic review demonstrated a proven association between higher total staffing levels (especially licensed staff) and improved quality of care, as well as significant relationships between high turnover and poor patient outcomes (Bostick *et al.* 2006). Training programs and supervision have been seen to increase job satisfaction and reduce turnover (Hyrkäs & Paunonen-Ilmonen 2001, JiSun & Meg 2012).

Moreover, strong prioritization dilemmas due to lack of adequate staffing of competent personnel such as physicians and RNs in NHs are described. This may result in limited supply of adequate and comprehensive medical and nursing care. A recent study revealed that the registered nurses (RN) nurses reported having to be very strict in terms of prioritizing tasks in relation to residents' needs (Slettebø *et al.* 2010). They always prioritized physiological needs

and very rarely had any time left for addressing the residents' psychosocial needs. Because the RNs felt that they had to prioritize the residents' medical needs, they found it necessary to leave most of the basic nursing care for residents to less-qualified staff. Shortage of qualified nurses was a problem for the nurses who had to take responsibility for a more than optimal number of residents. They also lacked the time to instruct the licensed practitioner nurses (LPN) about proper care of the residents (Slettebø *et al.* 2010). Training programs and supervision groups might be a sufficient approach in supporting staff nurses' health and continuing learning possibilities (Chiu *et al.* 2010, Hyrkäs & Paunonen-Ilmonen 2001, JiSun & Meg 2012), if they are provided the required time for such learning and quality care improvements. Also, there is a need to improve care organization and management in the NHs (Castle & Anderson 2011, Slettebø *et al.* 2010, Spilsbury *et al.* 2011).

Educational curricula in nursing university programs should reflect the demands of caring, focusing theories and concepts such as vulnerability, dignity, self-transcendence, self-acceptance, self-worthiness, and well-being, as well as highlighting presence and the nurse-patient-interaction to be vital resources for self-transcendence and well-being. Also physical conditions such as fatigue and pain are essential knowledge for facilitating well-being among NH patients. Nurses are increasingly aware that good nursing care consists of more than the competent performance of a number of caring activities. However, for many nurses it is much less clear what this "more" means and what importance it has in nursing for NH patients. Because of NH patients' large dependency they often expose feelings of fear and desperation over the actions of staff and express a lack of negotiation about how best to meet an elderly person's needs and desires, which is experienced as insulting and as a threat to the sense of self (Franklin *et al.* 2006). Presence, intentionality, and conscious choice of action are key elements embedded in each caring moment (Bernick 2004, Watson 2008). The staff nurses' way of being present when interacting with the patients results in quite different patient inner experiences; a sense of fulfillment and growth or a sense of stagnation and elimination (Haugan Hovdenes 2002). Thus, maintaining dignity in the relationships with staff nurses is a main QoL domain for NH patients (Burack *et al.* 2012, Medvene & Lann-Wolcott 2010).

Therefore, university educational curricula should not only include relevant theoretical perspectives on caring, well-being, self-transcendence, and nurse-patient-interaction. In addition, educational curricula should provide practical training communicating programs for nursing students involving topics such as being authentically present, offering non-judgmental recognition, actively listening, facilitating self-acceptance and self-worthiness, congruence,

empathy, non-possessive warmth, and conscious choices of communicative actions, along with supervision from trained nurses.

13. SUGGESTIONS FOR FUTURE STUDIES

As the research on self-transcendence in the NH population is in its infancy, more studies are needed to explore the level of self-transcendence in this vulnerable population. Since the original one-factor structure of the self-transcendent scale was not well supported by CFA, further empirical testing is recommended to explore the factor-structure of the scale in different vulnerable populations, specifically in NH populations. The two-factor construct of self-transcendence was found in our particular sample, and may or may not be reliable in other samples. Further research should continue exploring how self-transcendence relates to well-being and map out to which degree nurses are aware of this alleviating process of self-transcendence.

Further research to test these relationships in greater samples ($N \geq 500$) among NH patients and other chronically ill persons is warranted, as is an evaluation of possible self-transcendence-based nursing interventions aimed at increasing well-being.

Further testing and validating of the Nurse-Patient-Interaction Scale is also warranted, regarding both validity of the items as well as the functionality of a ten-point scale in this population.

A cross-cultural validation of the FACT-G QoL questionnaire for the NH population is also desired. The development of a valid and reliable QoL questionnaire for NH patients is highly needed in Norway.

As previous research points out spiritual well-being as a significant predictor of overall satisfaction among NH patients (page 25), further research on this variable seems essential. Furthermore, SEM-analysis including spiritual, physical, social, emotional, and functional well-being should be undertaken.

Moreover, intervention studies exploring ways of promoting self-transcendence and well-being among NH patients are highly warranted, as well as studies exploring pedagogical approaches to teaching and supporting staff nurses in performing advanced professional nursing care. The art of nursing/caring is fundamental in all fields of nursing care. Hence, in the area of evidence-driven practice focusing on the art of caring is increasingly important. The nurse-patient-interaction appeared as a significant mediator factor on the relationships between self-transcendence and multidimensional well-being.

14. REFERENCES

- Anderson KL & Burkhardt CS (1999): Conceptualization and measurement of quality of life as an outcome variable for health care intervention and reasearch. *Journal of Advanced Nursing* **29**, 298-306.
- Arman M (2007): Bearing witness: an existential position in caring. *Contemporary Nurse: A Journal for the Australian Nursing Profession* **27**, 84-93.
- Baker CD (2008) Self-transcendence, death anxiety, and older adult's participation in health promotion behaviours. University of Wisconsin, Wisconsin.
- Baltes PB & Smith J (2003): New frontiers in the future of aging: from successful aging of the young old to dilemmas of the Fourth Age. *Gerontology* **49**, 123-135.
- Barca ML, Selbæk G, Laks J & Engedal K (2009): Factors associated with depression in Norwegian nursing homes. *International Journal of Geriatric Psychiatry* **24**, 417-425.
- Bean KB & Wagner K (2006): Self-transcendence, illness distress, and quality of life among liver transplant recipients. *Journal of Theory Construction & Testing* **10**, 47-53.
- Bentler P & Chou C (1987): Practical issued in structural equations modeling. *Sociological Methods and Research* **16**, 7y8-117.
- Bergland A & Kirkevold M (2006): Thriving in nursing homes in Norway: contributing aspects described by residents. *International Journal of Nursing Studies* **43**, 681-691.
- Bernick L (2004): Caring for Older Adults: Practice Guided by Watson's Caring-Healing Model. *Nursing Science Quarterly* **17**, 128-134.
- Bickerstaff K, Grasser C & McCabe B (2003): How elderly nursing home residents transcend losses of later life. *Holistic Nursing Practice* **17**, 159-165.
- Bostick JE, Rantz MJ, Flesner MK & Riggs CJ (2006): Systematic Review of Studies of Staffing and Quality in Nursing Homes. *Journal of American Med Dir Association* **7**, 366-376.
- Brady M, Peterman A, Fitchett G, Mo M & Cella D (1999): A case for including spirituality in quality of life measurement in oncology. *Psychooncology* **8**, 417-428.
- Buck H (2006): Spirituality: concept analysis and model development. *Holist Nurs Practic* **20**, 288-292.
- Buck H, Overcash J & McMillan S (2009): The geriatric cancer experience at the end of life: testing an adapted model. *Oncology Nursing Forum* **36**, 664-673.
- Burack OR, Weiner AS, Reinhardt JP & Annunziato RA (2012): What Matters Most to Nursing Home Elders: Quality of Life in the Nursing Home. *Journal of the American Medical Directors Association* **13**, 48-53.
- Burkhardt MA & Nagai-Jakobsen MG (1994): Reawakening spirit in clinical practice. *Journal of Holistic Nursing* **12**, 9-21.
- Büssing Arndt, Ostermann Thomas & G KH (2007): Relevance of religion and spirituality in German patients with chronic diseases. *International Journal of Psychiatry in Medicine* **37**, 39-57.
- Canada AL, Murphy PE, Fitchett G, Peterman AH & Schover LR (2008): A 3-factor model for the FACIT-Sp. *Psycho-Oncology* **17**, 908-916.
- Carpenter K, Girvin L, Kitner W & Ruth-Sahd L (2008): Spirituality. A Dimension of Holistic Critical Care. *Dimensions of Critical care Nursing* **Vol.27**, 16-22.
- Caruso EM, Cisar N & Pipe T (2008): Creating a Healing Environment. An Innovative Educational Approach for Adapting Jean Watson's Theory of Human Caring. *Nurs Admin Q* **32**, 1126-1132.
- Castle N & Anderson R (2011): Caregiver staffing in nursing homes and their influence on quality of care: using dynamic panel estimation methods. *Medical Care* **Jun;49**, 545-552.

- Cella D, Tulsky D, Gray G, Sarafian B, Linn E & Bonami P (1993): The functional Assessment of Cancer Therapy Scale: Development and Validation of the General Measure. *Journal of Clinical Oncology* **11**, 570-579.
- Chin-A-Loy SS & Fernsler JI (1998): Self-transcendence in older men attending a prostate cancer support group. *Cancer Nursing* **21**, 358-363.
- Chiu L, Emblen J, VanHofwegen L, Sawatzky R & Myerhoff H (2004): An integrative review of the concept of spirituality: A literature review. *Western Journal of Nursing Research* **26**, 1183-1188.
- Chiu S, Ying L & Chen H (2010): The appropriateness of nursing aides training program: the perspective of nursing home staff. *Journal of Nursing & Healthcare Research (J NURS HEALTHC RES)* **6**, 209-218.
- Choi NG, Ransom S & Wyllie RJ (2008): Depression in older nursing home residents: The influence of nursing home environmental stressors, coping, and acceptance of group and individual therapy. *Aging and Mental Health* **12**, 536-547.
- Clarke A, Jane Hanson E & Ross H (2003): Seeing the person behind the patient: enhancing the care of older people using a biographical approach. *Journal of Clinical Nursing* **12**, 697-706.
- Clarke PN, Watson J & Brewer BB (2009): From Theory to Practice. *Nursing Science Quarterly* **22**, 339-345.
- Cotton SP, Levine EG, Fitzpatrick CM, Dold KH & Targ E (1999): Exploring the relationships among spiritual well-being, quality of life, and psychological adjustment in women with breast cancer. *Psycho-Oncology* **8**, 429-438.
- Coward DD (1990): The lived experiences of self-transcendence in women with advanced breast cancer. *Nursing Science Quarterly* **3**, 162-169.
- Coward DD (1991): Self-Transcendence and Emotional Well-Being in Women with Advanced Breast Cancer. *Oncology Nursing Forum* **18**, 857-863.
- Coward DD (1996): Self-transcendence and correlates in a healthy population. *Nursing Research* **45**, 116-121.
- Coward DD (2010) Self-Transcendence Theory. In *Nursing Theorists and Their Work*, Seventh Edition edn (Allgood MR & Tomey AM eds.). MOSBY ELSEVIER, pp. 618-637.
- Coward DD & Kahn D (2005): Transcending Breast Cancer: Making Meaning from Diagnosis and Treatment. *Journal of Holistic Nursing* **23**, 264-283.
- Coward DD & Reed PG (1996): Self-transcendence: a resource for healing at the end of life. *Issues in Mental Health Nursing* **17**, 275-288.
- Daaleman TP, Kuckelman Cobb A & Frey BB (2001): Spirituality and well-being: an exploratory study of the patient perspective. *Social Science & Medicine* **53**, 1503-1511.
- Daaleman TP, Williams CS, Hamilton VL & Zimmerman S (2008): Spiritual care at the end of life in long-term care. *Medical Care* **46**, 85-91.
- Diamantopolous A & Siguaw J (2008) *Introducing LISREL*. SAGE Publications Ltd, Los Angeles - London - New Dehli - Singapore.
- Drageset J (2004): The importance of activities of daily living and social contact for loneliness: a survey among residents in nursing homes. *Scandinavian J Caring Sciences* **18**, 65-71.
- Drageset J (2009) Health-related quality of life among nursing home residents. In *Department of Public Health and Primary Health Care; Section of Nursing Science*. University of Bergen, Bergen.
- Dwyer L, Nordenfelt L & Ternestedt B-M (2008a): Three Nursing Home Residents Speak About Meaning at The End of life *Nursing Ethics* **15**, 97-100.
- Dwyer L, Nordenfelt L & Ternestedt B-M (2008b): Three Nursing Home Residents Speak About Meaning at The End of life. *Nursing Ethics* **15**, 97-109.

- Egan M & Swedersky J (2005): Spirituality as experienced by occupational therapists in practice. *American Journal of Occupational Therapy* **57**, 525-533.
- Ellermann CR & Reed PG (2001): Self-transcendence and depression in middle-age adults. *Western Journal of Nursing Research* **23**, 698-713.
- Ellison CG & Levin JS (1998): The Religion-Health Connection: Evidence, Theory, and Future Directions. *Health Education & Behavior* **25**, 700-720.
- Emery MP, Perrier LL & Acquardo C (2005): Patient-reported outcome and quality of life instruments database (PROQOLID): frequently asked questions. *Health Quality of Life Outcomes* **3**, 12.
- Erikson EH (1950) *Childhood and Society*. W.W. Norton & Company, Inc, New York.
- Erikson EH (1964) *Insight and Responsibility*. Norton & Company, New York.
- Erikson EH (1998) *The Life Cycle Completed*, Extended Version edn. W.W.NORTON & COMPANY, New York - London.
- Erikson EH, Erikson J & Kivnick HQ (1986) *Vital Involvement in Old Age*. W.W.NORTON & COMPANY, New York.
- Eriksson K (1987a) *Pausen. En beskrivning av vårdvetenskapens kunskapsobjekt [The Pause. A conceptual view of the main focus of the science of caring]*. Almquist & Wiksell, Stockholm.
- Eriksson K (1987b) *Vårdandets idé [The idea of caring]*. Almquist & Wiksell, Stockholm.
- Eriksson K (1995a) *Det Lidende Menneske (The Suffering Human Being)*. TANO AS, Otta.
- Eriksson K (1995b) Mot en Caritativ Vårdetik (Towards a Caritative Caring Ethics). In *VÅRDFORSKNING. Reports from the Department of Caring Science*. Åbo Akademi, Åbo.
- Field A (2005) *Discovering statistics using SPSS*. SAGE Publications Ltd, London, Thousand Oaks, New Dehli.
- Finch LP (2005): Nurses' communication with patients: examining relational communication dimensions and relationship satisfaction. *International Journal for Human Caring* **9**, 14-23.
- Finch LP (2006): Patients' communication with nurses: relational communication and preferred nurse behaviors. *International Journal for Human Caring* **10**, 14-22.
- Fiveash B (1998): The experience of nursing home life. *International Journal of Nursing Practice* **4**, 166-174.
- Forder JE & Caiels J (2011): Measuring the outcomes of long-term care. *Social Science & Medicine* **73**, 1766-1774.
- Frankl VE (1963): Man's search for meaning. *Washington Square Press, New York*.
- Franklin L, Ternestedt B & Nordenfelt L (2006): Views on dignity of elderly nursing home residents. *Nursing Ethics* **13**, 130-146.
- Gaugler JE, Anderson KA, Zarit SH & Pearlin LI (2004): Family involvement in nursing homes: effects on stress and well-being. *Aging & Mental Health* **8**, 65-75.
- Gill C, Hillier LM, Crandall JM & Johnston J (2011): Nursing guidelines for end-of-life care in long-term care settings: sustainable improvements to care. *Journal of Palliative Care* **27**, 229-237.
- Glaister JA (2001): Healing: Analysis of the concept. *International Journal of Nursing Practice* **7**, 63-68.
- Grav S, Hellzèn O, Romild U & Stordal E (2012): Association between social support and depression in the general population: the HUNT study, a cross-sectional survey. *Journal of Clinical Nursing* **21**, 111-120.
- Guzzetta CE (2005) Holistic Nursing Research. In *Holistic Nursing. A Handbook for Practice*, Fourth edition edn (Dossey BM, Keegan L & Guzzetta CE eds.). Jones and Bartlett Publishers, Boston - Toronto - London - Singapore, pp. 211-228.

- Haas BK (1999): Clarification and integration of similar quality of life concepts. *Image: The Journal of Nursing Scholarship* **31**, 215-220.
- Haddock J (1996): Towards further clarification of the concept "dignity". *Journal of Advanced Nursing* **24**, 924-931.
- Hair Jj, Black W, Babin B & Anderson R (2010) *Multivariate data analysis*. Upper Saddle River: Prentice Hall.
- Hall S, Longhurst S & Higginson I (2009): Living and dying with dignity: a qualitative study of the views of older people in nursing homes. *Age & Ageing* **38**, 411-416.
- Halldorsdottir S (2008): The dynamics of the nurse-patient relationship: introduction of a synthesized theory from the patient's perspective. *Scandinavian Journal of Caring Sciences* **22**, 643-652.
- Harrefors C, Sävenstedt S & Axelsson K (2009): Elderly people's perceptions of how they want to be cared for: an interview study with healthy elderly couples in Northern Sweden. *Scandinavian Journal of Caring Sciences* **23**, 353-360.
- Harrington C, Choiniere J, Goldman M, Jacobsen F, Lloyd L, McGregor M, Stamatopoulos V & Szebehely M (2012): Nursing home staffing standards and staffing levels in six countries. *Journal of Nursing Scholarship* **44**, 88-98.
- Harrington D (2009) *Confirmatory factor Analysis*. Oxford University Press, Oxford - New York.
- Haugan G, Innstrand S & Moksnes U (2012): The Effect of Nurse-Patient-Interaction on Anxiety and Depression in Cognitively Intact Nursing Home Patients. *Journal of Clinical Nursing in press*.
- Haugan G & Innstrand ST (2012): The Effect of Self-Transcendence on Depression among Cognitively Intact Nursing Home Patients. *ISRN Psychiatry* Volume 2012, Article ID 301325, doi: 10.5402/2012/301325
- Haugan Hovdenes G (1998): Et meningsfullt liv i sykehjemmet - tross alt. [A meaningful life in the nursing home - after all.]. *OMSORG - Nordisk Tidsskrift for Palliativ Medisin*
- Haugan Hovdenes G (1999): Det åndelige er det relasjonelle. [The spiritual is the relational of caring]. *Tidsskriftet Sykepleien (Norwegian Journal of Nursing)*, 56-59.
- Haugan Hovdenes G (2002): The Nurse-patient-relationship in nursing homes: fulfillment or destruction [Pleier-pasient-relasjonen i sykehjem: virkeliggjørelse eller tilintetgjørelse]. *Nordic Journal of Nursing Research & Clinical Studies/Vård i Norden* **publ. no.65, vol 22**, 21-26.
- Hauge S (2004) Jo mere vi er sammen, jo gladere vi blir? - ein feltmetodisk studie av sjukeheim som heim [The more we are together, the happier we will be? - a field study of the nursing home as a home]. In *Faculty of medicine*. University of Oslo, Oslo, Norway.
- Hauge S & Heggen K (2008): The nursing home as a home: a field study of residents' daily life in common living rooms. *Journal of Clinical Nursing* **17**, 460-467.
- Heliker D (2009): Enhancing Relationships in Long-term Care Through Story Sharing. *Journal of Gerontological Nursing* **35**, 43-49.
- Hermann CP (2007): The degree to which spiritual needs of patients near the end of life are met. *Oncology Nursing Forum* **34**, 70-78.
- Hicks TJ, Jr. (1999): Spirituality and the elderly: nursing implications with nursing home residents. *Geriatric Nursing* **20**, 144-146.
- Hjaltadottir I & Gustafsdottir M (2007): Quality of life in nursing homes: perception of physically frail elderly residents. *Scandinavian J Caring Sciences* **21**, 48-55.
- Hjaltadóttir I & Gústafsdóttir M (2007): Quality of life in nursing homes: perception of physically frail elderly residents. *Scandinavian Journal of Caring Sciences* **21**, 48-55.
- Hollinger-Samson N & Pearson JL (2000): The relationships between staff empathy and depressive symptoms in nursing home residents. *Ageing and Mental Health* **4**, 56-65.

- Hooper D, Coughlan J & Mullen MR (2008): Structural Equation Modelling: Guidelines for Determining Model Fit. *The Electronic Journal of Business Research Methods* **6**, 53-60.
- Hoshi M (2008) Self-transcendence, vulnerability, and well-being in hospitalized Japanese elders. University of Arizona, Tucson, p. 231 p.
- Hou H & Chen Y (2008): Loneliness and related factors among the elderly living in long-term care facilities [Chinese] *Journal of Evidence-Based Nursing* **4**, 213-221.
- Hsu Y (2009) A cultural psychosocial model for depression in elder care institutions: the roles of Socially Supportive Activity and self-transcendence. University of Arizona, p. 237 p.
- Hu L & Bentler P (1998): Fit Indices in Covariance Structure Modeling: Sensitivity to Underparametrized Model Misspecification. *Psychological Methods* **3**, 424-453.
- Hu L & Bentler P (1999): Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus. *Structural Equation Modeling* **6**, 1.
- Hunnibell LS, Reed PG, Quinn-Griffin M & Fitzpatrick JJ (2008): Self-transcendence and burnout in hospice and oncology nurses. *Journal of Hospice & Palliative Nursing* **10**, 172-179.
- Hyrkäs K & Paunonen-Ilmonen M (2001): The effects of clinical supervision on the quality of care: examining the results of team supervision. *Journal of Advanced Nursing* **33**, 492-502.
- Hägerström E, Skovdahl K, Fläckman B, Kihlgren AL & Kihlgren M (2004): To feel betrayed and to feel that you are betraying the older residents: caregivers' experiences at a newly opened nursing home. *Journal of Clinical Nursing* **13**, 687-696.
- Høie J (2005): Sykehjemmenes oppgaver og legens rolle1009 ("The NH's responsibilities and the doctor's role"). *Tidsskr Nor Lægeforen (Norwegian Journal of Medicine)* **125**, 1009-1010.
- Jakobsen R & Sorlie V (2010): Dignity of older people in a nursing home: narratives of care providers. *Nursing Ethics* **17**, 289-300.
- JiSun C & Meg J (2012): The importance of supervision in retention of CNAs. *Research in Nursing & Health (RES NURS HEALTH)* **35**, 187-199.
- Johnson PS (1998): An analysis of "dignity". *Theoretical Medicine and Bioethics* **19**, 337-352.
- Jones CS (2010) Culture change and quality of life in elderly persons living in long term care. University of North Florida, p. 87 p.
- Jongenelis K, Pot AM, Eisses AMH, Beekman ATF, Kluiters H & Ribbe MW (2004): Prevalence and risk indicators of depression in elderly nursing home patients: the AGED study. *Journal of Affective Disorders* **83**, 135-142.
- Joyce CR, Hickey A, McGee HM & O'Boyle CA (2003): A theory-based method for the evaluation of individual quality of life: the SEIQoL. *Quality Life Research* **12**, 275-280.
- Jøreskog K & Sörbom D (1995) *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language*. Scientific Software International, Chicago.
- Jøreskog K, Sörbom D, du Toit S & du Toit M (2000) *New statistical features*. Scientific Software International, Inc., Chicago.
- Kaasalainen S, Williams J, Hadjistavropoulos T, Thorpe L, Whiting S, Neville S & Tremeer J (2010): Creating Bridges Between Researchers and Long-Term Care Homes to Promote Quality of Life for Residents. *Qualitative Health Research* **20**, 1689-1704.
- Kagan PN (2008): Feeling Listened To: A Lived Experience of Humanbecoming. *Nursing Science Quarterly* **21**, 59-67.
- Kane R (2001): Long-term care and a good quality of life. Bringing them closer together. *The Gerontologist* **41**, 293-304.
- Kane R (2003): Definition, measurement, and correlates of quality of life in nursing homes: Toward a reasonable practice, research, and policy agenda. *The Gerontologist* **Apr**; **43**, 28.

- Kass J, Friedman R, Leserman J, Zuttermeister P & Benson H (1991): Health outcomes and a new index of spiritual experience. *Journal for the Scientific Study of Religion* **30**, 203-211.
- Kausch KD & Amer K (2007): Self-transcendence and depression among AIDS Memorial Quilt panel makers. *Journal of Psychosocial Nursing & Mental Health Services* **45**, 44-53.
- Kinsella K & He W (2009) An Aging World: 2008, US Census Bureau edn (Bureau UC ed.). U.S. Department of Health and Human Services National Institutes of Health NATIONAL INSTITUTE ON AGING U.S. Department of Commerce Economics and Statistics, Washington, DC, pp. 1-191.
- Kirby SE, Coleman PG & Daley D (2004): Spirituality and well-being in frail and nonfrail older adults. *Journals of Gerontology Series B: Psychological Sciences & Social Sciences* **59B**, P123-129.
- Kirkevold M (2010) Translating Chronic Illness Research Across the Lifespan. In *Translating Chronic Illness Research into Practice*, 1 edn (Kralik D, Paterson B & Coates V eds.). Blackwell Publishing Ltd, Oxford, pp. 37-55.
- Kirkevold Ø & Engedal K (2006): The quality of care in Norwegian nursing homes. *Scandinavian J Caring Sciences* **20**, 177-183.
- Klaas D (1998): Testing two elements of spirituality in depressed and non-depressed elders. *International Journal of Psychiatric Nursing Research* **4**, 452-462.
- Kline R (2005) *Principles and Practice of Structural Equation Modeling*, Second Edition edn. The Guilford Press, London.
- Knestrick J & Lohri-Posey B (2005): Spirituality and health. Perceptions of older women in a rural senior high rise. *Journal Gerontol Nurs* **31**, 44-52.
- Koenig HG, George LK, Titus P & Meador KG (2004): Religion, spirituality, and acute care hospitalization and long-term care use by older patients. *Archives of Internal Medicine* **164**, 1579-1585.
- Koenig HG, Weiner DK, Peterson BL, Meador KG & Keefe FJ (1997): Religious coping in the nursing home: A biopsychosocial model. *International Journal of Psychiatry in Medicine* **27**, 365-376.
- Krupski TL, Kwan L, Fink A, Sonn GA, Maliski S & Litwin MS (2006): Spirituality influences health related quality of life in men with prostate cancer. *Psycho-Oncology* **15**, 121-131.
- Levy-Malmberg R, Eriksson K & Lindholm L (2008): Caritas -- caring as an ethical conduct. *Scandinavian Journal of Caring Sciences* **22**, 662-667.
- Linton A & Lach H (2007) *Matteson & McConnell's gerontological nursing: concepts and practice*. Saunders, Philadelphia.
- Liveng A (2011): The vulnerable elderly's need for recognizing relationships – a challenge to Danish home-based care. *Journal of Social Work Practice* **25**, 271-283.
- Lukose A (2011): Developing a practice model for watson's theory of caring. *Nursing Science Quarterly* **24**, 27-30.
- Magilvy JK & Congdon JG (2000): The crisis nature of health care transitions for rural older adults. *Public Health Nursing* **17**, 336-345.
- Mahlungulu SN & Uys LR (2004): Spirituality in nursing: an analysis of the concept. *Curationis* **27**, 15-26.
- Malmedal W, Hammervold R & Saveman B (2009a): To report or not report? Attitudes held by Norwegian nursing home staff on reporting inadequate care carried out by colleagues. *Scandinavian Journal of Public Health* **37**, 744-750.
- Malmedal W, Ingebrigtsen O & Saveman B (2009b): Inadequate care in Norwegian nursing homes -- as reported by nursing staff. *Scandinavian Journal of Caring Sciences* **23**, 231-242.

- Maloney LR (2009) Loneliness, self-esteem, cognition, physical functioning, and nursing home satisfaction as predictors of depression. Marquette University, p. 145 p.
- Martinsen K (1989) *Omsorg, sykepleie og medisin [Care, nursing and medicine]*. TANO, Oslo.
- Martinsen K (1993) *Fra Marx til Løgstrup. Om etikk og sanselighet i sykepleien (From Marx to Løgstrup. About ethics and awareness in nursing)*. TANO A.S., Otta.
- Maslow AH (1987) *Motivation and Personality*. Harper & Row, Publishers, Inc., New-York, Cambridge, Philadelphia, San Fransisco, Washington, London, Mexico City, Sao Paulo, Singapore, Sydney.
- Matiti M, Cotrel-Gibbons E & Teasdale K (2007): Promoting patient dignity in healthcare settings. *Nursing Standard* **21**, 46.
- Matiti M & Cotrel-Gibbons L (2006): Patient dignity -- promoting good practice. *Foundation of Nursing Studies: Developing Practice Improving Care Dissemination Series* **3**, 1-4.
- McCullaugh M, Hoyt W, Larson D, Koenig H & Thoresen C (2000): Religious involvement and mortality: a meta-analytic review. *Health and Psychology* **19**, 11-22.
- McGilton KS & Boscart VM (2007): Close care provider-resident relationships in long-term care environments. *Journal of Clinical Nursing* **16**, 2149-2157.
- McKinley K & Adler G (2005): Quality of life in nursing homes: involving elders in policy making for their own care and life satisfaction. *Social Policy Journal* **4**, 37-51.
- Medvene LJ & Lann-Wolcott H (2010): An exploratory study of nurse aides' communication behaviours: giving 'positive regard' as a strategy. *International Journal of Older People Nursing* **5**, 41-50.
- Meeks S & Looney S (2011): Depressed nursing home residents' activity participation and affect as a function of staff engagement. *Behavior Therapy* **42**, 22-29.
- Mellors M, Riley T & Erlen J (1997): HIV, Self-transcendence, and Quality of Life. *Journal of the Association of Nurses in AIDS care* **82**, 59-69.
- Mentes JC & Tripp-Reimer T (2002): Barriers and facilitators in nursing home intervention research. *Western Journal of Nursing Research* **24**, 918-936.
- Miner-Williams D (2006): Putting a puzzle together: making spirituality meaningful for nursing using an evolving theoretical framework *Journal of Clinical Nursing* **15**, 811-821.
- Ministry of Health and Care Services a (1988) FOR 1988-11-14 nr.932: forskrift for sykehjem og boform for heldøgns omsorg og pleie, av lov av 14.november 1988, med hjemmel i lov av 19.november 1982 nr. 66 om helsetjenestene i kommunene m.v. [FOR 1988-11-14 no. 932: Regulations for nursing homes and living arrangements for 24-hour care and nursing, pursuant to the Act of 14th November 1988, in accordance with the Municipal Health Act, Act No. 66 of 19th of November 1982] (Services MoHaC ed.), Oslo.
- Ministry of Health and Care Services a (2012) Helse- og omsorgstjenesteloven: Lov om kommunale helse- og omsorgstjenester m.m. [Municipal Health and Care Act] (Services] H-ooMoHaC ed.), Oslo.
- Mok E, Wong F & Wong D (2010): The meaning of spirituality and spiritual care among the Hong Kong Chinese terminally ill. *Journal of Advanced Nursing* **66**, 360-370.
- Moreira-Almeida A & Koenig HG (2008): Religiousness and spirituality in fibromyalgia and chronic pain patients. *Current Pain & Headache Reports* **12**, 327-332.
- Mount B, Boston P & Cohen S (2007): Healing Connections: On Moving from Suffering to a Sense of Well-Being. *Journal of Pain & Symptom Management* **33**, 372-388.
- Murphy PE, Canada AL, Fitchett G, Stein K, Portier K, Crammer C & Peterman AH (2010): An examination of the 3-factor model and structural invariance across racial/ethnic groups for the FACIT-Sp: a report from the American Cancer Society's Study of Cancer Survivors-II (SCS-II). *Psycho-Oncology* **19**, 264-272.

- Nakrem S, Vinsnes AG & Seim A (2011): Residents' experiences of interpersonal factors in nursing home care: A qualitative study. *International Journal of Nursing Studies* **Nov**; **48**, 1357-1366.
- Narayanasamy A, Clissett P, Parumal L, Thompson D, Annasamy S & Edge R (2004): Responses to the spiritual needs of older people. *Journal of Advanced Nursing* **48**, 6-16.
- Neill J (2002): Transcendence and transformation in the life patterns of women living with reumathoid arthritis. *Advances in Nursing Science* **24**, 27-47.
- Neuman B (1995) *The Neuman Systems Model*, 3rd Edition edn. Appleton & Lange, Norwalk, Connecticut.
- Nordenfelt L (2003): Dignity and the care of the elderly. *Medicine, Health Care and Philosophy* **6**, 103-110.
- Nygaard HA (2002): Nursing home as a medical institution - a fata morgana? *Tidsskrift Nor Laegeforen [Norwegian Journal of Medicine]* **122**, 823-825.
- Nygaard HA, Naik M & Ruths S (2000): Mental impairment un nursing home residents. *Tidsskr Nor Laegeforen (Norwegian Journal of Medicine)* **120**, 3113-3116.
- Nygren B, Aléx L, Jonsén E, Gustafson Y, Norberg A & Lundman B (2005): Resilience, sense of coherence, purpose in life and self-transcendence in relation to perceived physical and mental health among the oldest old. *Aging & Mental Health* **9**, 354-362.
- Nåden D & Eriksson K (2004): Understanding the Importance of Values and Moral Attitudes in Nursing Care in Preserving Human Dignity. *Nursing Science Quarterly* **17**, 86-91.
- Nåden D & Sæteren B (2006): Cancer Patients' Perception of Being or Not Being Confirmed. *Nursing Ethics* **13**, 222-235.
- OECD (1988) *Aging Populations: The Social Policy Implications*. Washington, D.C.: OECD Publications and Information Centre, Paris.
- Paulsen B, Harsvik T, Halvorsen T & al e (2004) *Bermanning og tjenestetilbud i sykehjem [Staffing and care service in nursing homes]*. SINTEF, Helse, Trondheim.
- Pesut B (2008a): A conversation on diverse perspectives of spirituality in nursing literature. *Nursing philosophy* **9**, 98-109.
- Pesut B (2008b): Spirituality and Spiritual Care in Nursing Fundamentals Textbooks. *Journal of Nursing Education* **47**, 167-173.
- Peterman A, Fitchett G, Brady M, Hernandez L & Cella D (2002): Measuring Spiritual Well-Being in People With Cancer: The Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp). *Annals of Behavioral Medicine* **24**, 49.
- Peterman A, Reeve CL, Winford E, Cotton SP, Salsman J, McQuellon R, Cella D & Tsevat J (2011): Measuring meaning and peace with the FACIT-Spiritual Well-being scale: Distinction without a difference? *in preparation*.
- Pickens S, Halphen JM & Dyer CB (2011): Elder mistreatment in the long-term care setting. *Annals of Long Term Care* **19**, 30-35.
- Pipe T, Hansen R, Hentz J & Hartsell Z (2010): Rediscovering the art of healing connection by creating the Tree of Life poster. *Journal of Gerontological Nursing* **Jun**; **36**, 2010.
- Pleschberger S (2007): Dignity and the challenge of dying in nursing homes: the residents' view. *Age & Ageing* **36**, 197-202.
- Power M, Harper A & Bullinger M (1999): The World Health Organization WHOQOL-100: Tests of the Universality of Quality of Life in 15 Different Cultural Groups Worldwide. *Health Psychology* **18**, 495-505.
- Quinn J (2005) *Transpersonal Human Caring and Healing*. In *Holistic Nursing. A Handbook for Practice* (Dossey B, Keegan L & Guzzetta C eds.). Jones and Bartlett Publishers, Boston-Toronto-London-Singapore, pp. 41-53.
- Rannestad T (2005) *Hysterectomy: Effects on quality of life and psychological aspects* In *Clinical Obstetrics & Gynecology* (Arulkumaran S ed.).

- Raphael D, Brown I, Renwick R, Cava M, Wir N & Heathcote K (2010a) Measuring the Quality of Life of Older Persons. In *Health Promotion and Quality of Life in Canada* (Raphael D ed.). Marquis Book Printing, INc., Toronto, Ontario.
- Raphael D, Brown I, Renwick R & Rootman I (2010b) Quality of Life: What are the Implications for Health Promotion? In *Health Promotion and Quality of Life in Canada* (Raphael D ed.). Marquis Book Printing, Inc., Toronto, Ontario, pp. 30-46.
- Rchaidia L, Dierckx de Casterlé B, De Blaeser L & Gastmans C (2009): Cancer Patients' Perceptions of the Good Nurse: a Literature Review. *Nursing Ethics* **16**, 528-542.
- Reed PG (1986): Developmental resources and depression in the elderly. *Nursing Research* **35**, 368-374.
- Reed PG (1991a): Self-transcendence and mental health in oldest-old adults. *Nursing Research* **40**, 5-11.
- Reed PG (1991b): Toward a nursing theory of self-transcendence: Deductive reformulation using developmental theories. *Advanced Nursing Science* **13**, 64-77.
- Reed PG (1992): An emerging paradigm for the investigation of spirituality in nursing. *Research in Nursing and Health* **15**, 349-357.
- Reed PG (2008) Theory of Self-Transcendence. In *Middle Range Theory for Nursing* (Smith MJ & Liehr PR eds.). Springer Publishing Company, LLC, New York, pp. 105-129.
- Reed PG (2009a): Demystifying Self-Transcendence for Mental Health Nursing Practice and Research. *Archives of Psychiatric Nursing* **23**, 397-400.
- Reed PG (2009b) Nursing: The Ontology of the Discipline. In *Perspectives on Nursing Theory*, 5th Edition edn (Reed PG & Shearer NBC eds.). Wolters Kluwer - Lippincott Williams & Wilikns, Philadelphia - Baltimore - New York - London - Buenos Aires - Hong Kong - Sydney - Tokyo, pp. 615-620.
- Reed SM (2010): A unitary-caring conceptual model for advanced practice nursing in palliative care. *Holistic Nursing Practice* **24**, 23-34.
- Register ME & J. H (2006): A Middle Range Theory for Generative Quality of Life for the Elderly. *Advances in Nursing Science* **29**, 340-350.
- Rogers CR (1961) *On Becoming a Person*. Houghton Mifflin, Boston, MA.
- Routasalo P, Savikko N, Tilvis R, Strandberg T & Pitkälä K (2006): Social contacts and their relationship to loneliness among aged people – a population-base study. *Gerontology* **52**, 181-187.
- Runquist JJ & Reed PG (2007): Self-transcendence and well-being in homeless adults. *Journal of Holistic Nursing* **25**, 5-13.
- Ryan AA & Scullion HF (2000): Nursing home placement: an exploration of the experiences of family carers. *Journal of Advanced Nursing* **32**, 1187-1195.
- Ryan RM & Deci EL (2001): On Happiness and Human Potentials: A Review of Research on Hedonic and Eudamonic Well-Being. *Annu Rev Psychol* **52**, 141-166.
- Ryff CD (1989): Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Person. Soc. Psychol.* **57**, 1069-1081.
- Ryff CD, Singer BH & Love GD (2004): Positive health: connecting well-being with biology. *Phil. Trans. R. Soc. Lond. B* **359**, 1383-1394.
- Salkeld G, Cameron I, Cummings R, Easter S, Seymour E, Kurrle S & Quine S (2000): Quality of life related to fear of falling and hip fracture in older women: A time trade off study. *British Medical Journal* **320**, 241-246.
- Sandmoe A, Kirkevold M & Ballantyne A (2011): Challenges in handling elder abuse in community care. An exploratory study among nurses and care coordinators in Norway and Australia. *Journal of Clinical Nursing* **20**, 3351-3363.

- Savikko N (2008) Loneliness of older people and elements of an intervention for its alleviation. Doctoral dissertation. Annales Universitatis Turkuensis University of Turku, Finland, Turku.
- Schermelleh-Engel K, Moosbrugger H & Müller H (2003): Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. *Methods of Psychological Research* **8**, 23-74.
- Schumacker R & Lomax R (2004) *A Beginner's Guide to STRUCTURAL EQUATION MODELING*. Psychology Press - Taylor & Francis Group, New York-London.
- Sciamberg LB, Barboza GG, Oehmke J, Zhenmei Z, Griffiore RJ, Weatherill RP, Von Heydrich L & Post LA (2011): Elder Abuse in Nursing Homes: An Ecological Perspective. *Journal of Elder Abuse* **23**, 190-211.
- Sharma S, Mukherjee S, Kumar A & Dillin WR (2008): A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. *Journal of Business Research* **58**, 935-943.
- Skevington SM, Lotfy M & O'Connell KA (2004): The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial. A Report from the WHOQOL Group *Quality of Life Research* **13**, 299-310.
- Slettebø Å, Kirkevold M, Andersen B, Pedersen R, Halvorsen K, Nordhaug M & Nordtvedt P (2010): Clinical prioritizations and contextual constraints in nursing homes – a qualitative study. *Scand Journal of Caring Science* **24**, 533-540.
- Smith M (2004): Review of Research Related to Watson's Theory of Caring. *Nursing Science Quarterly* **17**, 13-25.
- Spilsbury K, Hewitt C, Stirk L & Bowman C (2011): The relationship between nurse staffing and quality of care in nursing homes: A systematic review. *International Journal of Nursing Studies* **48**, 732-750.
- Statistics of Norway a (2010a) Tabell 15 Folkemengden 1. januar etter alder og kjønn. Hele landet. Registrert 2002 og framskrevet 2003-2050. Alternativ LLML [Table 15 Population 1th January by age and sex. The whole country. Registered in 2002 and projected 2003-2050. Alternative LLML].
- Statistics of Norway b (2010b): Tabell 3 Bebuarar i bustader til pleie- og omsorgsformål, etter alder. 1994-2010 [Table 3 Residents in homes for the aged and disabled, by age. 1994-2010].
- Statistics of Norway c (2010c) Table 03297: Dødsfall, etter dødssted [Deaths sorted by place of death].
- Stinson CK & Kirk E (2006): Structured reminiscence: an intervention to decrease depression and increase self-transcendence in older women. *Journal of Clinical Nursing* **15**, 208-218.
- Tabacknick BG & Fidell LS (2001) *Using Multivariate Statistics*. Allyn and Bacon, Boston.
- Tanyi RA (2002): Towards clarification of the meaning of spirituality. *Journal of Advanced Nursing* **39**, 500-509.
- Tatarkiewicz W (1976) *Analysis of Happiness*. Polish Scientific Publishers, Warszawa.
- Teixera ME (2008): Self-Transcendence. A Concept Analysis for Nursing Praxis. *Holistic Nursing Practice* **22**, 25-31.
- Temkin-Greener H, Zheng NT & Mukamel DB (2012): Rural–Urban Differences in End-of-Life Nursing Home Care: Facility and Environmental Factors. *The Gerontologist*.
- Tester S, Hubbard G & Downs M (2004): What does quality of life mean for frail residents? *Nursing & Residential Care* **6**, 89-92.

- Thomas JC, Burton M, Quinn Griffin MT & Fitzpatrick JJ (2010): Self-transcendence, spiritual well-being, and spiritual practices of women with breast cancer. *Journal of Holistic Nursing* **28**, 115-122.
- Tomaka J, Thompson S & Palacios R (2006): The Relation of Social Isolation, Loneliness, and Social Support to Disease Outcomes Among the Elderly. *Journal of Aging and Health* **18**, 359-384.
- Touhy T (2001): Nurturing hope and spirituality in the nursing home. *Holistic Nursing Practice* **15**, 45-56.
- Touhy T, Brown C & Smith C (2005): Spiritual caring: end of life in a nursing home. *Journal of Gerontological Nursing* **31**, 27-35.
- Travelbee J (1979) *Interpersonal Aspects of Nursing*, Second Edition edn. F.A. DAVIS COMPANY, Philadelphia.
- Tsai H-H & Tsai Y-F (2012): Family members' perceived meaning of visiting nursing home residents in Taiwan. *Journal of Advanced Nursing* **68**, 302-311.
- Unruh AM, Versnel J & Kerr N (2002): Spirituality unplugged: a review of commonalities and contentions, and a resolution. *Canadian Journal of Occupational Therapy* **69**, 5-19.
- Upchurch S (1999): Self-Transcendence and Activities of Daily Living: the Woman With the Pink Slippers. *Journal of Holistic Nursing* **17**, 251-266.
- Upchurch S & Muller WH (2005): Spiritual influences on ability to engage in self-care activities among older African Americans. *International journal of aging & human development* **60**, 77-94.
- Vaarama M & Tiit E-M (2007) Quality of life of older homecare clients In *Care-Related Quality of Life in Old Age. Concepts, Models and Empirical Findings* (Vaarama M PRSAe ed.). Springer, New York, pp. 168-195.
- Van Nordennen RTCM & Ter Meulen RHJ (2005): The role of spiritual well-being in palliative care provided by nursing home physicians. [Dutch] *Tijdschrift voor Verpleeghuisgeneeskunde* **30**, 11-14.
- van Soest-Poortvliet MC, Jt, Zimmerman S, Cohen LW, Munn J, Achterberg WP, Ribbe MW & de Vet HC (2011): Measuring the quality of dying and quality of care when dying in long-term care settings: a qualitative content analysis of available instruments. *Journal of Pain & Symptom Management* **42**, 852-863.
- Victorson D, Barocas J, Song J & Cella D (2008): Reliability across studies from the functional assessment of cancer therapy-general (FACT-G) and its subscales: a reliability generalization. *Quality Life Research* **17**, 1137-1146.
- Villagomez LR (2005): Spiritual distress in adult cancer patients: toward conceptual clarity. *Holistic Nursing Practice* **19**, 285-294.
- Wachholtz AB, Pearce MJ & Koenig HG (2007): Exploring the relationship between spirituality, coping, and pain. *Journal of Behavioral Medicine* **30**, 311-318.
- Wadensten B & Ahlström G (2009): The struggle for dignity by people with severe functional disabilities. *Nursing Ethics* **16**, 453-465.
- Walker MS (2009) Compassion within the relationship between the nurse and the older adult patient. Catholic University of America, p. 294 p.
- Wallace M & O'Shea E (2007): Perceptions of spirituality and spiritual care among older nursing home residents at the end of life. *Holistic Nursing Practice* **21**, 285-289; quiz 290-281.
- Wang J-J (2011): A structural model of the bio-psycho-socio-spiritual factors influencing the development towards gerotranscendence in a sample of institutionalized elders. *Journal of Advanced Nursing* **67**, 2628-2636.
- Warelow P, Edward K-L & Vinek J (2008): Care: What Nurses Say and What Nurses Do. *Holistic Nursing Practice* **22**, 146-153.

- Watson J (1979) *Nursing: the philosophy and science of caring*. Little Brown; 1979, Boston (USA).
- Watson J (1988) *Nursing: human science and human care. A theory of nursing*. National League for Nursing, New York.
- Watson J (2001) Jean Watson: Theory of human caring In *Nursing theories and nursing practice* (Parker ME ed.). Davis, Philadelphia, pp. 343-354.
- Watson J (2003): Love and Caring. Ethics of Face and Hand-An Invitation to Return to the Heart and Soul of Nursing and our Deep Humanity. *Nurs Admin Q* **27**, 197-202.
- Watson J (2005) *Caring science as a sacred science*. FA Davis, Philadelphia, USA.
- Watson J (2007): Watson's theory of human caring and subjective living experiences: Carative factors/Caritas processes as a disciplinary guide to the professional nursing practice. *Texto Contexto Enferm, Florianópolis* **Jan-Mar; 16**, 129-135.
- Watson J (2008) *The philosophy and science of caring*. Boulder, CO: University Press of Colorado.
- Watson J & Foster R (2003): The Attending Nurse Caring Model®: integrating theory, evidence and advanced caring–healing therapeutics for transforming professional practice. *Journal of Clinical Nursing* **12**, 360-365.
- Webster K, Cella D & Kost K (2003): The Functional Assessment of Chronic Illness Therapy (FACIT) Measurement System: properties, applications, and interpretation. *Health and Quality of Life Outcomes* **1**, 1-7.
- Westin L, Ohrn I & Danielson E (2009): Visiting a nursing home: relatives' experiences of encounters with nurses. *Nursing Inquiry* **16**, 318-325.
- Whitford HS & Olver IN (2011): The multidimensionality of spiritual wellbeing: peace, meaning, and faith and their association with quality of life and coping in oncology. *Psycho-Oncology*, n/a-n/a.
- Wikberg I (2007): Imagining Nursing Practice 2050: The Caritative Caring Theory. *Nursing Science Quarterly* **20**, 333-335.
- Williams B (2008) Rebirth: The Experience of Self-Transcendence in Patients who have undergone Stem Cell Transplantation. In *The College of Nursing at The College of Dentistry*. New York University, New York, p. 187.
- World Health O (2002) Active Ageing: A policy framework. Department of Health Promotion, Geneva.
- Wright K (2010): Prevention and treatment of depression in care homes. *Nursing & Residential Care* **12**, 188-191.
- Zeller JM & Lamb K (2011): Mindfulness Meditation to Improve Care Quality and Quality of Life in Long-Term Care Settings. *Geriatric Nursing* **32**, 114-118.

THE STUDY PAPERS

PAPER 1

*The self-transcendence scale:
An investigation of the factor structure
among nursing home patients.*

Journal of Holistic Nursing
2012 Sep;30(3):147-59. Epub 2011 Dec 27

Is not included due to copyright

PAPER 2

*Self-Transcendence in Cognitively Intact Nursing Home
Patients: A Resource for Well-Being.*

Journal of Advanced Nursing

published online: 14 AUG 2012,

DOI: 10.1111/j.1365-2648.2012.06106.x *in press*

ABSTRACT

Title: Self-Transcendence in Cognitively Intact Nursing Home Patients: A Resource for Well-Being.

Aim: This paper reports an empirical study of self-transcendence in cognitively intact nursing-home patients. The aim was to investigate the interrelationships between self-transcendence and nursing-home patients' physical, social, emotional, and functional well-being.

Background: Finding new and alternative approaches to increase well-being among nursing-home patients is highly warranted. Self-transcendence is considered a developmental process of maturity in adulthood and a vital resource for well-being at the end of life, thus self-transcendence could be a useful approach.

Method: A cross-sectional design using the self-transcendence scale and the FACT-G Quality of Life questionnaire was adopted. A sample of 202 cognitively intact nursing-home patients in Mid-Norway was selected to respond to the instruments in 2008 and 2009. Analysis was applied by means of LISREL 8.8 Structural Equation Modeling (SEM).

Results: A two-factor-construct of self-transcendence showed that intrapersonal self-transcendence directly affected functional well-being and indirectly influenced physical, emotional, and functional well-being. Interpersonal self-transcendence directly affected social and emotional well-being. Additionally significant influences were disclosed from functional to emotional and from emotional to physical well-being.

Conclusion: Finding nursing interventions to enhance both intrapersonal and interpersonal self-transcendence might benefit nursing-home patients' overall well-being. In a holistic perspective of body-mind-spirit, this research generates new research-questions about the pathways between the different dimensions of well-being in nursing-home patients', which is important to holistic nursing practice.

Keywords: *elderly; nursing home; self-transcendence; SEM-analysis; spirituality; well-being.*

SUMMARY STATEMENT

What is already known about this topic

- Self-transcendence is an inner developmental resource assisting individuals to achieve well-being by transcending self-boundaries.
- Self-transcendence is important to vulnerable populations, particularly those who have experienced a life-changing diagnosis such as AIDS or cancer, have undergone stem-cell transplantation, or who are homeless.
- Self-transcendence has been explored in older adults and has been linked to higher levels of mental well-being.

What this paper adds

- This study involves a two-factor-construct of self-transcendence providing a more complex examination of the relationships between self-transcendence and well-being.
- Evidence that interpersonal and intrapersonal self-transcendence influences physical, social, emotional, and functional well-being in cognitively intact nursing-home patients is provided. Thus, self-transcendence appears to be a potentially vital resource for cognitively intact nursing-home patients' multidimensional well-being.
- Specific information about the mechanisms involved in the relationships between well-being and interpersonal and intrapersonal self-transcendence is generated. Hence, this study provides more specific guidelines for nursing interventions promoting well-being in nursing-home patients. This study suggests that finding ways to enhance both the individual's intrapersonal and interpersonal self-transcendence might be beneficial.

Implications for practice and/or policy

- In nursing, self-transcendence is a means for facilitating well-being; the potential for self-transcendence and, thereby, well-being is an important consideration in nursing-home care.
- Nursing-home nurses should be aware of and focus on self-transcendence as a resource for patients' multidimensional well-being. Finding ways to enhance interpersonal and intrapersonal self-transcendence may have benefits.
- Nursing-home nurses should provide interventions that support patients in managing multiple challenges to their personal integrity and well-being.

INTRODUCTION

The document *An Aging World* (US Census Bureau, 2009) highlights a shift to an older population and its consequences. In the next 30 years, the number of people over 65 worldwide will almost double to 1.3 billion. Within this shift, the most rapidly growing segment is people over 80 years old: by 2050 the percentage of those 80 and older would be 31%, up from 18% in 1980 (OECD, 1988). These changes have produced the notions of the “third” and “fourth” ages in developmental literature (Baltes and Smith, 2003). This differentiation of the final part of the life-span into two separate phases is important because of the characteristic patterns of gains (growth) and losses (decline) seen in the “young old” and the “old old” (Kirkevold, 2010). For many of the “old old” (80+) issues such as loss, illness, and approaching mortality decimate functioning and subsequently lead to the need for care in nursing homes (NH). The NH patients’ loss of independence and privacy, feelings of isolation and loneliness, the ever-present death and grief, and a lack of meaningful activities are identified as risk factors for depression and thus for well-being (Konnert et al., 2009, Meeks et al., 2009, Namkee et al., 2008). Because of the numbers of elderly requiring advanced care and treatment, knowledge about Quality of Life (QoL) and well-being in NHs is becoming more important in research and practice. Finding new and alternative approaches to increase well-being is highly warranted. Self-transcendence (ST) is a vital resource for well-being that could offer a positive approach among vulnerable populations and at the end of life (Ellerman and Reed, 2001, Reed, 2009a, Baker, 2008, Hoshi, 2008, Hsu, 2009).

Background

The theoretical concept of ST addresses an enhanced understanding of well-being in late adulthood (Reed, 2008). In accordance with human developmental theory emphasizing maturity as the developmental task in later life (Erikson, 1950), ST is described as a major

psychosocial force toward personal maturity distinct from the more self-absorbed strivings for self-esteem or self-identity of earlier developmental phases (Reed, 2009a, Reed, 2008). ST allows one to overcome ego concerns and search for new perspectives, meaning, and thus well-being. Subjective well-being is described as a sense of feeling whole and healthy, in accordance with one's own criteria for wholeness and health (Hunnibell et al., 2008), both a correlate to and an outcome of ST. The central core of ST is the expansion of self-boundaries through *intrapersonal* connectedness (self-acceptance and finding meaning in life), *interpersonal* connectedness (reaching out to others/connecting with nature), *transpersonal* connectedness (reaching out to a higher entity), and *temporality* (integrating one's past and future into the present), all of which positively influence healing and well-being (Coward and Reed, 1996, Reed, 2008, Reed, 1997).

As a general human dimension of personal maturity (Reed, 2008), ST has been related to spiritual as well as non-spiritual factors. Humans' spirituality is expressed and experienced in the context of caring connections with oneself, others, nature, and a life force or God (Burkhardt and Nagai-Jakobsen, 1994, Buck, 2006, Pesut, 2008, Miner-Williams, 2006, Chiu et al., 2004). Accordingly, spirituality seems closely related to connectedness; the essence of ST (Haugan et al., 2012). ST is a process of change characterized by striving for new and deeper understandings of life, and acceptance of self, others and one's life situation. This process of change is stimulated by the challenges of aging, and coming to terms with death (Dalby, 2006).

ST is described as a powerful coping mechanism involving adaption to physical, emotional, and spiritual distress. Hence, ST can lead to personal transformation, a sense of well-being and improved QoL when experiencing difficulties and significant challenges (Reed, 1992, Runquist and Reed, 2007, Teixeira, 2008). Studies link ST to well-being in

various populations (Reed, 1991, Mellors et al., 1997, Ellerman and Reed, 2001, Hunnibell et al., 2008, Bickerstaff et al., 2003). Previous research has considered vulnerable groups, particularly those who have experienced a life-changing diagnosis, such as AIDS (Mellors et al., 1997, Kausch and Amer, 2007), cancer (Coward, 1990, Coward and Kahn, 2005) or patients who have undergone stem cell transplantation (Williams, 2008), and the homeless (Runquist and Reed, 2007). ST has also been explored in healthy populations (Coward, 1996, Baker, 2008) and in older adults (Reed, 1991, Upchurch, 1999, Hoshi, 2008). Early studies by Reed (1986, 1991, 1989) involving people ages 80- to 100 indicate a significant inverse relationship between ST and depression, results supported also in later and recent studies (Klaas, 1998, Hsu, 2009). Expressions of ST are positively related to emotional well-being, health, and functioning in adults confronting personal mortality because of advanced age and/or chronic illness (Coward and Reed, 1996, Neill, 2002, Baker, 2008, Nygren et al., 2005, Mellors et al., 1997, Upchurch and Muller, 2005).

Still, there is a paucity of research on ST and well-being among NH patients, as well as research exploring the relationships between ST and well-being multidimensionally. The holistic-wellness model views individuals holistically as bio-psycho-social-spiritual units in whom the body, mind, and spirit are interconnected and affect one another (Quinn, 2005, Glaister, 2001, Narayanasamy et al., 2004, Guzzetta, 2005). The medical states of patients admitted to NHs are often complex with multiple diagnoses; they require different types of medical treatment, not to cure their illnesses, but for palliation. Disabilities, experiencing loss of functions and social relations, and approaching mortality lead to vulnerability and distress; in particular, loneliness and depression are identified as risks to the emotional well-being of older people (Savikko, 2008, Routasalo et al., 2006). Depression in NH patients is three to four times higher than in community-dwelling older adults (Jongenelis et al., 2004), and older

people lacking social and emotional support tend to be more depressed (Grav et al., 2012). NH care increasingly targets those elderly with the greatest needs in terms of personal daily activities, while services supporting their psychosocial and spiritual needs tend to be ignored (Vaarama and Tiit, 2007). Consequently, a multidimensional approach to NH patients' well-being seems necessary. Finding new and alternative nursing interventions to increase well-being is highly warranted.

A recent study demonstrates a two-factor construct of ST comprising "interpersonal ST" and "intrapersonal ST" as psychometrically superior to the one-factor construct in cognitively intact NH patients (Haugan et al., 2011). The two-factor construct allows a more complex examination of the relations between ST and well-being, which has not been reported earlier in this population.

THE STUDY

Aim

By utilizing structural equation modelling (SEM), the present study investigated the interrelationships between ST (interpersonal and intrapersonal) and physical, social, emotional, and functional well-being in cognitively intact NH patients. Spiritual well-being is vital to NH patients, but was not included for reasons of simplification (N=190). Our research question was: *Which specific dimensions of well-being are affected by interpersonal and intrapersonal ST?* Based on the theoretical and empirical knowledge of the positive associations between ST and well-being, we hypothesized that interpersonal ST would affect social well-being, and that intrapersonal ST would affect emotional well-being. Possible indirect and total effects between the constructs seemed less than obvious. Additionally, since the previous ST-literature considers ST as one dimension, associated generally with mental well-being it seemed important to test all possible links between ST and well-being. We

assumed that social well-being, involving positive relationships with friends and family would have a positive influence on NH patients' enjoyment of life and acceptance of their situation, both aspects of functional well-being as measured in the present study. Moreover, we expected that functional well-being, comprising enjoying life, etc. would relate to patients' lack of negative feelings (sadness, nervousness, and discomfort) representing emotional well-being. Finally, as it is well known that physical discomforts such as pain and fatigue negatively affect emotional well-being and vice versa (James, 2011), we supposed that emotional well-being would affect NH patients' physical well-being. Hence, the following hypotheses were formulated:

Hypotheses 1-4: Interpersonal self-transcendence (ST-1) positively affects physical, social, emotional, and functional well-being.

Hypotheses 5-8: Intrapersonal self-transcendence (ST-2) positively affects physical, social, emotional, and functional well-being.

Hypothesis 9: Social well-being positively affects functional well-being.

Hypothesis 10: Functional well-being positively affects emotional well-being.

Hypothesis 11: Emotional well-being positively affects physical well-being.

We tested a hypothesized structural equation model with bases in existing theory and previous empirical research. Figure 1 shows the hypotheses representing the directional relationships implying the influences between the latent constructs in the model.

Insert Figure 1 about here

Design

The data were collected during 2008 and 2009 from 250 potential participants representing 44 rural and urban NHs in Mid-Norway. Inclusion criteria were: (1) local authority's decision

of long term NH care (2) 6 months or longer in NH (3) informed-consent competency recognized by responsible doctor and nurse, (4) and capable of being interviewed.

Missing data frequency was 5.9% for the self-transcendence scale and 12% for the FACT-G QoL questionnaire; these were handled using the listwise procedure. In SEM there is no universal agreement about how large a sample is large enough, and no easy way to determine the sample size needed for confirmative factor analysis (CFA) (Harrington, 2009, Kline, 2005, Schumacker and Lomax, 2004). A sufficient power analysis is dependent on the ratio between the total number of variables (error measurements, observed and latent variables) and the sample size; one observed variable per 10 subjects is given as a rule of thumb, however a ratio of 5:10 has also been suggested (Bentler and Chou, 1987). A rough guideline is given; samples less than 100 are considered “small”, 100 to 200 “medium”, and may be an acceptable minimum sample size if the model is not too complex, while greater than 200 is “large”, and probably acceptable for most models (Kline, 2005, Schumacker and Lomax, 2004, Harrington, 2009). Because of statistical power and study logistics we planned to include a minimum 200 patients.

Because this population has difficulties completing questionnaires independently, three trained researchers conducted one-on-one interviews in private. To avoid introducing bias in the respondents’ reporting, researchers with identical professional backgrounds were chosen (RN, MA trained and experienced in communication with elderly and teaching gerontology at an advanced level); in addition, they were trained to conduct the interviews as identically as possible. The questionnaires used were part of a battery of nine questionnaires comprising 130 items. A large-print copy of the questions and possible responses were held in front of each participant to avoid misunderstandings. Statistical correlational analysis showed no significant difference between responses based on interviewers.

Participants

The total sample comprised 202 (80.8%) of 250 long-term nursing-home patients; long-term care was defined as 24-hour care. Short-term care patients, rehabilitations residents and cognitively impaired patients were not included.

Ethical considerations

Approval by the Norwegian Social Science Data Services was obtained for a license to maintain a register containing personal data (Ref.no 16443); likewise, we attained approval from the Regional Committee for Medical and Health Research Ethics in Central Norway (Ref.no.4.2007.645) and the 44 NHs. Potential participants were approached by a head nurse whom they knew well. The nurse provided both oral and written information about their rights as participants and their right to withdraw at any time. Each participant provided informed consent.

Data collection

Self-transcendence was assessed by items from the *Self-Transcendence Scale* (STS, Appendix1), developed to identify intrapersonal, interpersonal, transpersonal, and temporal experiences characteristic of later life and reflecting expanded boundaries of the self (Reed, 1986, Reed, 2008). The STS comprises 15 items representing the extent to which a person expands his personal boundaries. Each item is rated on a 4-point Likert-type scale from 1.0 (not at all) to 4.0 (very much) (Appendix 1); higher scores indicate higher ST. In former studies, Cronbach's α range was from .80 to .88 (Reed, 2009b, Reed, 1991, Runquist and Reed, 2007). Content validity is adequate, based on thorough review of empirical and theoretical literature (Reed, 2008). Support for construct validity has been found in the relationships of ST scores to other measures (Coward, 1990, Coward, 1996).

The STS was translated into Swedish and then back into English; the back-translated version was then approved by the instrument constructor (Nygren et al., 2005). The Swedish version demonstrated internal consistency of .70 to .85 (ibid.) and was translated into Norwegian for the purposes of the present study. Swedish and Norwegian language and culture are almost identical in all aspects that matters for this study. The ST questionnaire is virtually un-changed in the Norwegian version, but the words are spelled in Norwegian and meanings have been checked. Previous research considers ST as a one-dimensional construct (Reed, 1992, Coward and Reed, 1996, Coward and Kahn, 2005, Ellerman and Reed, 2001, Runquist and Reed, 2007, Hunnibell et al., 2008). However, the recently documented two-factor construct of ST (Haugan et al., 2011) is used for the purpose of the present study. The measurement model for self-transcendence was established based on theoretical considerations, model complexity, and validity reliability concerns. Conversely, it is important to retain the theoretical substance and nuances of each latent variable; simultaneously, because of sample size the model complexity has to be moderated; however, 3- to 5 indicators per latent variable is supposed to be sufficient (Marsh et al., 1998). The items “Having hobbies or interests I can enjoy”, “Being involved with other people”, “Sharing my wisdom or experience”, “Helping others in some way” and “Having an ongoing interest in learning” were indicators for interpersonal ST (ST-1). The items “Accepting myself as growing older”, “Adjusting well to my present life situation”, “Adjusting well to changes in physical abilities” and “Letting others help me” constituted intrapersonal ST (ST-2).

Multidimensional well-being was assessed by the FACT-G (Appendix2) questionnaire (Webster et al., 2003, Cella et al., 1993) which is divided into four well-being domains: physical, social/family, emotional, and functional well-being. The FACT-G is a 27-item, general QoL-measure considered appropriate for use with patients who have cancer (Cella et

al., 1993), and has also been used and validated in other chronic-illness conditions (e.g. HIV/AIDS, multiple sclerosis) as well as in the general population (using a slightly modified version) (ibid.). Each item is rated on a 5-point Likert-type scale from 0 (not at all) to 4 (very much); higher scores indicate better QoL/well-being. A review of 78 published studies reporting Cronbach's α reliability coefficient reported an average FACT-G reliability score as .88 (subscales ranged from .71 to .83); the FACT-G demonstrated acceptable reliability evidence across observed studies, without substantial variability due to scale or demographic characteristics (Victorson et al., 2008). In the present study, average FACT-G Cronbach's α was .80.

Before examining the hypothesized relationships, the measurement models were tested by CFA. The FACT-G, comprising four latent constructs was tested and the number of items gradually reduced; three items (SWB11,13,14) involving partner, sexual life, and family acceptance together with items regarding work (FWB21,22) were irrelevant. Regarding physical well-being, the items "I have lack of energy", "I have pain", and "I feel ill" were used. Social well-being was measured by the indicators "I feel close to my friends", "I get emotional support from my family", and "I get support from my friends". Further the items "I feel sad", "I feel nervous" and "I worry that my conditions will get worse" constituted the emotional well-being factor. Concerning functional well-being, the items "I am able to enjoy life", "I have accepted my life situation", and "I am content with the quality of my life right now" were used.

Reliability and Validity

The CFA provided a good fit to the observed data for the latent constructs. The measurement models for the two-factor construct of self-transcendence ($\chi^2=41.98$, $p<0.025$, RMSEA=.056, SRMR=0.056, NFI=0.92, CFI=0.97, GFI/AGFI=0.94/0.90) and multidimensional well-being

($\chi^2=54.57$, $p<0.024$, $RMSEA=.027$, $SRMR=0.058$, $NFI=0.91$, $CFI=0.99$, $GFI/AGFI=0.95/0.92$) showed good fit. All parameter estimates were significant ($p<0.05$) and loaded positively and clearly on their intended latent variable with factor loadings between 0.29-0.86. Cronbach's α (Table 1) and composite reliability (ρ_c) (Table 2) indicate acceptable reliability; values greater than .70 and 0.60 respectively, are desirable (Diamantopolous and Siguaw, 2008).

Insert Table 1 about here.

Data analyses

A SEM-model of the hypothesized relations between the latent constructs of self-transcendence and well-being was tested by means of LISREL 8.8 (Jøreskog and Sørbom, 1995). By using SEM, random measurement error is accounted for, and psychometric properties of the scales in the model are more accurately derived. At the same time, all the direct, indirect, and total effects throughout the model are estimated. SEM-models combine measurement models (e.g., factor models) with structural models (e.g., regression); a major issue is evaluation of model fit. The conventional overall test of fit is the chi-square (χ^2); a small χ^2 and a non-significant p-value corresponds to good fit (Jøreskog and Sørbom, 1995). In line with the rule of thumb given as conventional cutoff criteria (Schermelel-Engel et al., 2003), the following fit indices were used: the Root Mean Square Error of Approximation (RMSEA) and the Standardized Root Mean Square (SRMS) with acceptable/good fit respectively set to 0.08/0.05 (Hu and Bentler, 1998, Schermelleh-Engel et al., 2003), the Comparative Fit Index (CFI) and the Non-Normed Fit Index (NNFI) with acceptable/good fit respectively 0.95/0.97, the Normed Fit Index (NFI) and the Goodness-of-Fit Index (GFI) at 0.90/0.95, and the Adjusted GFI (AGFI) 0.85/0.90 (ibid.). The frequency distribution of the data was examined to assess deviation from normality; both skewness and kurtosis were

significant. As normality is a premise in SEM, we corrected for the non-normality by applying the Robust Maximum Likelihood (RML) estimate procedure and stated the Satorra-Bentler corrected χ^2 (Satorra and Bentler 1994).

RESULTS

Descriptive Analysis

Participants' age ranged from 65 to 104, with a mean of 86 years ($SD=7.65$). The sample comprised 146 women (72.3%) and 56 men (27.7%), the mean age for women was 87.3 years and 82 years for men. A total of 38 (19%) were married/cohabitating, 135 (67%) were widows/widowers, 11 (5.5%) were divorced, and 18 (9%) were single. Residential NH time when interviewed was a mean 2.6 years for both sexes (range 0.5-13 years); 117 were in rural NHs, and 85 were in urban NHs. Statistical correlational analyses (data not shown) showed no significant differences between rural and urban NHs. Our results indicate a lower ST score (mean=42.5) than previously reported among elderly populations, with means like 49 (Reed, 1991), 48 (Upchurch, 1999), 47 (Nygren et al., 2005) and 46 (Klaas, 1998). The present study disclosed an inverse relationship between ST and age with ST mean score=45 for the group ages 65-75, which is more in line with those reported earlier, while groups ages 76-90 (ST-mean 42.9) and 91-104 (ST-mean 41.25) reported considerably lower ST.

SEM-analysis; Self-Transcendence related to well-being

The SEM-model to be tested (Model-1) comprised 9 ST-items and 12 FACT-G-items representing 6 latent constructs. The measurement models are listed in Table 2. For scaling, the variances of the 4 latent dependent well-being-variables were set as 1.

Insert Figure 2 and Table 2 about here

Model-1 portrayed in Figure 2, yielded a reasonable fit; χ^2 (234.59; $p=0.0024$, $df=177$), RMSEA (0.041; $p=0.84$), CFI (0.96), NFI/NNFI (0.86/0.95), SRMR (0.071) and GFI/AGFI (0.88/0.85)

supporting the model (Table 3). However, NFI (0.86) and GFI (0.88) were low. The modification indices suggested adding a path from PWB4 (pain) to functional well-being (QoL/enjoying life), and letting error variances between the following pair of variables correlate; ST6-ST8, ST3-ST6 and ST1-ST9, which all seem theoretically reasonable. Including these parameters in Model-1 increases the fit: χ^2 (208.66; $p=0.0333$, $df=173$), RMSEA (0.033; $p=0.97$), CFI (0.98), NFI/NNFI (0.88/0.97), SRMR (0.067) and GFI/AGFI (0.90/0.86). However, correlated error terms are a step that should be taken with caution (Hooper et al., 2008, Boomsma, 2009, Diamantopolous and Siguaw, 2008), thus such correlations are not included in Model-1.

Insert Table 3 about here

To examine the stability of the relationships between ST and well-being, Model-2 comprising 31 indicators (15 ST and 16 FACT-G) but based on sum scores, was estimated. Model-2 gave significant estimates, and the same significant paths between ST and well-being (Table 4), and between the well-being-factors as Model-1. The paths from ST-1 to social (H1: $\gamma_{1,2}$) and emotional well-being (H3: $\gamma_{1,3}$) were significant, while ST-2 showed a significant path to functional well-being (H6: $\gamma_{2,4}$). Looking to the betas, significant paths existed from functional to emotional well-being (H10: $\beta_{3,4}$) and from emotional to physical well-being (H11: $\beta_{1,3}$).

Insert Table 4 about here

The effects of ST on well-being demonstrated stability throughout the estimated models (data not shown for Model-2). Table 5 lists the total effects of ST on well-being based in Model-1, showing statistically significant total effects of ST-1 on social well-being (0.42*) and of ST-2 on physical (0.31*), emotional (0.59*), and functional well-being (0.68*).

Insert Table 5 about here

DISCUSSION

The aim of the present study was to investigate the interrelationships between self-transcendence (interpersonal and intrapersonal) and physical, social, emotional, and functional well-being. By doing so we sought to contribute to a holistic nursing perspective of promoting well-being in NHs in four ways. First, by exploring the relationships between interpersonal and intrapersonal ST to well-being multidimensionally, the present study supplies empirical knowledge to the growing body of ST-knowledge. Second, research focusing on ST among NH patients is still in its infancy. The link between self-transcendence and well-being has formerly been identified in persons approaching end of life through normal aging (Reed, 1991, Coward and Reed, 1996), demonstrating the importance of self-transcendence to well-being in older adults (Daaleman et al., 2001, Wachholtz et al., 2007). To the authors' knowledge, the relationships between self-transcendence and physical, social, emotional, and functional well-being in NH patients are not previously documented. Thus, a notable strength of this research is the empirical examination of models and measures that previously have not been tested empirically. Third, by involving a two-factor-construct of ST, the present study provides a more complex examination of the relationships between ST and well-being. And fourth, by examining the relationships and the effects of interpersonal and intrapersonal self-transcendence on physical, social, emotional, and functional well-being in cognitively intact NH patients, new approaches to nursing interventions can emerge. By means of advanced statistical analyses, the present study could point out more specific information about the mechanisms involved in the relationships between well-being and self-transcendence and provide more specific guidelines for nursing interventions promoting well-being. The present study suggests that finding ways to enhance both the individual's intrapersonal and interpersonal self-transcendence might be beneficial in this matter.

The level of Self-Transcendence

Our results indicate an inverse relationship between ST and age, and a lower ST score (mean 42.5) than previously reported among elderly populations. Although the participants in Reed's study (1991) were ages 85-100, their reported ST-level was 49. Similarly Upchurch (1999) reported ST-level at 48 for adults ages 65-93, and Klaas (1998) studied elderly 75 years and older, reporting a mean of 46. This supports the idea that not age, but rather a poorer ST-capacity, explains our findings. The NH setting might represent fewer possibilities for developing and preserving ST than are found among same-aged older adults living at home (Nygren et al., 2005, Reed, 1991). The present study includes older adults with NH residence of six months or longer; NH services and nursing care have tended to ignore the psychosocial needs (Haugan Hovdenes, 2002, Vaarama and Tiit, 2007) essential to ST. Moving to a NH results from numerous losses, illnesses, and functional impairments, all of which increase an individual's vulnerability. The NH life is institutionalized, representing loss of social relationships, privacy, self-determination, and connectedness. Additionally, rates of depression in NH patients are three to four times higher than in community-dwelling older adults (Jongenelis et al., 2004), and the elderly who lack social/emotional support report more depression (Grav et al., 2012). These aspects might explain the lower ST scores in the present study compared to the community-based samples in previous studies.

Self-Transcendence influences on well-being

The research question aimed to investigate the relationships between interpersonal and intrapersonal ST and physical, social, emotional, and functional well-being. Some of the hypotheses tested, explicitly H1, H3, H6, and H10-H11 (Figure 1) were supported. Interpersonal ST, comprising involvement with other people, sharing wisdom, and helping others, as well as an ongoing interest in learning, relates directly to NH patients' social and

emotional well-being. This is theoretically reasonable and in accordance with previous findings (Reed, 1991, Ellerman and Reed, 2001, Bickerstaff et al., 2003). Interpersonal ST comprises exactly the *inter*-dimension respectively social relationships and interaction with other people. Experiences of connectedness and closeness to family and friends, which is usually important to an individual's emotional well-being, are essential aspects of social well-being. Accordingly, interpersonal ST also relates (statistically) directly to emotional well-being, comprising feelings such as sadness, nervousness, and discomfort. Thus, involvement with others, sharing wisdom, helping and learning (Interpersonal ST) are negatively associated with such negative feelings, while interpersonal ST is related to positive feelings. The causality for this association might be reciprocal; people with positive feelings are more likely to engage with others, while engaging with others can make individuals feel better.

In accordance with previous research (Reed, 1992, Runquist and Reed, 2007, Teixeira, 2008) intrapersonal ST relates directly to functional well-being, comprising the patients' experience of their overall QoL and their ability to enjoy life and accept their situation. Intrapersonal ST comprises aspects such as self-acceptance, adjustment to life situation and physical disabilities, and letting others help. Thus, the influence on functional well-being seems theoretically reasonable; acceptance, QoL, and the ability to enjoy life relate logically to the extent of self-acceptance, adjustment, and letting others help. If a NH patient doesn't accept, adjust, and let others help, it seems reasonable that enjoying life in the NH will be difficult.

Total effects of intrapersonal ST on physical, emotional, and functional well-being were disclosed. Directional effects from functional well-being, to emotional and physical well-being emerged, indicating that ST indirectly affects physical well-being, mediated by functional and emotional well-being. Accordingly, ST not only influences vulnerable patients'

functional, social, and emotional well-being, but also their physical well-being, as portrayed in Figure 2. Intrapersonal ST comprises adjustment to changes in physical abilities/frailties, hence this influence is reasonable and comprehensible within the holistic perspective of body-mind-spirit as a whole which is based on the premise that each of these elements is interconnected and that one affects the others (Quinn, 2005, Glaister, 2001, Narayanasamy et al., 2004, Guzzetta, 2005). The statistical stability of the influences of ST on well-being throughout the different estimated models supports the findings. In summary, the assessment of the measurement part of Model-1 did not reveal any crucial deficiencies as non-significant error variances and loadings, the indicators used loaded clearly and composite reliability revealed good evidence of reliability for the latent variables.

Limitations

Some limitations must be considered. Effective sample $N=190$ is considered as “medium”, near the limit for “large” samples (>200). A larger sample would significantly increase statistical power of the tests. Nevertheless, models with moderate sample sizes should be analysed if a greater sample is unavailable and if convergence problems or improper solutions, such as negative variances estimates or Heywood cases do not occur (Schermelleh-Engel et al., 2003). Such problems did not arise here.

The fact that researchers assisted participants completing the questionnaires might have introduced some bias into respondents’ reporting, although statistical tests showed no significant differences between responses based on interviewers.

The STS and the FACT-G were part of a battery of nine questionnaires comprising 130 items. Thus, frail NH patients might tire when completing the questionnaires, representing a possible bias in their reporting. To avoid this, experienced researchers were

carefully trained to conduct the interviews following a standardised procedure, including short breaks at specific points during the process.

Although the FACT-G has been validated for other chronic-illness conditions as well as for the general population (Cella et al., 1993), it might not work so well for this NH population. Four items were excluded and the measurement model reduced accordingly, but still some items showed low R^2 . A cross-cultural validation of the FACT-G for the NH population is of great interest. In the present study NFI and GFI were lower than the recommended value of 0.90. This, together with the low ST-scores, indicates that causal connections cannot be made with certainty. However, both NFI and GFI are sensitive to small samples, underestimating fit for samples less than 200, and thus should not be relied on solely (Kline, 2005, Sharma et al., 2008). Moreover, the AGFI adjusts the GFI based upon degrees of freedom and shows acceptable fit. The CFI is a revised form of NFI, which takes into account sample size and performs well even when samples are small (Hooper et al., 2008); $CFI \geq .95$ is presently recognized as indicative of good fit (Hu and Bentler, 1999). CFI (0.96) in the present study supports Model-1. Furthermore, the relationships in Model-1 were supported by Model-2.

CONCLUSION

The aim of this study was to investigate the interrelationships between ST and physical, social, emotional, and functional well-being in NH patients. Our results indicate that ST relates to functional, emotional, and social well-being, and indirectly influences physical well-being (mediated by functional and emotional). Hence, nursing interventions that facilitate interpersonal and intrapersonal ST are a potential resource for multidimensional well-being. The potential for ST and thus well-being are important considerations in NH care; most patients have suffered numerous losses that challenge their self-transcending and coping

capacities. Most are in need of care and assistance because of physical decline and other limitations. Self-acceptance and adjustment seem necessary for well-being. Facing with advanced age, few remaining social contacts, other losses, and physical decline requiring NH care, individuals may experience threats to their connectedness, representing life experiences that manifest existential suffering and feelings of loneliness and worthlessness.

Hence, the nurse-patient-interaction is a potential resource for connectedness, supporting NH patients' self-acceptance and adjustment. Nurses may promote ST by facilitating patients' connections with others, family, and friends, and by stimulating reflections and connection to patients' inner thoughts and emotions. Facilitating hobbies, helping others, learning, and sharing wisdom could increase meaning in life and acceptance of the self, death, and the pace of life, which positively influence adjustment and well-being. Further research testing these relationships in greater samples ($N \geq 500$) among NH patients and other chronically ill is warranted, as is an exploration of possible ST-based nursing interventions aimed at increasing well-being.

REFERENCES

- BAKER, C. D. 2008. *Self-Transcendence, death anxiety, and older adult's participation in health promotion behaviours*. Ph.D, University of Wisconsin.
- BALTES, P. B. & SMITH, J. 2003. New frontiers in the future of aging: from successful aging of the young old to dilemmas of the Fourth Age. *Gerontology*, 49, 123-135.
- BENTLER, P. & CHOU, C. 1987. Practical issues in structural equations modeling. *Sociological Methods and Research*, 16, 78-117.
- BICKERSTAFF, K., GRASSER, C. & MCCABE, B. 2003. How elderly nursing home residents transcend losses of later life. *Holistic Nursing Practice*, 17, 159-65.
- BOOMSMA, A. 2009. Reporting Analyses of Covariance Structures. *Structural Equation Modeling: A Multidisciplinary Journal*, 7, 461-483.
- BUCK, H. G. 2006. Spirituality: concept analysis and model development. *Holistic Nursing Practice*, 20, 288-292.
- BURKHARDT, M. A. & NAGAI-JAKOBSEN, M. G. 1994. Reawakening spirit in clinical practice. *Journal of Holistic Nursing*, 12, 9-21.

- CELLA, D., TULSKY, D., GRAY, G., SARAFIAN, B., LINN, E. & BONAMI, P. 1993. The functional Assessment of Cancer Therapy Scale: Development and Validation of the General Measure. *Journal of Clinical Oncology* 11, 570-579.
- CHIU, L., EMBLEN, J., VANHOFWEGEN, L., SAWATZKY, R. & MYERHOFF, H. 2004. An integrative review of the concept of spirituality: A literature review. *Western Journal of Nursing Research*, 26, 1183-1188.
- COWARD, D. D. 1990. The lived experiences of self-transcendence in women with advanced breast cancer. *Nursing Science Quarterly*, 3, 162-169.
- COWARD, D. D. 1996. Self-transcendence and correlates in a healthy population. *Nursing Research*, 45, 116-121.
- COWARD, D. D. & KAHN, D. 2005. Transcending Breast Cancer: Making Meaning from Diagnosis and Treatment. *Journal of Holistic Nursing*, 23, 264-283.
- COWARD, D. D. & REED, P. G. 1996. Self-transcendence: a resource for healing at the end of life. *Issues in Mental Health Nursing*, 17, 275-288.
- DAALEMAN, T. P., KUCKELMAN COBB, A. & FREY, B. B. 2001. Spirituality and well-being: an exploratory study of the patient perspective. *Social Science & Medicine*, 53, 1503-11.
- DALBY, P. 2006. Is there a process of spiritual change or development associated with ageing? A critical review of research. *Aging & Mental Health* 10, 4-12.
- DIAMANTOPOULOS, A. & SIGUAW, J. A. 2008. *Introducing LISREL*, Los Angeles - London - New Dehli - Singapore, SAGE Publications Ltd.
- ELLERMAN, C. & REED, P. 2001. Self-transcendence and depression in middle-aged adults. *Western Journal of Nursing Research*, 23, 698-713.
- ERIKSON, E. H. 1950. *Childhood and Society*, New York, W.W. Norton & Company, Inc.
- GLAISTER, J. A. 2001. Healing: Analysis of the concept. *International Journal of Nursing Practice*, 7, 63-68.
- GRAV, S., HELLZËN, O., ROMILD, U. & STORDAL, E. 2012. Association between social support and depression in the general population: the HUNT study, a cross-sectional survey. *Journal of Clinical Nursing*, 21, 111-120.
- GUZZETTA, C. E. 2005. Holistic Nursing Research. In: DOSSEY, B. M., KEEGAN, L. & GUZZETTA, C. E. (eds.) *Holistic Nursing. A Handbook for Practice*. 4th Edition ed. Boston - Toronto - London - Singapore: Jones and Bartlett Publisher.
- HARRINGTON, D. 2009. *Confirmatory factor Analysis*, Oxford - New York, Oxford University Press.
- HAUGAN, G., RANNESTAD, T., HAMMERVOLD, R., GARÅSEN, H. & ESPENES, G. A. 2012. The Influence of Self-Transcendence on Spiritual Well-Being in Cognitively Intact Nursing Home Patients. *International Journal of Older People Nursing*, SUBMITTED.
- HAUGAN, G., RANNESTAD, T., HAMMERVOLD, R., GARÅSEN, H. & ESPNES, G. A. 2011. The Self-Transcendence Scale - An investigation of the Factor Structure Among Nursing Home Patients. *Published online before print December 27, 2011, doi: 10.1177/0898010111429849 J Holist Nurs December 27, 2011 0898010111429849*
- HAUGAN HOVDENES, G. 2002. Pleier-pasient-relasjonen i sykehjem: virkeliggjørelse eller tilintetgjørelse. [The Nurse-patient-relationship in nursing homes: fulfillment or destruction]. *Vård i Norden*, publ. no.65, vol 22, 21-26.
- HOOPER, D., COUGHLAN, J. & MULLEN, M. R. 2008. Structural Equation Modelling: Guidelines for Determining Model Fit. *The Electronic Journal of Business Research Methods*, 6, 53-60.

- HOSHI, M. 2008. *Self-transcendence, vulnerability, and well-being in hospitalized Japanese elders*. Ph.D, University of Arizona.
- HSU, Y. 2009. *A cultural psychosocial model for depression in elder care institutions: the roles of Socially Supportive Activity and Self-Transcendence*. Ph.D, University of Arizona.
- HU, L. & BENTLER, P. 1998. Fit Indices in Covariance Structure Modeling: Sensitivity to Underparametrized Model Misspecification. *Psychological Methods*, 3, 424-453.
- HU, L. T. & BENTLER, P. M. 1999. Cutoff Criteria for Fit Indexes in Covariance Structure Analysis: Conventional Criteria Versus. *Structural Equation Modeling*, 6, 1.
- HUNNIBELL, L., REED, P., QUINN-GRIFFIN, M. & FITZPATRICK, J. 2008. Self-Transcendence and Burnout in Hospice and Oncology Nurses. *Journal of Hospice and Palliative Nursing*, 10, 172-179.
- JAMES, G. 2011. Chronic Pain: Living with Chronic Pain. In: RANDALL, S. & FORD, H. (eds.) *Long-term Conditions. A Guide for Nurses and Health Care Professionals*. Oxford: Blackwell Publishing Ltd.
- JONGENELIS, K., POT, A. M., EISSES, A. M. H., BEEKMAN, A. T. F., KLUITER, H. & RIBBE, M. W. 2004. Prevalence and risk indicators of depression in elderly nursing home patients: the AGED study. *Journal of Affective Disorders*, 83, 135-142.
- JØRESKOG, K. & SØRBOM, D. 1995. *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language*, Chicago, Scientific Software International.
- KAUSCH, K. D. & AMER, K. 2007. Self-transcendence and depression among AIDS Memorial Quilt panel makers. *Journal of Psychosocial Nursing & Mental Health Services*, 45, 44-53.
- KIRKEVOLD, M. (ed.) 2010. *Translating Chronic Illness Research Across the Lifespan*, Oxford: Blackwell Publishing Ltd.
- KLAAS, D. 1998. Testing two elements of spirituality in depressed and non-depressed elders. *International Journal of Psychiatric Nursing Research*, 4, 452-462.
- KLINE, R. B. 2005. *Principles and Practice of Structural Equation Modeling*, London, The Guilford Press.
- KONNERT, C., DOBSON, K. & STELMACH, L. 2009. The prevention of depression in nursing home residents: a randomized clinical trial of cognitive-behavioral therapy. *Aging & Mental Health*, 13, 288-299.
- MARSH, H. W., KIT-TAI, H., BALLA, J. R. & GRAYSON, D. 1998. Is More Ever Too Much? The Number of Indicators per Factor in Confirmatory Factor Analysis. *Multivariate Behavioral Research*, 33, 181.
- MEEKS, S., SHAH, S. N. & RAMSEY, S. K. 2009. The Pleasant Events Schedule - nursing home version: a useful tool for behavioral interventions in long-term care. *Aging & Mental Health*, 13, 445-455.
- MELLORS, M., RILEY, T. & ERLIN, J. 1997. HIV, Self-transcendence, and Quality of Life. *Journal of the Association of Nurses in AIDS Care*, 82, 59-69.
- MINER-WILLIAMS, D. 2006. Putting a puzzle together: making spirituality meaningful for nursing using an evolving theoretical framework *Journal of Clinical Nursing*, 15, 811-821.
- NAMKEE, G., CHOI, S. R. & RICHARD, J. W. 2008. Depression in older nursing home residents: The influence of nursing home environmental stressors, coping, and acceptance of group and individual therapy. *Aging and Mental Health*, 12, 536-547.

- NARAYANASAMY, A., CLISSETT, P., PARUMAL, L., THOMPSON, D., ANNASAMY, S. & EDGE, R. 2004. Responses to the spiritual needs of older people. *Journal of Advanced Nursing*, 48, 6-16.
- NEILL, J. 2002. Transcendence and transformation in the life patterns of women living with reumathoid arthritis. *Advances in Nursing Science*, 24, 27-47.
- NYGREN, B., ALEX, L., JONSEN, E., GUSTAFSON, Y., NORBERG, A. & LUNDMAN, B. 2005. Resilience, sense of coherence, purpose in life and self-transcendence in relation to perceived physical and mental health among the oldest old. *Aging and Mental Health*, 9, 354-362.
- OECD 1988. *Aging Populations: Social Policy Implications*. Paris.
- PESUT, B. 2008. A conversation on diverse perspectives of spirituality in nursing literature. *Nursing philosophy*, 9, 98-109.
- QUINN, J. 2005. Transpersonal Human Caring and Healing. In: DOSSEY, B., KEEGAN, L. & GUZZETTA, C. (eds.) *Holistic Nursing. A Handbook for Practice*. Boston-Toronto-London-Singapore: Jones and Bartlett Publishers.
- REED, P. G. 1986. Developmental resources and depression in the elderly. *Nursing Research*, 35, 368-374.
- REED, P. G. 1989. Mental Health of Older Adults. *Western Journal of Nursing Research*, 11, 143-163.
- REED, P. G. 1991. Self-transcendence and mental health in oldest-old adults. *Nursing Research*, 40, 5-11.
- REED, P. G. 1992. An emerging paradigm for the investigation of spirituality in nursing. *Research in Nursing and Health*, 15, 349-357.
- REED, P. G. (ed.) 1997. *The place of transcendence in nursing's science of unitary human beings: Theory and research*, New York: National League for Nursing Press.
- REED, P. G. 2008. Theory of Self-Transcendence. In: SMITH, M. J. & LIEHR, P. R. (eds.) *Middle Range Theory for Nursing*. New York: Springer Publishing Company, LLC.
- REED, P. G. 2009a. Demystifying Self-Transcendence for Mental Health Nursing Practice and Research. *Archives of Psychiatric Nursing*, 23, 397-400.
- REED, P. G. 2009b. Nursing: The Ontology of the Discipline. In: REED, P. G. & SHEARER, N. B. C. (eds.) *Perspectives on Nursing Theory*. 5th Edition ed. Philadelphia - Baltimore - New York - London - Buenos Aires - Hong Kong - Sydney - Tokyo: Wolters Kluwer - Lippincott Williams & Wilkins.
- ROUTASALO, P., SAVIKKO, N., TILVIS, R., STRANDBERG, T. & PITKÄLÄ, K. 2006. Social contacts and their relationship to loneliness among aged people – a population-base study. *Gerontology*, 52, 181-187.
- RUNQUIST, J. J. & REED, P. G. 2007. Self-transcendence and well-being in homeless adults. *Journal of Holistic Nursing*, 25, 5-13.
- SAVIKKO, N. 2008. Loneliness of older people and elements of an intervention for its alleviation. Doctoral dissertation. *Annales Universitatis Turkuensis Turku*: University of Turku, Finland.
- SCHERMELLEH-ENGEL, K., MOOSBRUGGER, H. & MULLER, H. 2003. Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. *Methods of Psychological Research*, 8, 23-74.
- SCHUMACKER, R. E. & LOMAX, R. G. 2004. *A Beginner's Guide to STRUCTURAL EQUATION MODELING*, New York, Psychology Press, Taylor & Francis Group.

- SHARMA, S., MUKHERJEE, S., KUMAR, A. & DILLIN, W. R. 2008. A simulation study to investigate the use of cutoff values for assessing model fit in covariance structure models. *Journal of Business Research*, 58, 935-943.
- TEIXERA, M. E. 2008. Self-Transcendence. A Concept Analysis for Nursing Praxis. *Holistic Nursing Practice*, 22, 25-31.
- UPCHURCH, S. 1999. Self-Transcendence and Activities of Daily Living: the Woman With the Pink Slippers. *Journal of Holistic Nursing*, 17, 251-266.
- UPCHURCH, S. & MULLER, W. H. 2005. Spiritual influences on ability to engage in self-care activities among older African Americans. *International Journal of Aging & Human Development*, 60, 77-94.
- US CENSUS BUREAU 2009. An Aging World: 2008. In: WWW.CENSUS.GOV/PROD/2009PUBS/P95-09-1.PDF, U. G. P. O. A. A. (ed.).
- VAARAMA, M. & TIIT, E.-M. (eds.) 2007. *Quality of life of older homecare clients* New York: Springer.
- VICTORSON, D., BAROCAS, J., SONG, J. & CELLA, D. 2008. Reliability across studies from the functional assessment of cancer therapy-general (FACT-G) and its subscales: a reliability generalization. *Quality Life Research*, 17, 1137-1146.
- WACHHOLTZ, A. B., PEARCE, M. J. & KOENIG, H. G. 2007. Exploring the relationship between spirituality, coping, and pain. *Journal of Behavioral Medicine*, 30, 311-318.
- WEBSTER, K., CELLA, D. & KOST, K. 2003. The Functional Assessment of Chronic Illness Therapy (FACIT) Measurement System: properties, applications, and interpretation. *Health and Quality of Life Outcomes*, 1, 1-7.
- WILLIAMS, B. 2008. *Rebirth: The Experience of Self-Transcendence in Patients who have undergone Stem Cell Transplantation*. Doctor of Philosophy, New York University.

FIGURES AND TABLES

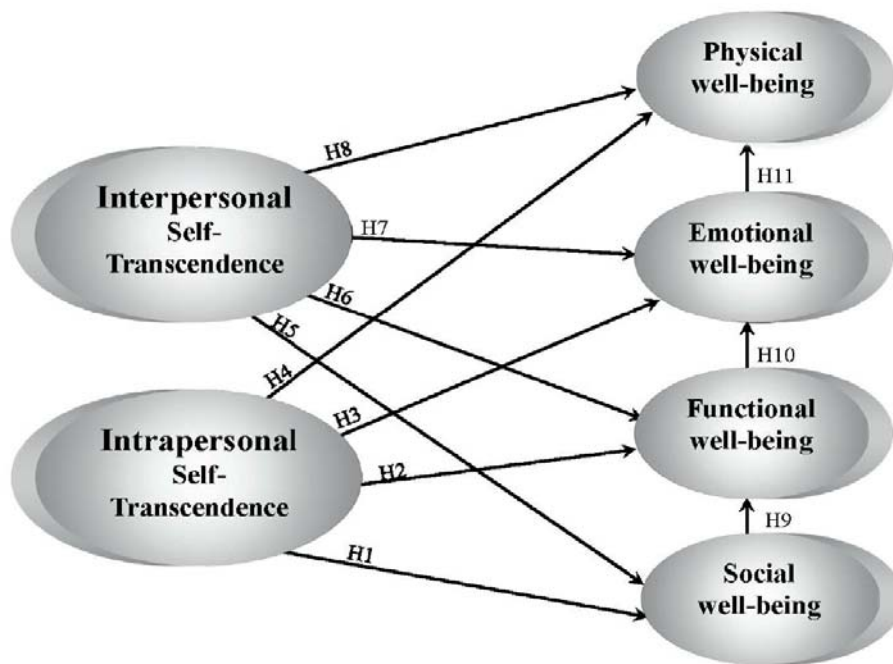


Figure 1. The hypotheses between interpersonal and intrapersonal self-transcendence and physical, emotional, functional, and social well-being to be tested.

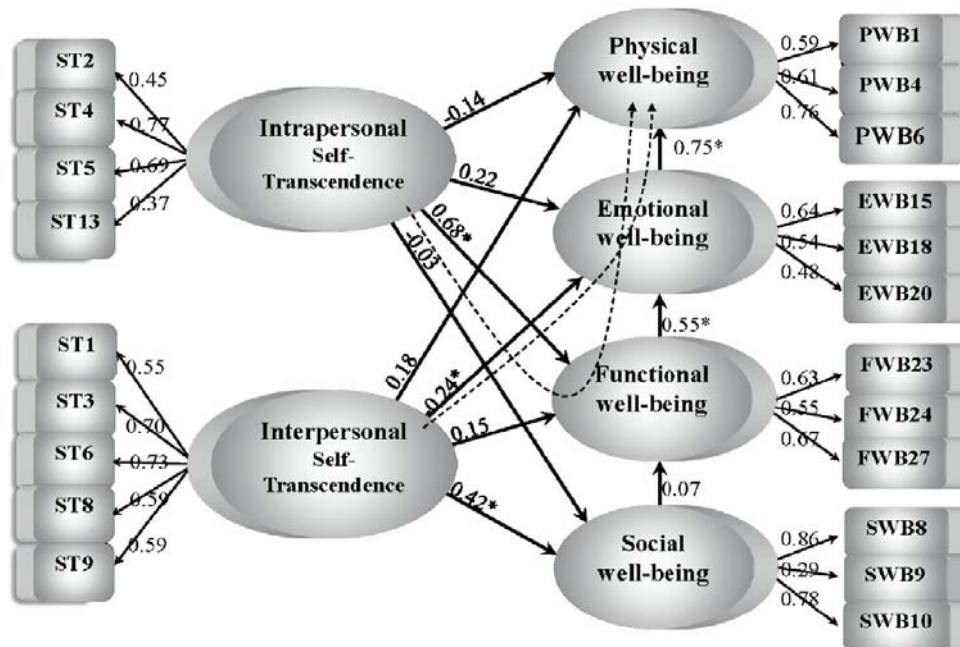


Figure 2. SEM Model-1. Measurement models for the latent constructs and direct relationships between interpersonal and intrapersonal self-transcendence and physical, emotional, functional, and social well-being.

Note. \rightarrow Direct influence. $-\rightarrow$ Indirect influence. ST=Self-Transcendence. PWB=Physical Well-Being. EWB=Emotional Well-Being. FWB=Functional Well-Being. SWB=Social Well-Being.

Measurement models for Model-1:

PWB: PWB1: "I have lack of energy".

PWB4: "I have pain".

PWB6: "I feel ill".

EWB: EWB15: "I feel sad".

EWB18: "I feel nervous".

EWB20: "I worry that my condition will be worse".

FWB: FWB23: "I am able to enjoy life"

FWB24: "I have accepted my life situation"

FWB27: "I am content with the quality of my life right now".

SWB: SWB8: "I feel close to my friends".

SWB9: "I get emotional support from my family".

SWB10: "I get support from my friends"

ST-1: ST1: "Having hobbies and interests I can enjoy".

ST3: "Being involved with other people or my community when possible".

ST6: "Sharing my wisdom or experience with others".

ST8: "Helping others in some way".

ST9: "Having ongoing interest in learning".

ST-2: ST2: "Accepting myself as I grow older".

ST4: "Adjusting well to my present life situation."

ST5: "Adjusting well to changes in my physical abilities."

ST13: "Letting others help me when I may need it"

Table 1. Instruments; Constructs in Model-1 and Cronbach's Alpha

Construct	Items	Cronbach's Alpha
ST-1 (Inter-personal Self-Transcendence)	5	0.76
ST-2 (Intra-personal Self-Transcendence)	4	0.66
PWB (Physical Well-being)	3	0.68
SWB (Social Well-being)	3	0.65
EWB (Emotional Well-being)	3	0.54
FWB (Functional Well-being)	3	0.62

Table 2. Model-1. Measurement models for ST and well-being. Completely Standardized Factor Loadings¹ and t-values, Squared Multiple Correlations² (R^2), Composite reliability³ (ρ_c).

Items	Parameter	Lisrel Estimate ¹	t-value ²	R^2
ST1	$\lambda_{x1,1}$	0.55	6.83*	0.31
ST2	$\lambda_{x2,2}$	0.45	4.14*	0.20
ST3	$\lambda_{x3,1}$	0.70	10.48*	0.49
ST4	$\lambda_{x4,2}$	0.77	7.82*	0.60
ST5	$\lambda_{x5,2}$	0.69	7.72*	0.48
ST6	$\lambda_{x6,1}$	0.73	9.64*	0.53
ST8	$\lambda_{x8,1}$	0.59	7.03*	0.35
ST9	$\lambda_{x9,1}$	0.59	8.18*	0.34
ST13	$\lambda_{x13,2}$	0.37	3.30*	0.14
PWB1	$\lambda_{y1,1}$	0.59	-	0.35
PWB4	$\lambda_{y4,1}$	0.61	5.46*	0.37
PWB6	$\lambda_{y6,1}$	0.76	6.46*	0.57
SWB8	$\lambda_{y8,2}$	0.86	-	0.73
SWB9	$\lambda_{y9,2}$	0.29	3.34*	0.08
SWB10	$\lambda_{y10,2}$	0.78	6.20*	0.61
EWB15	$\lambda_{y15,3}$	0.64	-	0.41
EWB18	$\lambda_{y18,3}$	0.54	6.07*	0.29
EWB20	$\lambda_{y20,3}$	0.48	5.34*	0.23
FWB23	$\lambda_{y23,4}$	0.63	-	0.40
FWB24	$\lambda_{y24,4}$	0.55	5.26*	0.31
FWB26	$\lambda_{y26,4}$	0.67	5.90*	0.45
ρ_{cST-1}	ρ_c	0.77		
ρ_{cST-2}	ρ_c	0.67		
ρ_{cPWB}	ρ_c	0.64		
ρ_{cSWB}	ρ_c	0.70		
ρ_{cEWB}	ρ_c	0.60		
ρ_{cFWB}	ρ_c	0.65		

Note. *Significant at the 5 % level. ¹Completely Standardized Factor Loadings.

²Squared Multiple Correlations (R^2). Listwise, N=190, 21 items included.

³Composite reliability $\rho_c = \frac{(\sum \lambda)^2}{(\sum \lambda)^2 + \sum(\theta)}$

Table 3. Goodness-of-fit measures for Model-1 and Model-2.

Fit Measure	Model-1	Model-2 Sum score
	9ST ¹ +3PWB ² +3EWB ³ +3SWB ⁴ +3FWB ⁵ items, RML N=190	15ST+4PWB+4EWB +4SWB+4FWB items, OLS N=183
χ^2 Satorra Bentler	234.59	2.99
p-value	0.0024	0.3900
$\frac{\chi^2}{df}$ Satorra Bentler	1.3253 Df=177	0.99667 Df=3
RMSEA	0.041	0.000
p-value (<i>close fit test</i>)	0.84	0.57
SRMR	0.071	0.024
NFI	0.86	0.98
NNFI	0.95	1.00
CFI	0.96	1.00
GFI	0.88	0.99
AGFI	0.85	0.96

Note. RMSEA=Root Mean Square Error of Approximation. SRMS=Standardized Root Mean Square Residual. NFI=Normed Fit Index. NNFI=Nonnormed Fit Index. CFI=The Comparative Fit Index. GFI=Goodness-of-Fit Index. AGFI=Adjusted Goodness-of-Fit Index. ¹ST=Self-Transcendence. ²PWB= Physical Well-Being. ³EWB=Emotional Well-Being. ⁴SWB=Social well-Being. ⁵FWB=Functional Well-Being.

Table 4. SEM-models of Self-Transcendence (ST) to well-being. Completely Standardized Beta¹ and Gamma².

Construct	Parameter	Model-1		Model-2 SUM score	
		Lisrel Estimate	t-value	Lisrel Estimate	t-value
		N=190 9 ST+12WB=21items		N=183 15ST +16WB=31items	
EWB ³ to PWB ⁴	β 1,3	0.75	3.65*	0.59	6.41*
FWB ⁵ to EWB	β 3,4	0.55	2.56*	0.30	4.99*
SWB ⁶ to FWB	β 2,4	0.07	0.57	0.07	1.25
ST-1 ⁷ to PWB,	γ 1,1	0.18	1.55	0.14	1.30
SWB,	γ 2,1	0.42	4.45*	0.68	5.58*
EWB,	γ 3,1	-0.24	-2.18*	-0.19	-2.36*
FWB	γ 4,1	0.15	1.38	0.24	2.25*
ST-2 ⁸ to PWB,	γ 1,1	-0.14	-0.78	0.05	0.29
SWB,	γ 2,1	-0.03	-0.30	0.28	1.22
EWB,	γ 3,1	0.22	1.09	0.33	2.69*
FWB	γ 4,1	0.68	5.86*	0.78	5.03*

Note. *Significant at the 5 % level

¹Beta; standardized regression coefficients representing directional relationships between the well-being-factors

²Gamma; standardized regression coefficients representing directional relationships between Self-Transcendence and well-being.

³EWB=Emotional Well-Being. ⁴PWB=Physical Well-Being. ⁵FWB=Functional Well-Being.

⁶SWB=Social Well-Being. ⁷ST-1=Interpersonal Self-Transcendence. ⁸ST-2=Intrapersonal self-Transcendence.

Table 5. Model-1. Total¹ and Indirect² effects of Self-Transcendence (ST) on well-being; Completely standardized Lisrel estimates and t-values.

Total Effects¹ of Self-Transcendence on Well-Being

	ST-1⁷	ST-2⁸
PWB³	0.08	0.31
	0.78	2.54*
SWB⁴	0.42	-0.03
	4.45***	-0.30
EWB⁵	-0.14	0.59
	-1.32	3.91**
FWB⁶	0.18	0.68
	1.83	5.88***

Indirect Effects of Self-Transcendence on Well-Being

	ST-1	ST-2
PWB	-0.10	0.45
	-1.27	2.67**
SWB	-	-
EWB	0.10	0.37
	1.46	2.54*
FWB	0.03	0.00
	0.77	-0.26

Note. *Significant at the 5 % level. ¹Total Effects represent the total influence of the explanatory variable Self-Transcendence on well-being meaning direct + indirect effects. Indirect effects represent the influence of Self-Transcendence on well-being mediated by intervening variables (mediators). ³PWB=Physical Well-Being. ⁴SWB=Social Well-Being. ⁵EWB=Emotional Well-Being. ⁶FWB=Functional Well-Being. ⁷ST-1=Interpersonal Self-Transcendence. ⁸ST-2=Intrapersonal self-Transcendence.

PAPER 3

The relationships between self-transcendence and spiritual well-being in cognitively intact nursing home patients

International Journal of Older People Nursing

doi: 10.1111/opn.12018 in press

ABSTRACT

Title: *The Relationships between Self-Transcendence and Spiritual Well-Being in Cognitively Intact Nursing-Home Patients*

Aims: The aim of the present study was to identify the relationships between self-transcendence and spiritual well-being in cognitively intact nursing-home patients.

Background: Self-transcendence is considered a developmental process of personal maturity and a vital resource of well-being in later adulthood. The measurement of the associations between self-transcendence and spiritual well-being in cognitively intact nursing-home patients has not been previously published.

Methods: A cross-sectional design using the self-transcendence scale and the FACIT-Sp spiritual well-being questionnaire was adopted. A sample of 202 cognitively intact nursing-home patients in mid-Norway was selected to respond to the questionnaires in 2008 and 2009. The statistical analyses were conducted using LISREL 8.8 and Structural Equation Modeling (SEM).

Results: A hypothesized SEM-model comprising a two-factor construct of self-transcendence and a three-factor construct of spiritual well-being demonstrated significant direct relationships and total effects of self-transcendence on spiritual well-being.

Conclusion and Implication for practice: Facilitating patients' self-transcendence, both interpersonally and intrapersonally, might increase spiritual well-being among cognitively intact nursing-home patients, which is seen to be of great importance to nursing-home patients' overall satisfaction and satisfaction with staff. The two-factor construct of self-transcendence and the three-factor-construct of FACIT-Sp allow a more complex examination of the associations between the constructs, and prove more specific guidelines for nursing interventions promoting well-being in nursing-home patients.

Keywords: *FACIT-Sp, nursing-home; self-transcendence; SEM-analysis; spiritual well-being*

INTRODUCTION

Globally, the life expectancy of people is increasing. Western societies face a rapidly growing number of adults aged 80 and over, which has given rise to the notions of the “third” and “fourth” ages in the lifespan development literature (Baltes and Smith 2003). This differentiation of the last part of the lifespan into two separate phases is important because of the characteristic patterns of gains (growth) and losses (decline) seen in the “young old” and the “old old” (Kirkevoid 2010). For many of those in the fourth age (80+) issues like physical illness, disabilities, and experiences of loss of functions and social relations necessitate the need for long-term care in nursing-homes (NH). In transcending many losses, multi-diseases, frailty, and nearing death awareness, NH patients have lost essential and vital physical, social, and functional resources. Thus, promoting well-being is a fundamental and major nursing concern in long-term care (Drageset 2009; Nakrem, Vinsnes et al. 2011).

Spirituality is of particular importance to well-being in the lives of many older adults (Knestrick and Lohri-Posey 2005; Wallace and O'Shea 2007) in NHs (Hicks 1999; Kane 2001; Touhy 2001; Kane 2003; Touhy, Brown et al. 2005) and at the end of life (Touhy, Brown et al. 2005; Van Nordennen and Ter Meulen 2005; Hermann 2007; Mount, Boston et al. 2007; Daaleman, Williams et al. 2008). Spiritual well-being has also been described as a predictor of overall NH satisfaction (Burack, Weiner et al. 2012) and an important dimension of well-being in NH patients (McKinley and Adler 2005).

While the role of spirituality may differ among NH patients, spirituality may provide self-transcendence, purpose, and meaning toward the end of life and provide a framework for coping with illness, losses, loneliness, despair, and death (Knestrick and Lohri-Posey 2005; Dwyer, Nordenfelt et al. 2008; Hou and Chen 2008; Thomas, Burton et al. 2010). Meaning in life and spiritual well-being is derived through relationships and connectedness; by communication with others, self-reflection on responsibilities, inner dialogue, and completing

unfinished business (Haugan Hovdenes 2002; Dwyer, Nordenfelt et al. 2008; Buck, Overcash et al. 2009; Mok, Wong et al. 2010).

Peterman and colleagues' (Peterman, Fitchett et al. 2002) contribution of the Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being (FACIT-Sp) measure has allowed much progress in this research area. They state a broad concept of spirituality described as a personal search for faith, meaning, and inner peace through connections with others, nature, and a transcendent dimension of existence, and the experiences and feelings associated with that search. Humans' spirituality is expressed and experienced in the context of caring connections with oneself, others, nature, and a life force or God (Burkhardt and Nagai-Jakobsen 1994; Chiu, Emblen et al. 2004; Buck 2006; Miner-Williams 2006; Pesut 2008). Accordingly, spiritual well-being seems closely related to connectedness.

Individuals are capable of transcending and/or accepting experiences such as losses, disabilities, and facing death (O'Brien 2003). This ability to accept, and in some cases even embrace illness and suffering is primarily a function of the patient's personal spiritual resources (ibid.). Faith represents the religious component of spiritual well-being. Religiosity is seen to increase well-being by providing social support via clergy, support groups, and integration in a social network (George, Ellison et al. 2002; Koenig, George et al. 2004; Ladd and McIntosh 2008); however, these resources are scarce in NHs and hardly available to NH patients. Nurses' identification of patients' spiritual resources is vital for supporting and strengthening well-being, as well as nursing research to test the relationships between spiritual well-being and other coping resources (O'Brien 2003). Self-transcendence is described as a powerful coping mechanism involving adaption to physical, emotional, and spiritual distress (Runquist and Reed 2007; Teixeira 2008). Thus, spiritual care includes an integrative approach that includes facilitating self-transcendence (Reed 2008).

Pamela Reed (1992) presented a paradigm with which to explore spirituality in nursing by defining spirituality as “an expression of the developmental capacity of self-transcendence” (p.350). The theory of self-transcendence (ST) addresses an enhanced understanding of well-being in late adulthood, stating ST as a “well-being maker” in vulnerable populations—and thereby a correlate and resource for well-being (Reed 2008). The core of ST is the expansion of self-boundaries through intrapersonal (within), interpersonal (between), and transpersonal (beyond) connectedness, besides temporality; all of which positively influence healing and well-being (Coward and Reed 1996; Reed 1997; Reed 2008). ST is considered a general human developmental process of maturity (Reed 2008) that has been related to spiritual as well as non-spiritual factors. The idea is inspired by human developmental theory emphasizing maturity as the developmental task in later life (Erikson 1950). This developmental process of ST in NH patients is stimulated by the challenges of aging and coming to terms with death (Dalby 2006). ST is a process of change, characterized by striving for new and deeper understandings of life, meaning, and acceptance of the self, others, and the life situation.

Previous research has examined ST in relation to well-being (Coward 1991; Coward 2003; Runquist and Reed 2007; Hoshi 2008; Thomas, Burton et al. 2010; Sharpnack, Benders et al. 2011) and quality of life (QoL) (Mellors, Riley et al. 1997; Bean and Wagner 2006; Farren 2010) showing statistically significant positive correlations. Accordingly, ST might provide a framework for nursing interventions promoting well-being in NH patients.

The original factor analysis of the FACIT-Sp supported two factors; meaning/peace and faith (Peterman, Fitchett et al. 2002). However, more recent investigations have shed new light. Results indicate that a three-factor construct, comprising meaning, peace, and faith, is psychometrically superior allowing a more complex examination of the construct; thus, the three-factor construct is more informative than the original two-factor model (Canada,

Murphy et al. 2008; Murphy, Canada et al. 2010; Lazenby, Khatib et al. 2011; Peterman, Reeve et al. 2011; Whitford and Olver 2011). A recent study (Haugan, Rannestad et al. 2011) demonstrates ST comprising two main dimensions: an outwardly labeled “interpersonal self-transcendence” (ST-1), and an inward aspect entailing the intrapersonal, the transpersonal, and temporal ST dimensions, labeled “intrapersonal self-transcendence” (ST-2).

A recent review on research using the FACIT-Sp measure suggests directions for future research (Bredle, Salsman et al. 2011), requesting strategies such as Structural Equation Modelling (SEM) to identify relationships among spiritual well-being and numerous variables (ibid). Hence, this study intends to investigate the relationships between ST and spiritual well-being, by means of SEM-analysis.

The hypotheses formulated are based in the literature review disclosing the following assumptions: 1. Spirituality is seen as an expression of the self-transcendence capacity. 2. Furthermore, spirituality is defined as that most human of experiences that seeks to transcend self and find meaning and purpose through connection with others, nature, and/or a Supreme Being, which may or may not involve religious structures or traditions (Buck 2006); accordingly, spiritual well-being seems closely related to connectedness. 3. The core of self-transcendence is to transcend the self through connectedness, and 4. ST is a correlate and a resource for well-being in older adults. Thus, this study tested the relationship between ST (interpersonal and intrapersonal) and spiritual well-being in cognitively intact NH patients by utilizing SEM. Since a two-factor concept of self-transcendence in relation to spiritual well-being has not been examined previously, we wanted to explore the possible associations between interpersonal ST (ST-1) and intrapersonal ST (ST-2) to spiritual well-being. Our research question was: *Do the specific ST-dimensions relate to spiritual well-being in cognitively intact NH patients?* The original factor structure of FACIT-Sp considers meaning and peace as one factor thus, we expected these factors to be correlated. Consequently, we

assumed that faith was positively associated to both meaning and peace which is in accordance to recent research (Dyess 2011). Further, we assumed that faith was positively associated to meaning (ibid.). Because social support via clergy, support groups, and integration in a social network (George, Ellison et al. 2002; Koenig, George et al. 2004; Ladd and McIntosh 2008) hardly is available to NH patients, we did not assume that faith would affect inner peace in this sample. Because meaning as an aspect of spiritual well-being is derived through relationships and connectedness (Haugan Hovdenes 2002; Dwyer, Nordenfelt et al. 2008; Buck, Overcash et al. 2009), we hypothesized that ST-1 comprising connectedness through involvement, learning, helping, and sharing would positively relate to meaning. Also, since inner peace and meaning are supposed to be clearly inter-related as they originally constituted one factor (Peterman, Fitchett et al. 2002), we supposed that also peace would positively relate to ST-1. Faith includes a relationship/connectedness to a divine and has been found to be related to a religious community providing relationships and involvement (Koenig, George et al. 2004; Ladd and McIntosh 2008). Thus, we hypothesized faith to be associated with ST-1 comprising various kinds of involvement. Furthermore, since inner peace has been seen as a result from self-acceptance, meaning (Mahlungulu and Uys 2004; Cooney, Murphy et al. 2009), and adjustment (Ventura, Fitzgerald et al. 2007; Gijssberts, Echteld et al. 2011), we hypothesized intrapersonal ST, involving self-acceptance, adjustment, and meaning to be associated with peace and meaning, but also faith; since we expected faith in a loving and supporting divine/God might support acceptance of one's self and life situation. Thus, the following hypotheses were formulated:

Hypotheses 1-3: Interpersonal self-transcendence (ST-1) positively affects spiritual well-being (meaning, peace and faith).

Hypotheses 4-6: Intrapersonal self-transcendence (ST-2) positively affects spiritual well-being (meaning, peace and faith).

Hypothesis 7: Faith positively affects meaning.

Hypothesis 8: Inner peace positively affects meaning.

Figure 1 portrays the specific hypotheses representing the relationships implying the influences between the latent constructs in the model.

Insert Figure 1 about here

METHODS

Design and ethical considerations

The data were collected during 2008 and 2009 from 250 potential participants representing 44 NHs in Norway. Inclusion criteria were: (1) local authority's decision of long term NH care (2) six months or longer in NH (3) informed consent competency recognized by responsible doctor and nurse and (4) capable of being interviewed. Potential participants were approached by a head nurse whom they knew well. The nurse provided oral and written information about their rights as participants and their right to withdraw at any time. Each participant provided informed consent. Because this population has problems completing a questionnaire independently, three trained researchers conducted one-on-one interviews in private. To avoid introducing bias into the respondents' reporting, researchers with identical professional backgrounds were chosen (RN, MA trained and experienced in communication with older people, as well as teaching gerontology at an advanced level); in addition they were trained to conduct the interviews as identically as possible. The questionnaires used were part of a battery of nine questionnaires comprising 130 items. A large-print copy of questions and possible responses was held in front of the participants to avoid misunderstandings. Statistical correlational analysis showed no significant difference among responses based on interviewers. Approval by the Norwegian Social Science Data Services was obtained for a license to maintain a register containing personal data (Ref.no 16443); likewise we attained

approval from the Regional Committee for Medical and Health Research Ethics in Central Norway (Ref.no.4.2007.645) and the 44 actual NHs.

Participants

The total sample comprises 202 (80.8%) of 250 long-term-nursing home patients; long-term care was defined as 24-hour care. Short term care, rehabilitation, and cognitively impaired patients were not included. Participants' age was 65 -104, with a mean of 86 years ($SD=7.65$). The sample comprised 146 women (72.3%) and 56 men (27.7%), the mean age was 87.3 years for women and 82 years for men. A total of 38 (19%) were married/cohabitating, 135 (67%) were widows/widowers, 11 (5.5%) were divorced and 18 (9%) were single. Regarding religiosity 58 (28.7%) perceived themselves as "very *religious*", 106 (52.5%) as "*somewhat religious*" and 38 (18.8%) were "*not religious at all*". Duration of time of NH residence when interviewed was at mean 2.6 years for both sexes (range 0.5-13 years); 117 were in rural NHs, and 85 were in urban NHs. Missing data frequency was 5.9% for the STS and 12% for the FACIT-Sp, and was handled using the listwise procedure.

Measures

Interpersonal ST (ST-1) and intrapersonal ST (ST-2) were assessed by items from the Self-Transcendence Scale (STS). The STS was developed to identify intrapersonal, interpersonal, transpersonal, and temporal experiences characteristic of later life, reflecting expanded boundaries of self (Reed 2008). The STS comprises 15 items measuring the extent to which a person expands personal boundaries. Previous research considers ST as a one-dimensional construct (Reed 1992; Coward and Reed 1996; Ellerman and Reed 2001; Coward and Kahn 2005; Runquist and Reed 2007; Hunnibell, Reed et al. 2008). However, a recent study demonstrates that ST forms a two-dimensional construct among cognitively intact NH patients (Haugan, Rannestad et al. 2011); this two-factor construct is applied in this study. Each item is rated on a four-point Likert-type scale from 1.0 (*not at all*) to 4.0 (*very much*),

with higher scores indicating higher ST (Appendix 1). In former studies Cronbach's α range was between .80 and .88 (Reed 1991; Runquist and Reed 2007; Reed 2009). Support for construct validity has been found in the relationships of ST scores to other measures (Coward 1990; Coward 1996).

The STS was translated into Swedish and then back into English; the back-translated version was then approved by the instrument constructor (Nygren, Alex et al. 2005). The Swedish version demonstrated internal consistency of .70-.85 (ibid.) and was translated into Norwegian for the purpose of the present study. Swedish and Norwegian language and culture are almost identical in all aspects that matters for this study. The ST questionnaire is virtually un-changed in the Norwegian version, but the words are spelled in Norwegian and meanings have been checked. The two-factor-construct of self-transcendence (Haugan, Rannestad et al. 2011) was used, but the number of items was reduced; the item "letting go of my past losses" (ST15) which is reversed scored, loaded extremely low ($\lambda=0.11$) and demonstrated $R^2=0.02$. This item was uncorrelated; therefore, there might be some translation problems and this item was dismissed. The items "Having hobbies and interests I can enjoy," "Being involved with other people," "Sharing my wisdom or experience with others," "Helping others in some way," and "Having an ongoing interest in learning," were indicators for interpersonal self-transcendence, while the items "Accepting myself as growing older," "Adjusting well to my present life situation," "Adjusting well to changes in my physical abilities," "Finding meaning in my past experiences, and "Enjoying my pace of life" constituted the intrapersonal ST construct. Cronbach's α in current study was .72 (all 15 items), while α for interpersonal self-transcendence (5 items) was .76 and .63 for intrapersonal self-transcendence (4 items) (Table 1). Reliability for the latent constructs in this study is further investigated inside the confirmatory factor analysis (CFA). Composite reliability (ρ_c) is reported in Table 2

displaying values .65 and .77, respectively; values greater than .60 are desirable (Diamantopolous and Siguaw 2008).

Spiritual well-being was assessed by the Functional Assessment of Chronic Illness Therapy-Spiritual well-being scale (FACIT-Sp), which is part of the larger FACIT measurement system (Cella, Tulsky et al. 1993). The FACIT-Sp was developed to describe aspects of spirituality and/or faith that contributed to well-being (Peterman, Fitchett et al. 2002). The original instrument comprises two subscales; one measuring a sense of meaning and peace, and the other assessing the role of faith during illness. The scale is designed to provide a measure of spiritual well-being that could be employed in research with people with chronic and/or life-threatening illnesses (ibid.). Each item is rated on a five-point Likert-type scale from 0 (*not at all*) to 4 (*very much*) (Appendix 2); higher scores indicated better spiritual well-being. Previous research demonstrates that the FACIT-Sp is a psychometrically sound measure of spiritual well-being for people with cancer or other chronic illnesses (Brady, Peterman et al. 1999; Cotton, Levine et al. 1999; Peterman, Fitchett et al. 2002). Recent studies (Canada, Murphy et al. 2008; Murphy, Canada et al. 2010; Lazenby, Khatib et al. 2011; Peterman, Reeve et al. 2011; Whitford and Olver 2011) have demonstrated a three-factor-solution comprising meaning, peace, and faith providing a psychometrically better fit than the two-factor-solution, besides being more informative in assessing the relationships between spiritual well-being and other related concepts (Canada, Murphy et al. 2008; Murphy, Canada et al. 2010; Peterman, Reeve et al. 2011; Whitford and Olver 2011). Hence, the present study applied the previous documented three-factor-solution. Sample items were for peace “I feel peaceful”, “I am able to reach down deep into myself for comfort”, and “I feel sense of harmony within myself”, whereas the items “I have a reason for living”, “I feel sense of purpose in my life”, and “my life lacks meaning and purpose” represented meaning. Regarding faith item9 “I find comfort in my faith or spiritual beliefs” and item10 “I find

strength in my faith and spiritual beliefs” displayed a high inter-item-correlation ($r=.83$) indicating these indicators measuring almost the same. Accordingly, item9 was removed. In addition to item10, the indicators “My illness has strengthened my faith or spiritual beliefs” and “I know that whatever happens with my situation, things will be okay” were indicators for the faith factor. Cronbach’s α was between .62-.72 and composite reliability between .61-.75 (Table 2).

Data analysis

Descriptive statistics was applied by means of PASW Statistics, version 18 (SPSS Inc., Chicago, IL). By means of LISREL 8.8 (Jøreskog and Sörbom 1995) CFA was applied in order to test the fit of the measurement models for the constructs, while a SEM-model tested the relationships between ST and spiritual well-being measured by the FACIT-Sp. SEM typically contains latent variables that are hypothetical constructs that cannot be measured directly, but are measured by several observed variables that serve as indicators for the construct. Each indicator is predicted to “tap into” the latent variables; >0.30 is given as a desired loading (Harrington 2009). By using SEM, random measurement error is accounted for, and psychometric properties of the scales in the model are more accurately derived. At the same time, all the direct, indirect, and total effects throughout the model are estimated. SEM-models combine measurement models (e.g., factor models) with structural models (e.g., regression); a major issue is evaluation of model fit.

The conventional overall test of fit is the chi-square (χ^2); a small χ^2 and a non-significant p-value corresponds to good fit (Jøreskog and Sörbom 1995). The present study assessed model fit adequacy in line with the rules of thumb given as conventional cut-off criteria (Schermele-Engel, Moosbrugger et al. 2003). The following fit indices were used; the Root Mean Square Error of Approximation (RMSEA) and the Standardized Root Mean Square Residual (SRMS) with values below 0.05 indicating good fit, whereas values smaller

than 0.08 is interpreted as acceptable (Hu and Bentler 1998; Schermelleh-Engel, Moosbrugger et al. 2003). Further we used the Comparative Fit Index (CFI) and the Non-Normed Fit Index (NNFI) with acceptable fit set at 0.95, and good fit at 0.97 and above, the Normed Fit Index (NFI) and the Goodness-of-Fit Index (GFI) with acceptable fit at 0.90, and good fit at 0.95. For the Adjusted GFI (AGFI) acceptable fit was set to 0.85 and good fit at 0.90.

The frequency distribution of the measurements was examined to assess deviation from normality; both skewness and kurtosis were significant. Since the standard errors are estimated under non-normality, the Satorra-Bentler scaled chi-square statistics were applied as goodness-of-fit statistics, which is the correct asymptotic mean even under non-normality (Jøreskog, Sörbom et al. 2000). In SEM there is no universal agreement about how large a sample is large enough, and there is no easy way to determine the sample size needed for CFA (Schumacker and Lomax 2004; Kline 2005; Harrington 2009). But some rough guidelines are given; samples less than 100 are considered “small”, 100 to 200 is “medium” and may be an acceptable minimum sample size if the model is not too complex, while greater than 200 is “large”, which is probably acceptable for most models (ibid.). Due to statistical power and practical concerns we planned to include a minimum of 200 participants.

Before examining the hypothesized relationships in the SEM analysis, the measurement models were tested by confirmatory factor analysis (CFA). The CFA provided an acceptable to good fit to the observed data for the two-factor construct of self-transcendence ($\chi^2=46.90$, $df=26$, $p<0.0072$, $RMSEA=0.064$, $p=0.20$, $SRMR=0.067$, $NFI=0.91$, $NNFI/CFI=0.94/0.96$, $GFI/AGFI=0.93/0.88$) and the three-factor construct of spiritual well-being ($\chi^2=45.82$, $df=24$, $p<0.0047$, $RMSEA=0.070$, $p\text{-value}=0.14$, $SRMR=0.068$, $NFI=0.93$, $NNFI/CFI=0.94/0.96$, $GFI/AGFI=0.94/0.88$). In accordance to the former published 3-factor-construct (Canada, Murphy et al. 2008) the item FACIT-Sp12 loaded on both the faith- and the peace-factor. Table 3 lists Cronbach’s Alpha and composite reliability

for the latent constructs involved in the SEM-analysis. All parameter estimates were significant ($p < 0.05$) and loaded positively and clearly on their intended latent variable. Standardized factor loadings were between 0.21-0.79, and squared multiple correlations (R^2) were between 0.16 and 0.91.

RESULTS

Descriptive Analysis

Means and standard deviations for ST and spiritual well-being are displayed in Appendix 1 and 2, respectively. The alpha levels for the various constructs indicate a moderate inter-item consistency in the measures with Cronbach's alpha coefficients between .62 and .76 (Table 1). However, composite reliability (ρ_c) displayed acceptable to good values (.61-.81, Table 1); values greater than .60 are desirable (Bagozzi and Yi 1988; Diamantopolous and Sigauw 2008). T-tests for equality of means (data not shown) for the five latent constructs involved in this study showed no significant differences between rural and urban NHs, as well as between men and women.

SEM-analysis; Model 1

Considering the sample size ($N=202$) the model complexity had to be moderated; three to five indicators per construct is supposed to be sufficient (Marsh, Kit-Tai et al. 1998). Table 1 lists measurement models, Cronbach's alpha, and composite reliability for the latent constructs involved in the SEM-analysis. Then Model 1 (Figure 2) was estimated; for scaling, the first factor loading of each dependent latent variable were set equal to 1. All loadings were significant ($p < 0.05$), with standardized factor loadings from 0.26-0.79 with acceptable to moderate R^2 -values, while some were weak (Table 1). All fit-measures supported Model 1; $\chi^2=157.72$ ($df=125$); $p=0.025$, RMSEA=0.038; $p=0.88$, SRMR=0.061, NFI=0.92, NFFI=0.98, CFI=0.98, GFI=0.90 and AGFI=0.86 (Table 2).

Insert Table 1 and Figure 3 about here

In order to investigate how ST-1 and ST-2 relate to spiritual well-being, the structural part of Model 1 was investigated (Table 2). Direct statistical significant paths revealed from ST-1 to meaning ($\gamma_{1,1}=0.34$, $t=3.44^*$), peace ($\gamma_{1,2}=0.27$, $t=2.42^*$), and to faith ($\gamma_{3,1}=0.32$, $t=2.92^*$). Additionally the path from ST-2 to peace ($\gamma_{2,2}=0.67$, $t=5.39^*$) was significant. The betas (β) displayed a significant value at the 10%-level ($\beta_{1,3}=0.15$, $t=1.70$), indicating faith affecting on meaning. A scrutiny of the total effects (Table 2) indicated that ST-1 affected statistically significant on meaning (4.98*), peace (2.42*), and faith (2.92*), while ST-2 affected on meaning (3.68*) and peace (5.49*).

Insert Table 2 about here

DISCUSSION

The aim of the present study was to explore the associations between self-transcendence and spiritual well-being. In all, eight hypotheses were tested, from which four (H1-H3 and H5) were supported at the 5%-level. By doing so we sought to contribute to a holistic nursing perspective of promotion well-being in NHs in three ways. First, research focusing on ST among NH patients is still in its infancy. The importance of self-transcendence to older adults' has formerly been identified (Daaleman, Kuckelman Cobb et al. 2001; Wachholtz, Pearce et al. 2007; Burack, Weiner et al. 2012). However, to the authors' knowledge, the fundamental relationships between self-transcendence and spiritual well-being in NH patients are not previously documented. Thus, a notable strength of this research is the empirical examination of models and measures that have not been empirically tested previously.

Second, by examining the associations of interpersonal and intrapersonal self-transcendence with meaning, peace, and faith, new approaches to nursing interventions can emerge. By means of advanced statistical analyses the present study could point out more specific information on the mechanisms involved in the relationships between spiritual well-being and self-transcendence, and hence provide a more specific guideline to nursing

interventions promoting well-being. The present study suggests that finding ways to enhance both intrapersonal and interpersonal self-transcendence in individuals might be beneficial in this matter.

In accordance with recent investigations (Canada, Murphy et al. 2008; Murphy, Canada et al. 2010; Lazenby, Khatib et al. 2011; Peterman, Reeve et al. 2011; Whitford and Olver 2011) a three-factor construct of the FACIT-Sp was used. Meaning and peace were highly inter-related, in accordance with previous reported results (Canada, Murphy et al. 2008; Murphy, Canada et al. 2010; Peterman, Reeve et al. 2011; Whitford and Olver 2011).

Self-Transcendence significantly relates to spiritual well-being (Model 1)

More specifically, we found a significant impact of interpersonal ST on meaning, peace, and faith, while intrapersonal ST strongly related to the peace-factor. Thus, the hypotheses H1-H3 and H5 (Figure 1) were supported. In addition, the relationship between faith and meaning (H8) was supported at the 10%-level.

The core of self-transcendence is expansion of the self-boundaries through connectedness with one's self, others, a transcendent dimension of existence, and temporality (Reed 2008). Moreover, the essence of spiritual well-being is described as a personal search for faith, meaning, and purpose in life, through these connections (Peterman, Fitchett et al. 2002). Also, the experiences and feelings associated with this personal search are essential.

Interpersonal self-transcendence (ST-1)

Significant relations between interpersonal ST and meaning, peace, and faith were displayed. Accordingly, interpersonal ST provides vital resources to spiritual well-being in NH patients. Interpersonal ST involving hobbies, interests, involvement, learning, helping, and sharing wisdom, might encourage experiences of meaning and reasons for living among NH patients (Haugan Hovdenes 2002). Moreover, involvement, shearing wisdom, and helping others appear to be meaningful ways of connecting with others (Haugan Hovdenes 2002; Reed

2008); previous research has demonstrated that meaning and spiritual well-being are derived through relationships and connectedness (Hicks 1999; Haugan Hovdenes 2002; Dwyer, Nordenfelt et al. 2008; Whitford and Olver 2011).

Furthermore, interpersonal ST seemed vital to NH patients' inner peace, harmony, and comfort, which has been found to be of particular importance to health-related QoL, and to physical well-being in particular (Brady, Peterman et al. 1999; Cotton, Levine et al. 1999; Krupski, Kwan et al. 2006). Thus, involvement with others, learning, helping, and sharing wisdom are potential resources for inner peace. Individuals, who do not get involved, learn, help, and share might feel lonely, worthless, and useless representing negative impact on inner peace and harmony. By involvement etc., individuals in general feel more alive and vitalized, and perhaps feel that they are still growing; as an inner developmental resource ST implies a process of change and growth (Reed 2008; Teixeira 2008). Hence, involvement, learning, helping, and sharing might facilitate personal growth toward new and deeper understandings of life, death, and ones' life situation. When no challenges are offered, a sense of stagnation may well take over.

Within Erikson's model of human psychosocial development (Erikson 1950), the eighth and final developmental crisis entails integrity versus despair, which is resolved by the development of maturity and wisdom, qualities providing well-being (Erikson 1964). Consequently, participating in relationships for involvement and communication seem even more evident to NH patients' self-transcendence and spiritual well-being. Self-transcendence (inter- and intrapersonal) constitutes a developmental process toward personal maturity and wisdom (Reed 2008). In accordance with Erikson (1998) wisdom rests in the capacity to see, look, and remember, as well as to listen, hear, and remember. Thus, NH patients' well-being may require incentives in somewhat substantial terms, to see, hear, and remember.

A low mean score for faith was displayed in this study, in spite of demographic analysis revealing that only 18.8% were not religious at all; 28.7% were very religious and 52.5% somewhat religious. This indicates that perceiving oneself as religious might be quite a different issue than finding strength in one's faith, the latter requiring an intimate relationship to a divinity. However, interpersonal ST was clearly associated with faith, which probably embodies involvement with others in the church or the community of believers. Accordingly, patients' faith or spiritual beliefs might provide relationships involving communication, support, helping, and sharing one's wisdom; a sense of communion that is vital for well-being. Thus, the experiences of strength derived from one's faith are supposed to positively be related to one's self-acceptance (intrapersonal ST) by experiences of self-worthiness. However, this relationship was not supported in the SEM-analysis. Surprisingly, faith did not even relate to peace and meaning. Previous research has demonstrated that the peace and meaning factors contributed to QoL, whereas the faith factor did not (Lazenby, Khatib et al. 2011; Whitford and Olver 2011). Thus, our results might be in accordance with this previous research; nonetheless, further research exploring these relations is needed. Yet, faith related significantly to meaning at the 10%-level, indicating that NH patients' spiritual faith might positively contribute to individuals' sense of meaning.

These results might indicate that opportunities for facilitating and supporting individuals' faith are scarce in NHs. Moreover, it is possible that for elders at this stage of their lives, inner spiritual experiences might replace the more organizational aspects of religion (McKinley and Adler 2005). Additionally, faith associated significantly solely to interpersonal self-transcendence in rural NHs, while faith was significantly related to both interpersonal and intrapersonal self-transcendence in urban NHs. Hence, intrapersonal ST comprising acceptance and adjustment might be less related to faith in rural NHs, indicating that rural NHs include more possibilities for meaningful involvement, separately from the

church setting. Rural districts often comprise a single NH resulting in closer understanding between NH patients and their family/friends visiting the NH. Hence, meaningful involvement is more likely to happen.

Intrapersonal self-transcendence (ST-2)

Intrapersonal ST related significantly solely to peace (Figure 3). Intrapersonal ST represents connectedness with one's self, comprising self-acceptance and adjusting well to one's disabilities and one's life situation, along with enjoying one's pace of life, and related clearly to peace. Hence, facilitating positive self-acceptance and adjustment to the NH life situation and one's pace of life, will contribute to inner harmony and peace. Accepting the self and adjusting well was supposed to support meaning in life, though the analysis did not support this hypothesis. However, a significant statistical total effect from intrapersonal ST on meaning and peace was displayed. Consequently, nursing interventions supporting NH patients' intrapersonal ST via acceptance of one's self and one's life situation might support inner peace and meaning.

Our results revealed no significant differences between rural and urban NHs, as well as between men and women. As formerly published (Haugan, Rannestad et al. 2012), a negative association between ST and age was found, and a noteworthy lower ST mean score (mean=42.5) than previous reported among elderly populations. This may signify a potential for increasing spiritual well-being by increasing both interpersonal and intrapersonal ST among NH patients. Nursing intervention supporting NH patients' intrapersonal processes toward acceptance, maturity, and wisdom, might increase inner peace and meaning in life, and therefore well-being. These findings support the theoretical basis stating that self-transcendence as a developmental inner resource of maturity, is related to well-being in vulnerable populations (Reed 2008). Consequently, these results support the work of culture change and the need to focus not only on physical health but also on spiritual and emotional

well-being in NHs (Rahman and Schnelle 2008). ST might serve as an indicator of successful aging among NH patients.

IMPLICATION FOR NURSING PRACTICE

Self-transcendence has significant implications for promoting spiritual well-being in NH patients. The present study demonstrates that connecting with oneself and others in meaningful ways is crucial to spiritual well-being in NH patients. NH practices, policies, and milieu can make a facility a more or less pleasant place to be, and can influence the quality and duration of family/friends visit and hence patients' well-being. Long-term care signifies that length of stay is long, hence much time is available to enter into meaningful relationships and communication with patients, pursuing appropriate interventions to promote self-transcendence. Nurses may encourage self-transcendence by facilitating patients making connections with others, stimulating inner reflections and connection to their inner thoughts and emotions (intrapersonal ST), and further, by promoting spiritual faith, facilitating hobbies, helping others, and sharing wisdom (interpersonal ST). When NH personnel are encouraged to think creatively about what they might do to improve self-transcendence and spiritual well-being, imaginative ideas emerge. Nurses may enhance acceptance of the self, death, and one's life situation (intrapersonal ST), which positively influence the ability to find meaning, harmony, and peace, and thus spiritual well-being. However, nursing interventions encouraging meaning and peace require a nurse-patient-interaction based in person-centered qualities. Nurse-patient-interaction entailing empathic awareness, active listening, unconditional acceptance, and tenderness is required (Rogers 1961; Medvene and Lann-Wolcott 2010). Consequently, caregivers will need more human relationship skills and more assessment skills related to spiritual well-being when working with elders than with other populations.

CONCLUSION

Self-transcendence is significantly related to NH patients' spiritual well-being. The interpersonal self-transcendence positively is associated with NH patients' inner feelings of meaning, peace, and faith, while intrapersonal self-transcendence positively relates to peace, and also exposes a mediated influence on meaning.

LIMITATIONS

The findings from this study should be interpreted in the light of some limitations. Effective sample in Model 1 is N=186 which is considered as "medium" sized, close to the limit for "large" samples ($N \geq 200$). Considering the complexity of Model 1 comprising 18 items, the rule of 10 subjects per one variable is fulfilled. However, a larger sample would increase the statistical power of the tests.

The fact that the researchers visited the participants to help fill in the questionnaires might have introduced some bias into the respondents' reporting, though statistical tests showed no significant differences between responses based on interviewers. The questionnaires used were part of a battery of nine questionnaires comprising 130 items. Thus, frail, older NH patients might tire when completing the questionnaires; this represents a possible bias to their reporting. To avoid such bias, experienced researchers were carefully selected and trained in conducting the interviews following a standardized procedure, including taking small breaks at specific points during the process. This procedure worked out very well; in just three cases the interviews had to be completed the next day, due to respondent's fatigue. Actually, most participants were even more vigorous after completing the interview.

REFERENCES

- Bagozzi R. P. & Yi Y. (1988) On the evaluation of structural equation models. *Journal of the Academy of Marketing Science* 16, Spring 74-94.
- Baltes P. B. & Smith J. (2003) New frontiers in the future of aging: from successful aging of the young old to dilemmas of the Fourth Age. *Gerontology* 49, 123-135.

- Bean K. B. & Wagner K. (2006) Self-transcendence, illness distress, and quality of life among liver transplant recipients. *The Journal of Theory Constructing and Testing* 10, 47-53.
- Brady M., Peterman A., Fitchett G., Mo M. & Cella D. (1999) A case for including spirituality in quality of life measurement in oncology. *Psychooncology* 8, 417-428.
- Bredle J. M., Salsman J. M., Debb S. M., Arnold B. J. & Cella D. (2011) Spiritual Well-Being as a Component of Health-Related Quality of Life: The Functional Assessment of Chronic Illness Therapy—Spiritual Well-Being Scale (FACIT-Sp). *Religions* 2, 77-94.
- Buck H. G. (2006) Spirituality: concept analysis and model development. *Holist Nurs Practic* 20, 288-292.
- Buck H. G. (2006) Spirituality: concept analysis and model development. *Holist Nurs Pract* 20, 288-292.
- Buck H. G., Overcash J. & McMillan S. C. (2009) The geriatric cancer experience at the end of life: testing an adapted model. *Oncology Nursing Forum* 36, 664-673.
- Burack O. R., Weiner A. S., Reinhardt J. P. & Annunziato R. A. (2012) What Matters Most to Nursing Home Elders: Quality of Life in the Nursing Home. *Journal of the American Medical Directors Association* 13, 48-53.
- Burkhardt M. A. & Nagai-Jakobsen M. G. (1994) Reawakening spirit in clinical practice. *Journal of Holistic Nursing* 12, 9-21.
- Canada A. L., Murphy P. E., Fitchett G., Peterman A. H. & Schover L. R. (2008) A 3-factor model for the FACIT-Sp. *Psycho-Oncology* 17, 908-916.
- Cella D., Tulsky D., Gray G., Sarafian B., Linn E. & Bonami P. (1993) The functional Assessment of Cancer Therapy Scale: Development and Validation of the General Measure. *Journal of Clinical Oncology* 11, 570-579.
- Chiu L., Emblen J., VAnHofwegen L., Sawatzky R. & Myerhoff H. (2004) An integrative review of the concept of spirituality: A literature review. *Western Journal of Nursing Research* 26, 1183-1188.
- Cooney A., Murphy K. & O'Shea E. (2009) Resident perspectives of the determinants of quality of life in residential care in Ireland. *Journal of Advanced Nursing* 65, 1029-1038.
- Cotton S. P., Levine E. G., Fitzpatrick C. M., Dold K. H. & Targ E. (1999) Exploring the relationships among spiritual well-being, quality of life, and psychological adjustment in women with breast cancer. *Psycho-Oncology* 8, 429-438.
- Coward D. D. (1990) The lived experiences of self-transcendence in women with advanced breast cancer. *Nursing Science Quarterly* 3, 162-169.
- Coward D. D. (1991) Self-Transcendence and Emotional Well-Being in Women with Advanced Breast Cancer. *Oncology Nursing Forum* 18, 857-863.
- Coward D. D. (1996) Self-transcendence and correlates in a healthy population. *Nursing Research* 45, 116-121.
- Coward D. D. (2003) Facilitation of Self-Transcendence in a Breast Cancer Support Group: II. *Oncology Nursing Forum* 30, 291-300.
- Coward D. D. & Kahn D. (2005) Transcending Breast Cancer: Making Meaning from Diagnosis and Treatment. *Journal of Holistic Nursing* 23, 264-283.
- Coward D. D. & Reed P. G. (1996) Self-transcendence: a resource for healing at the end of life. *Issues in Mental Health Nursing* 17, 275-288.
- Daaleman T. P., Kuckelman Cobb A. & Frey B. B. (2001) Spirituality and well-being: an exploratory study of the patient perspective. *Social Science & Medicine* 53, 1503-1511.
- Daaleman T. P., Williams C. S., Hamilton V. L. & Zimmerman S. (2008) Spiritual care at the end of life in long-term care. *Medical Care* 46, 85-91.
- Dalby P. (2006) Is there a process of spiritual change or development associated with ageing? A critical review of research. *Ageing & Mental Health* 10, 4-12.
- Diamantopolous A. & Siguaw J. A. (2008) *Introducing LISREL*. SAGE Publications Ltd, Los Angeles - London - New Dehli - Singapore.
- Drageset J. (2009) Health-related quality of life among nursing home residents: ed.^eds.). Department of Public Health and Primary Health Care, Section of Nursing Sciences, University of Bergen, Bergen, pp. 1 b. (flere pag.).

- Dwyer L., Nordenfelt L. & Ternstedt B.-M. (2008) Three Nursing Home Residents Speak About Meaning at The End of life *Nursing Ethics* 15, 97-100.
- Dwyer L., Nordenfelt L. & Ternstedt B.-M. (2008) Three Nursing Home Residents Speak About Meaning at The End of life. *Nursing Ethics* 15, 97-109.
- Dyess S. M. (2011) Faith: a concept analysis. *Journal of Advanced Nursing* 67, 2723-2731.
- Ellerman C. & Reed P. (2001) Self-transcendence and depression in middle-aged adults. *Western Journal of Nursing Research* 23, 698-713.
- Erikson E. H. (1950) *Childhood and Society*. W.W. Norton & Company, Inc, New York.
- Erikson E. H. (1964) *Insight and Responsibility*. Norton & Company, New York.
- Erikson E. H. (1998) *The Life Cycle Completed*. W.W.NORTON & COMPANY, New York - London.
- Farren A. T. (2010) Power, uncertainty, self-transcendence, and quality of life in breast cancer survivors. *Nursing Science Quarterly* 23, 63-71.
- George L. K., Ellison C. G. & Larson D. B. (2002) Explaining the relationship between religious involvement and health. *Psychological Inquiry* 13, 190-200.
- Gijsberts M.-J. H. E., Echteld M. A., Jenny T S., Muller M. T., Otten R. H. J., Ribbe M. W. & Deliens L. (2011) Spirituality at the End of Life: Conceptualization of Measurable Aspects-a Systematic Review. *Journal of Palliative Medicine* 14, 852-863.
- Harrington D. (2009) *Confirmatory factor Analysis*. Oxford University Press, Oxford - New York.
- Haugan G., Rannestad T., Hammervold R., Garåsen H. & Espnes G. A. (2011) The Self-Transcendence Scale - An investigation of the Factor Structure Among Nursing Home Patients. *Journal of Holistic Nursing*, 2012 Sep;30(3):147-59. Epub 2011 Dec 27
- Haugan G., Rannestad T., Hammervold R., Garåsen H. & Espnes G. A. (2012) Self-Transcendence in Nursing Home Patients - a Resource for Well-Being. *Journal of Advanced Nursing* published online: 14 AUG 2012, DOI: 10.1111/j.1365-2648.2012.06106.x *in press*
- Haugan Hovdenes G. (2002) The Nurse-patient-relationship in nursing homes: fulfillment or destruction [Pleier-pasient-relasjonen i sykehjem: virkeliggjørelse eller tilintetgjørelse]. *Nordic Journal of Nursing Research & Clinical Studies/Vård i Norden* publ. no.65, vol 22, 21-26.
- Hermann C. P. (2007) The degree to which spiritual needs of patients near the end of life are met *Oncology Nursing Forum* 34, 70-78.
- Hicks T. J., Jr. (1999) Spirituality and the Elderly: Nursing Implications with Nursing Home Residents. *Geriatric Nursing* 20, 144-146.
- Hoshi M. (2008) Self-transcendence, vulnerability, and well-being in hospitalized Japanese elders: ed.^eds.). University of Arizona, pp. 231.
- Hou H. & Chen Y. (2008) Loneliness and related factors among the elderly living in long-term care facilities [Chinese] *Journal of Evidence-Based Nursing* 4, 213-221.
- Hu L. & Bentler P. (1998) Fit Indices in Covariance Structure Modeling: Sensitivity to Underparametrized Model Misspecification. *Psychological Methods* 3, 424-453.
- Hunnibell L., Reed P., Quinn-Griffin M. & Fitzpatrick J. (2008) Self-Transcendence and Burnout in Hospice and Oncology Nurses. *Journal of Hospice and Palliative Nursing* 10, 172-179.
- Jøreskog K., Sörbom D., du Toit S. & du Toit M. (2000) *New statistical features*. Scientific Software International, Inc., Chicago.
- Jøreskog K. G. & Sörbom D. (1995) *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language*. Scientific Software International, Chicago.
- Kane R. (2001) Long-term care and a good quality of life. Bringing them closer together. *The Gerontologist* 41, 293-304.
- Kane R. (2003) Definition, measurement, and correlates of quality of life in nursing homes: Toward a reasonable practice, research, and policy agenda. *The Gerontologist* Apr; 43, 28.
- Kirkevold M. ed. (2010) *Translating Chronic Illness Research Across the Lifespan*. Blackwell Publishing Ltd, Oxford.
- Kline R. B. (2005) *Principles and Practice of Structural Equation Modeling*. The Guilford Press, London.
- Knestrick J. & Lohri-Posey B. (2005) Spirituality and health: Perceptions of older women in a rural senior high rise. *Journal Gerontol Nursing* 31, 44-52.

- Koenig H. G., George L. K. & Titus P. (2004) Religion, Spirituality, and Health in Medically Ill Hospitalized Older Patients. *Journal of the American Geriatrics Society* 52, 554-562.
- Koenig H. G., George L. K., Titus P. & Meador K. G. (2004) Religion, spirituality, and acute care hospitalization and long-term care use by older patients. *Archives of Internal Medicine* 164, 1579-1585.
- Krupski T. L., Kwan L., Fink A., Sonn G. A., Maliski S. & Litwin M. S. (2006) Spirituality influences health related quality of life in men with prostate cancer. *Psycho-Oncology* 15, 121-131.
- Ladd K. L. & McIntosh D. N. (2008) Meaning, God, and prayer: Physical and metaphysical aspects of social support. *Mental Health, Religion, and Culture* 11, 23-38.
- Lazenby M., Khatib J., Al-Khair F. & Neamat M. (2011) Psychometric properties of the Functional Assessment of Chronic Illness Therapy—Spiritual Well-being (FACIT-Sp) in an Arabic-speaking, predominantly Muslim population. *Psycho-Oncology*, n/a-n/a.
- Mahlungulu S. N. & Uys L. R. (2004) Spirituality in nursing: an analysis of the concept. *Curationis* 27, 15-26.
- Marsh H. W., Kit-Tai H., Balla J. R. & Grayson D. (1998) Is More Ever Too Much? The Number of Indicators per Factor in Confirmatory Factor Analysis. *Multivariate Behavioral Research* 33, 181.
- McKinley K. & Adler G. (2005) Quality of life in nursing homes: involving elders in policy making for their own care and life satisfaction. *Social Policy Journal* 4, 37-51.
- Medvene L. J. & Lann-Wolcott H. (2010) An exploratory study of nurse aides' communication behaviours: giving 'positive regard' as a strategy. *International Journal of Older People Nursing* 5, 41-50.
- Mellors M., Riley T. & Erlen J. (1997) HIV, Self-transcendence, and Quality of Life. *Journal of the Association of Nurses in AIDS care* 82, 59-69.
- Miner-Williams D. (2006) Putting a puzzle together: making spirituality meaningful for nursing using an evolving theoretical framework *Journal of Clinical Nursing* 15, 811-821.
- Mok E., Wong F. & Wong D. (2010) The meaning of spirituality and spiritual care among the Hong Kong Chinese terminally ill. *Journal of Advanced Nursing* 66, 360-370.
- Mount B., Boston P. & Cohen S. (2007) Healing Connections: On Moving from Suffering to a Sense of Well-Being. *Journal of Pain & Symptom Management* 33, 372-388.
- Murphy P. E., Canada A. L., Fitchett G., Stein K., Portier K., Crammer C. & Peterman A. H. (2010) An examination of the 3-factor model and structural invariance across racial/ethnic groups for the FACIT-Sp: a report from the American Cancer Society's Study of Cancer Survivors-II (SCS-II). *Psycho-Oncology* 19, 264-272.
- Nakrem S., Vinsnes A. G. & Seim A. (2011) Residents' experiences of interpersonal factors in nursing home care: A qualitative study. *International Journal of Nursing Studies* Nov; 48, 1357-1366.
- Nygren B., Alex L., Jonsen E., Gustafson Y., Norberg A. & Lundman B. (2005) Resilience, sense of coherence, purpose in life and self-transcendence in relation to perceived physical and mental health among the oldest old. *Aging and Mental Health* 9, 354-362.
- O'Brien M. E. (2003) Conceptual Models of Parish Nursing Practice: A Middle Range Theory of Spiritual Well-Being in Illness: In *Parish Nursing: Healthcare Ministry Within The Church* [Paperback] ed.). Jones & Bartlett Publisher, Mississauga (Canada), London (UK), pp. 85-94.
- Pesut B. (2008) A conversation on diverse perspectives of spirituality in nursing literature. *Nursing philosophy* 9, 98-109.
- Peterman A. H., Fitchett G., Brady M. J., Hernandez L. & Cella D. (2002) Measuring Spiritual Well-Being in People With Cancer: The Functional Assessment of Chronic Illness Therapy-Spiritual Well-Being Scale (FACIT-Sp). *Annals of Behavioral Medicine* 24, 49.
- Peterman A. H., Reeve C. L., Winford E., Cotton S. P., Salsman J., McQuellon R., Cella D. & Tsevat J. (2011) Measuring meaning and peace with the FACIT-Spiritual Well-being scale: Distinction without a difference? in preparation.
- Rahman A. N. & Schnelle J. F. (2008) The Nursing Home Culture-Change Movement: Recent Past, Present, and Future Directions for Research. *The Gerontologist* 48, 142-148.
- Reed P. G. (1991) Self-transcendence and mental health in oldest-old adults. *Nursing Research* 40, 5-11.

- Reed P. G. (1992) An emerging paradigm for the investigation of spirituality in nursing. *Research in Nursing and Health* 15, 349-357.
- Reed P. G. ed. (1997) *The place of transcendence in nursing's science of unitary human beings: Theory and research*. National League for Nursing Press, New York.
- Reed P. G. (2008) *Theory of Self-Transcendence*: In *Middle Range Theory for Nursing* (M. J. Smith and P. R. Liehr ed.^eds.). Springer Publishing Company, LLC, New York, pp. 105-129.
- Reed P. G. (2009) *Nursing: The Ontology of the Discipline*: In *Perspectives on Nursing Theory* (P. G. Reed and N. B. C. Shearer ed.^eds.). Wolters Kluwer - Lippincott Williams & Wilikns, Philadelphia - Baltimore - New York - London - Buenos Aires - Hong Kong - Sydney - Tokyo, pp. 615-620.
- Rogers C. R. (1961) *On Becoming a Person*. Houghton Mifflin, Boston, MA.
- Runquist J. J. & Reed P. G. (2007) Self-transcendence and well-being in homeless adults. *Journal of Holistic Nursing* 25, 5-13.
- Schermelleh-Engel K., Moosbrugger H. & Muller H. (2003) Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. *Methods of Psychological Research* 8, 23-74.
- Schumacker R. E. & Lomax R. G. (2004) *A Beginner's Guide to STRUCTURAL EQUATION MODELING*. Psychology Press, Taylor & Francis Group, New York.
- Sharpnack P. A., Benders A. M. & Fitzpatrick J. J. (2011) Self-transcendence and spiritual well-being in the amish. *Journal of Holistic Nursing* 29, 91-97.
- Teixera M. E. (2008) Self-Transcendence. A Concept Analysis for Nursing Praxis. *Holistic Nursing Practice* 22, 25-31.
- Thomas J. C., Burton M., Quinn Griffin M. T. & Fitzpatrick J. J. (2010) Self-transcendence, spiritual well-being, and spiritual practices of women with breast cancer. *Journal of Holistic Nursing* 28, 115-122.
- Touhy T. A. (2001) Nurturing hope and spirituality in the nursing home. *Holistic Nursing Practice* 15, 45-56.
- Touhy T. A., Brown C. & Smith C. J. (2005) Spiritual caring: end of life in a nursing home. *Journal of Gerontological Nursing* 31, 27-35.
- Van Nordennen R. T. C. M. & Ter Meulen R. H. J. (2005) The role of spiritual well-being in palliative care provided by nursing home physicians. [Dutch] *Tijdschrift voor Verpleeghuisgeneeskunde* 30, 11-14.
- Ventura J. L., Fitzgerald O. R., Koziol D. E., Covington S. N., Vanderhoof V. H., Calis K. A. & Nelson L. M. (2007) Functional well-being is positively correlated with spiritual well-being in women who have spontaneous premature ovarian failure. *Fertility and Sterility* 87, 584-590.
- Wachholtz A. B., Pearce M. J. & Koenig H. G. (2007) Exploring the relationship between spirituality, coping, and pain. *Journal of Behavioral Medicine* 30, 311-318.
- Wallace M. & O'Shea E. (2007) Perceptions of spirituality and spiritual care among older nursing home residents at the end of life. *Holistic Nursing Practice* 21, 285-289; quiz 290-281.
- Whitford H. S. & Olver I. N. (2011) The multidimensionality of spiritual wellbeing: peace, meaning, and faith and their association with quality of life and coping in oncology. *Psycho-Oncology*, n/a-n/a.

FIGURES AND TABLES

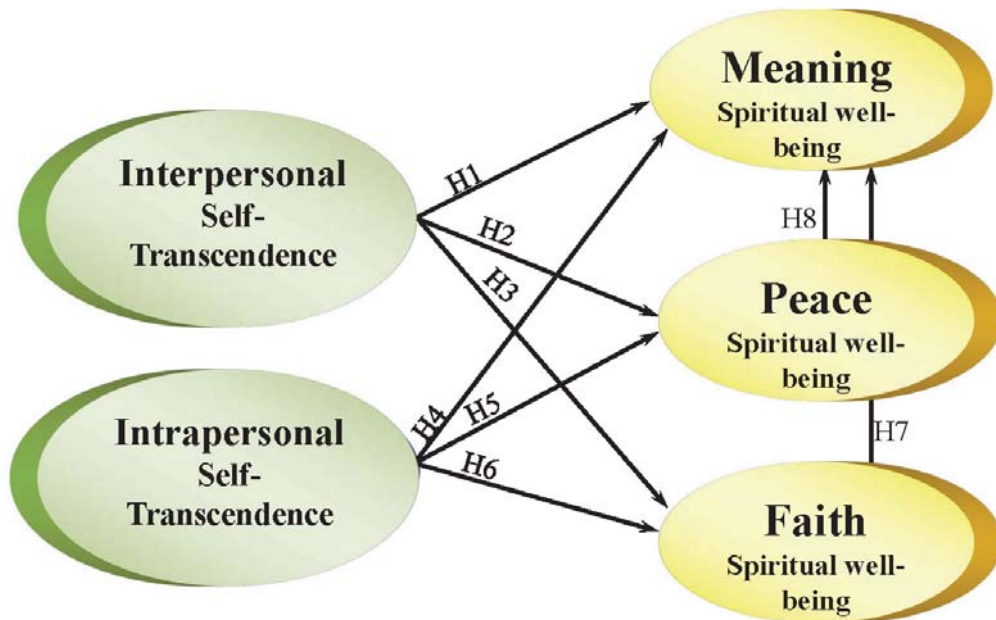
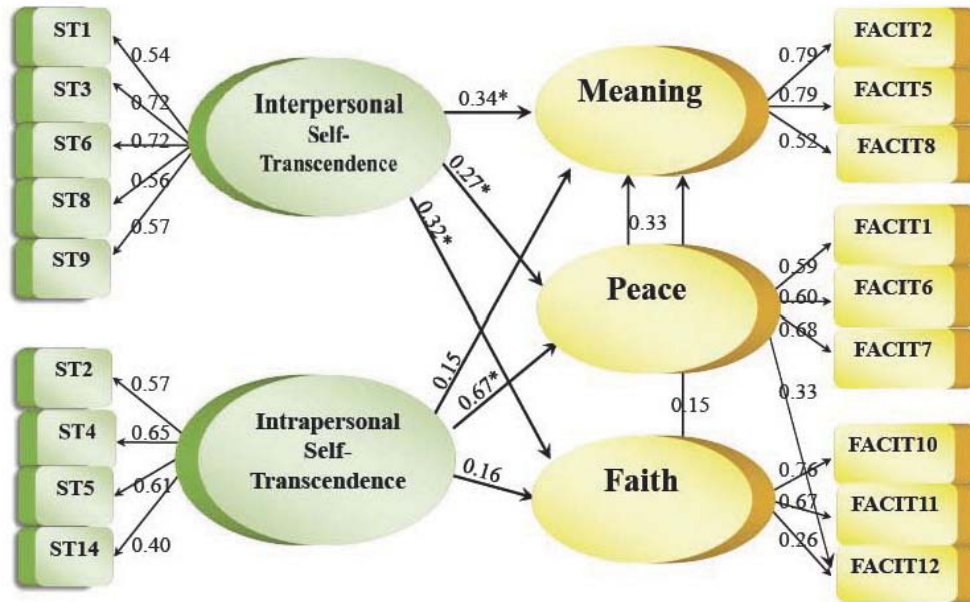


Figure 1. Hypotheses to be tested



Chi square =157.72, p-value 0.025, RMSEA 0.038

Figure 2. SEM Model 1. Measurement models and directional relationships for self-transcendence to spiritual well-being

Table 1. Constructs involved in Model 1¹; measurement models, Cronbach's alpha, and composite reliability².

Items	Parameter	Lisrel Estimate	t-value	R ²	Cronbach's Alpha (α)	Composite reliability (ρ_c)
<i>Interpersonal self-transcendence (ST-1)</i>						
ST1	$\lambda_{x1,1}$	0.54	6.31***	0.29	.76	.77
ST3	$\lambda_{x3,1}$	0.73	11.26***	0.52		
ST6	$\lambda_{x6,1}$	0.78	11.25***	0.60		
ST8	$\lambda_{x7,1}$	0.56	6.82***	0.31		
ST9	$\lambda_{x8,1}$	0.57	7.79***	0.32		
<i>Intrapersonal self-transcendence (ST-2)</i>						
ST2	$\lambda_{x2,2}$	0.57	6.36***	0.32	.63	.65
ST4	$\lambda_{x4,2}$	0.65	6.33***	0.42		
ST5	$\lambda_{x5,2}$	0.61	6.40***	0.38		
ST14	$\lambda_{x9,2}$	0.40	3.60***	0.16		
<i>Meaning (spiritual well-being)</i>						
FACIT-Sp2	$\lambda_{y2,1}$	0.79	-	0.61	.72	.75
FACIT-Sp5	$\lambda_{y3,1}$	0.79	9.72***	0.69		
FACIT-Sp8	$\lambda_{y6,1}$	0.52	6.87***	0.26		
<i>Peace (spiritual well-being)</i>						
FACIT-Sp1	$\lambda_{y1,2}$	0.59	-	0.34	.66	.72
FACIT-Sp6	$\lambda_{y4,2}$	0.60	6.54***	0.44		
FACIT-Sp7	$\lambda_{y5,2}$	0.68	7.62***	0.50		
FACIT-Sp12	$\lambda_{y9,2}$	0.33	3.67***	0.21		
<i>Faith (spiritual well-being)</i>						
FACIT-Sp10	$\lambda_{y7,3}$	0.76	-	0.91	.62	.61
FACIT-Sp11	$\lambda_{y8,3}$	0.67	4.76***	0.28		
FACIT-Sp12	$\lambda_{y9,3}$	0.26	2.92**	0.21		

Note. *Significant at the 5% level. **Significant at the 1% level. ***Significant at the 0.1% level. ¹Model 1: comprising 9 ST-items and 9 FACIT-Sp-items.

$$^2\text{Composite Reliability } \rho_c = \frac{(\sum \lambda)^2}{[(\sum \lambda)^2 + \sum(\theta)]}$$

Table 2. Model 1. Standardized Beta¹ and Gamma². Total³ and Indirect⁴ effects of Interpersonal ST (ST-1⁵) and Intrapersonal ST (ST-2⁶) on Spiritual Well-Being (Meaning⁷, Peace⁸ and Faith⁹). Standardized estimates.

Constructs Model 1	Parameter	Lisrel Estimate	t-value
ST-1 ⁵ to Meaning ⁷	γ 1,1	0.34	3.44***
ST-1 to Peace ⁸	γ 1,2	0.27	2.42*
ST-1 to Faith ⁹	γ 1,3	0.32	2.92**
ST-2 ⁶ to Meaning ⁷	γ 2,1	0.15	0.74
ST-2 to Peace ⁸	γ 2,2	0.67	5.39***
ST-2 to Faith ⁹	γ 2,3	0.16	1.56
Peace to Meaning	β 1,2	0.33	1.56
Faith to Meaning	β 1,3	0.15	1.70
Total effects of ST on Spiritual Well-Being, FACIT-Sp¹⁰			
ST-1 on Meaning		0.47	4.98***
ST-1 on Peace		0.27	2.42*
ST-1 on Faith		0.32	2.92**
ST-2 on Meaning		0.40	3.68***
ST-2 on Peace		0.67	5.39***
ST-2 on Faith		0.16	1.56
Goodness-of-fit measures Model 1			
Satorra Bentler χ^2	157.72	p=0.02538	Df ¹¹ = 125
RMSEA	0.038	p-value = 0.025	
CFI	0.98	-	
NFI/NFFI	0.92	0.98	
GFI/AGFI	0.90	0.86	
SRMR	0.061	-	

Note: ¹Beta; standardized regression coefficients representing directional relationships between the FACIT-Sp-factors. ²Gamma; standardized regression coefficients representing directional relationships between ST and spiritual well-being. ³Total effects; represents the total influence of ST on spiritual well-being. ⁴Indirect effects; represents the influence of ST on spiritual well-being mediated by intervening variables (mediators). ⁵ST-1=Interpersonal ST. ⁶ST-2=Intrapersonal ST. ⁷Meaning= FACIT-Sp meaning. ⁸Peace= FACIT-Sp Peace. ⁹Faith=FACIT-Sp Faith. ¹⁰FACIT-Sp=Spiritual well-being measure. ¹¹Df=degrees of freedom. *Significant at the 5% level. **Significant at the 1% level. ***Significant at the 0.1% level

PAPER 4

*Self-transcendence and nurse-patient-interaction
in cognitively intact nursing home patients*

Journal of Clinical Nursing

2012 Dec; 21(23-24):3429-41

ABSTRACT.

Title: *Self-Transcendence and Nurse-Patient-Interaction in Cognitively Intact Nursing Home Patients.*

Aims and objectives: The aim of the present study was to test whether nurse-patient interaction affects cognitively intact nursing home patients' interpersonal and intrapersonal self-transcendence, as well as testing the psychometric properties of the Nurse-Patient Interaction Scale.

Background: Self-transcendence is considered a spiritual developmental process of maturity in adulthood, and a vital resource of well-being at the end of life. The concept of self-transcendence has previously been explored in various populations; yet the nurse-patient-interactions' potential influence on self-transcendence in nursing home patients has not been published previously.

Design and Method: A cross-sectional design employing the Self-Transcendence Scale and the Nurse-Patient-Interaction Scale was adopted. A sample of 202 cognitively well-functioning nursing home patients in Norway was selected. The statistical analyses were carried out using LISREL 8.8 and Structural Equation Modeling (SEM).

Results: SEM-analysis indicates statistical significant effect of nurse-patient-interaction on the patients' self-transcendence. Direct influence on the intrapersonal and indirect influence on the interpersonal Self-Transcendence aspects was disclosed.

Conclusion: Nurse-patient interaction significantly affected both interpersonal and intrapersonal self-transcendence among cognitively intact nursing home patients. Hence, facilitating caring interventions can be significantly beneficial to elderly patients' self-transcendence and thereby well-being, both emotional and physical.

Relevance to clinical practice: Caring behaviour signifies the vital and ultimate qualitative nursing behaviour, which promotes self-transcendence and thereby well-being. These findings are important for clinical nursing which intends to increase patients' well-being.

Keywords: *interpersonal; intrapersonal; nurse-patient interaction; nursing home; self-transcendence; SEM-analysis.*

BACKGROUND

In modern societies life expectancy is increasing. As people age, experiences of physical, psychological and social losses, and reduced involvement occur. For some, this leads to the need for long-term care in a nursing home (NH). In Norway 19% of people aged 80 and over are living their last years in NHs. As experiencing many losses, illnesses, and facing death, NH patients are considered a particular vulnerable population. Loneliness and physical health problems in older people correlate highly; physically disabled elderly and older people suffering from visual or auditory problems tend to be lonelier than people without disability (Luleci *et al.* 2008, Murphy 2006). In long-term care, loneliness and decreased emotional well-being have been included together with helplessness and boredom as plagues that are running out of control (Thomas 1996); thus NH patients' emotional health has been marked by loneliness and depression (Krohn & Bergman-Evans 2000, Scocco *et al.* 2006).

Self-transcendence (ST) is a general human dimension of personal maturity, which is found to be a correlate and a resource for well-being among vulnerable populations (Reed 2008, Teixeira 2008). The central substance of ST is described as connectedness within the individual, the environment, and with a transcendent being (Reed 2008). ST is characterized by a profound awareness of one's wholeness manifested by looking inward (intraconnectedness), reaching out toward others (interconnectedness), and an ever-changing inner experience of time where past, present, and future are one (Reed 1997). ST represents a mature approach to life and death, and is expressed through various behaviours and perspectives such as sharing wisdom with others, integrating the physical changes of ageing, accepting death as a part of life, and finding meaning in life in spite of many losses (Reed 1991b, 2008). Adults with higher levels of ST do not seek absolute answers to questions in life but rather seek meaning in life events as integrated within a moral, social, and historical context (Reed 2008). ST has been studied in various disciplines, but is found to be of

particular interest to nursing. A recent study demonstrated statistically significant positive influence of ST on physical, social, emotional, and functional well-being among NH patients (Author *et al.* 2011). Former research examining the relations between ST and well-being has showed statistically significant positive correlations (Bean & Wagner 2006, Coward 1991, 2003, Hoshi 2008, Mellors *et al.* 1997). Empirical support for the importance of ST for those at the end of life and facing their own mortality has been well documented (Bean & Wagner 2006, Coward & Reed 1996, Coward 1990, 1991, 1995, 2003, Williams 2008). The reviewed literature of ST provides support for Reed's proposition that ST is related to indicators of well-being in older adults, as well as at the end of life.

The framework of clinical nursing research has shifted from an illness to a wellness model of health care (Guzzetta 2005). Nursing is not necessarily based upon a reversal of a disease process, but more upon a moving forward, to gain a sense of well-being in the absence or presence of disease. Reed (2009b) argues that good nursing involves a process that is developmental, progressive, and sustaining, and by which well-being occurs. This perspective of promoting health and well-being is fundamental in nursing and a major nursing concern in long-term NH care (Drageset 2009, Nakrem *et al.* 2011).

Furthermore, the nursing discipline's understanding of how a nursing process is manifested has shifted. The mid-20th century's rather mechanistic conception of nursing as a process external to patients and conducted by the nurse, has been replaced by the view of nursing as a relational process and practice (Reed 2009b). Through the last decades, the importance of establishing the nurse-patient relationship as an integral component of nursing practice has been well documented (Appleton 1993, Nåden & Eriksson 2004, Nåden & Sæteren 2006, Rchaidia *et al.* 2009). International well accepted nursing theorists describe nursing as a participatory process that transcends the boundaries between patient and nurse and can be

learned and knowingly deployed to facilitate well-being (Eriksson 1995a, b, 2001, Martinsen 1993, Neuman 1995, Reed 2009b, Travelbee 1979, Watson 1988, 1995).

Nursing consists of interwoven relational, moral, and practical aspects (Martinsen 1989) where nursing care encompasses the patient's fundamental needs as well as the patient's values and experiences. Excellent nursing care is characterized by a holistic view with inherent human values and moral; thus, excluding the patient as a unique human being, should be regarded as noncaring and amoral practice (Austgard 2008, Haugan Hovdenes 2002, Nåden & Eriksson 2004, Watson 1988). NH patients are in general extremely vulnerable, characterized by frailty, mortality, disability, powerlessness, and dependency; hence the relationships with the nursing staff are critical to their self-respect, feelings of self-worth, dignity, and thereby well-being (Clarke *et al.* 2003, Heliker 2009, Pipe *et al.* 2010). Caring nurses engage in person-to-person relationships with the patients as unique persons. Good nursing care is defined by the nurses' way of "being present" together with the patient while performing nursing activities, in which attitudes and competence are inseparably connected. The caring nurse is present and respectful, sincere, friendly, sensitive, and responsive to the patient's feelings of vulnerability; she understands the patient's needs, is compassionate to patients' different sufferings, and provides emotional support and confirmation (Appleton 1993, Asmuth 2004, Haugan Hovdenes 2002, Nåden & Eriksson 2004, Rchaidia *et al.* 2009). Thus, nursing care as a moral relational practice increases patients' well-being (Gastmans *et al.* 1998, Hollinger-Samson & Pearson 2000, Nakrem *et al.* 2011, Rchaidia *et al.* 2009); qualitatively good nurse-patient interaction helps patients gain a sense of trust, comfort, safety, confirmation, and enhanced well-being (op.cit). The experience of being listened to is crucial to long-term care patients, since this is how they experience feeling good, satisfied, and cared about (Finch 2005, 2006). If experiencing not being attended to or treated with

indifference, NH patients describe frustration and suffering (Haugan Hovdenes 2002, Jonas-Simpson *et al.* 2006), which has a negative impact on their well-being.

In sum, the literature reviewed suggests that; 1. ST is a profound resource for patients' well-being. 2. Promoting well-being is the fundamental concern in long-term NH care 3. Nurse-patient interaction is crucial to patients' well-being. Since ST is characterized by inter- and intraconnectedness, patients' experiences of connecting and communicating with the staff nurses might be vital to their ST. This raises question about the relations between the nurse-patient interaction and NH patients' ST.

Aims

The main aim of this study was to investigate the relationships between nurse-patient interaction and self-transcendence among cognitively intact NH patients. A subsequent aim was to test the psychometric properties of the Nurse-Patient Interaction Scale. Based on the theoretical and empirical knowledge of ST as connectedness and nursing as a moral relational practice, we hypothesized that patients' experiences of the nurse-patient interactions would affect ST among cognitively intact NH patients. Our research questions were: 1. To what degree does the NPIS demonstrate sound psychometric properties in cognitively intact NH patients? 2. In which ways is the nurse-patient interaction related to ST? 3. Does the nurse-patient interaction influence cognitively intact NH patients' ST? Figure 1 portrays the hypotheses creating the basis for the SEM-parameters reported in the results.

Insert Figure 1 about here

METHODS

Sampling

The study employed a cross-sectional design; 250 potential participants were approached by a head nurse, whom they knew well. Due to study logistics and other practical concerns we planned to include a minimum of 200 NH patients.

Procedure

Because this population has problems completing a questionnaire independently, three trained researchers conducted one-on-one interviews in private. To avoid introducing bias into the respondents' reporting, researchers with identical professional background were chosen (RN, MA, trained and experienced in communication with elderly, as well as teaching gerontology at an advanced level); they were trained to conduct the interviews as identically as possible. Statistical tests showed no significant differences between responses based on interviewers. The questionnaires relevant for the present study were part of a battery of questionnaires comprising 130 items. A large-print copy of questions and possible responses was held in front of the participants to avoid misunderstandings.

Ethical considerations

Approval by the Norwegian Social Science Data Services was obtained for a license to maintain a register containing personal data (Ref.no 16443) and likewise we attained approval from The Regional Committee for Medical and Health Research Ethics in Central Norway (Ref.no. 4.2007.645) as well as the directory of the 44 NHs. Both oral and written information about their rights as participants and their right to withdraw at any moment, were given by the nurse. Each participant provided informed consent.

Participants

About 70-80% of the Norwegian NH patients are cognitively impaired; consequently a great number of NHs had to be included. The total sample comprised 202 (80.8%) of 250 long-term NH patients who met the inclusion criteria, representing 44 different rural and urban Norwegian NHs. Participants' age was 65-104, with a mean of 86 years (Sd=7.65). The sample comprised 146 women (72.3%) and 56 men (27.7%), where the mean age was 87.3 years for women and 82 years for men. A total of 38 (19%) were married/cohabitating, 135 (67%) were widows/widowers, 11 (5.5%) were divorced and 18 (9%) were single. Duration

of time of NH residence when interviewed was at mean 2.6 years for both sexes (range 0.5-13 years); 117 were in rural NHs, while 85 were in urban NHs. Long-term NH care was defined as 24-hour care; short term care patients, rehabilitation patients, and patients having dementia were not included. Inclusion criteria were as follows: (1) local authority's decision of long term NH care (2) residential time 6 months or longer (3) informed consent competency recognized by responsible doctor and nurse, and (4) capable of being interviewed.

Data collection

The data were collected during 2008 and 2009, using the *Self-Transcendence Scale* (STS) and the *Nurse-Patient-Interaction Scale* (NPIS). The STS was developed from the 36-item Developmental Resources of Later Adulthood Scale (Reed 1986, 2008), which intended to identify intrapersonal, interpersonal, transpersonal, and temporal experiences characteristic of later life, reflecting expanded boundaries of self (Reed 2009a). The STS comprises 15 items measuring characteristics of a matured view of life representing the extent to which a person expands personal boundaries. Each item is rated on a 4-point Likert-type scale from 1.0 (*not at all*) to 4.0 (*very much*) (Appendix 1); higher scores indicating higher ST. In previous studies Cronbach's α range from .80 to .88 (Reed 1991a, 2009b, Runquist & Reed 2007). Content validity is adequate, based on a thorough literature review of empirical and theoretical literature (Reed 2008). Support for construct validity has been found in the relationships of ST scores to other measures (Coward 1990, 1991, 1996).

The STS was translated into Swedish and then back into English: the back-translated version was then approved by the instrument constructor (Nygren *et al.* 2005). The Swedish version demonstrated an internal consistency of .70-.85 (*ibid.*) and was translated into Norwegian for the purpose of the present study. Swedish and Norwegian language and culture are almost identical in all aspects that matters for this study. The STS is virtually un-changed in the Norwegian version, but the words are spelled in Norwegian and meanings have been

checked. Cronbach's α in this study was 0.72; while α for ST-1 (Interpersonal) was 0.80 and 0.82 for ST-2 (Intrapersonal). Composite reliability (ρ_c) is reported in Table 3; values greater than 0.60 are desirable (Diamantopolous & Siguaw 2008). A previous investigation of the dimensionality of ST revealed one interpersonal (ST-1) and one intrapersonal (ST-2) factor (Haugan *et al.* 2012a). This two-factor construct was used in the structural equation model (SEM) to be tested here.

The Nurse Patient Interaction Scale (NPIS) was developed for the present study to identify important characteristics of NH patients' experiences of communicating and interacting with the staff nurses, and covers domains that identify essential relational qualities stressed in the nursing care literature (Eriksson 1995a, b, Levy-Malmberg *et al.* 2008, Martinsen 1993, Nåden & Eriksson 2004, Nåden & Sæteren 2006, Watson 1988). The items were developed to measure the NH patients' ability to derive a sense of well-being and meaningfulness through the nurse-patient relationships (Haugan Hovdenes 1998, 2002, Hollinger-Samson & Pearson 2000, Rchaidia *et al.* 2009); examples of NPIS-items include having confidence in the staff nurses, experiences of being respected and recognized as a person; being listened to and taken seriously; nurse-patient-interaction makes patients feel well, satisfied, cared about and included in decisions, and they demonstrate satisfaction with the nurses' communication. Content validity is based on a thorough literature review of empirical and theoretical literature to specify the domains and the items. As part of instrument development, all items were scrutinized for content and face validity by a panel of six experts in the areas of NH care and instrument development. Additionally, the instrument was pilot tested with three nursing students, then with three older retired nursing teachers (aged 73-75 years), and finally with three NH patients for content validity resulting in minor word changes for some items. The NPIS is a 10-points scale ranging from 1 (*not at all*) to 10 (*very much*); higher numbers

indicating better nurse-patient interaction (Appendix 2). The Nurse Patient Interaction Scale (NPIS) has not been previously validated.

Analysis

Data were analysed by descriptive and correlational statistics using the PASW Statistics, version 18 (SPSS Inc., Chicago, IL). The NPIS was exposed to exploratory factor analysis (EFA) to explain as much of the total variance as possible with as few factors as possible. A good rule of thumb for the minimum loading is 0.32 (Tabachnick & Fidell 2001) which equates to approximately 10% overlapping variance with the other items in that factor. A “crossloading” item loads at 0.32 or higher on two or more factors. A structural equation model (SEM) of the hypothesized relations between the latent constructs of ST-1, ST-2 and NPIS was tested using LISREL 8.8 for Windows. SEM provides a comprehensive method for the quantification and testing of relations between latent variables, which are not measured directly, but are estimated from several measured variables (indicators) each of which is predicted to “load into” the latent variables; ≥ 0.30 is given as a desirable loading (Harrington 2009). By using SEM, random measurement error is accounted for, and psychometric properties of the scales in the model are more accurately derived. At the same time, all the direct, indirect, and total effects throughout the model are estimated. To evaluate model fit we used the chi-square (χ^2) which measures the distance (discrepancy) between the sample covariance matrix and the fitted covariance matrix (Jöreskog & Sörbom 1995). Besides, in line with the rules of thumb given as conventional cut-off criteria (Schermelleh-Engel *et al.* 2003) the following fit indices were used; the Root Mean Square Error of Approximation (RMSEA) and the Standardized Root Mean Square Residual (SRMS) with values below 0.05 indicating good fit, whereas values smaller than 0.08 is interpreted as acceptable (Hu & Bentler 1998, Schermelleh-Engel *et al.* 2003). Further we used the Comparative Fit Index (CFI) and the Non-Normed Fit Index (NNFI) with acceptable fit at 0.95, and good fit at 0.97

and above, the Normed Fit Index (NFI) and the Goodness-of-Fit Index (GFI) with acceptable fit at 0.90, while good fit was set to 0.95. For the Adjusted GFI (AGFI), acceptable fit was set to 0.85 and good fit at 0.90 (ibid.). At a significant level 0.05, the test statistics need to be ≥ 1.96 or ≤ -1.96 before the hypothesis can be rejected. Missing data was low in frequency; for the STS 5.9% and for the NPIS 4.0% had some missing data, which were handled by means of the listwise procedure. The frequency distribution of the items was examined to assess deviation from normality; both skewness and kurtosis were significant. As normality is a premise in SEM, we corrected for the non-normality by applying the Robust Maximum Likelihood (RML) estimate procedure and stated the Satorra-Bentler corrected χ^2 (Satorra & Bentler 1994).

RESULTS

The Nurse-Patient-Interaction Scale (NPIS) – psychometric properties

The 14 NPIS-items were subjected to explorative factor analysis (EFA). The Kaiser-Meyer-Olkin measure of sampling adequacy exceeded the recommended value of 0.60 (0.924) and Bartlett's test of Sphericity reached statistical significance ($p < 0.0001$), supporting the factorability of the correlation matrix. EFA using principal component analysis and varimax rotation extracted one factor with eigenvalue ≥ 1.0 , explaining 49.2% of the variance (Table 1). Intern consistency was calculated by Cronbach's α to 0.91. The component matrix revealed only one component, and factor loadings between 0.43-0.80 (Table 1).

Running the data setting two extracting factors and oblique rotation gave only two loadings > 0.32 for the second factor; both were crossloadings, loading substantially on both factors. Thus the EFA supported a one-dimensional structure. However, substantive conclusions based solely on EFA should not be drawn; consequently we applied confirmative factor analysis (CFA) as well to test the dimensionality and the psychometric properties of the NPIS. CFA testing the one-factor model of the NPIS (Model-1) gave significant estimates with

standardized factor loadings from 0.40-0.79. The R^2 -values were good, except from two items (Table 2). The Satorra Bentler χ^2 (92.32, df=77; p-value=0.11236), RMSEA (0.032) and all the goodness-of-fit indices NFI (0.97), NNFI (0.99), CFI (1.00), GFI (0.90), AGFI (0.86) and the SRMR (0.045) showed good fit (Table 4) – supporting the one-dimensionality of the NPIS. Composite reliability was 0.82 (Table 2), conveniently exceeding the desirable 0.60 threshold (Diamantopolous & Siguaw 2008).

Insert Table 1 and Table 2 about here

Structural Equation Modeling (SEM) – Model-2

For the intention of testing the hypotheses portrayed in Figure 1, the measurement models for the NPIS and STS were established. Identification of the model was based on theoretical considerations, model complexity, and validity-reliability concerns. The three-indicator rule applies that each latent variable should be measured by three or more observed indicators. The two-factor construct of ST (Haugan *et al.* 2012a) was used, but the number of indicators was reduced. The most valid (significant t-values) and reliable (R^2 -values) indicators were chosen; the items “Having hobbies or interests I can enjoy” (ST1), “Being involved with other people or my community when possible” (ST3), “Sharing my wisdom or experience with others” (ST6), “Helping others in some way” (ST8), “Having an ongoing interest in learning” (ST9) and “I am able to move beyond things that once seemed so important” (ST10) represented ST-1, while the items “Accepting myself as I grow older” (ST2), “Adjusting well to my present life situation” (ST4), “Adjusting well to changes in my physical abilities” (ST5) and “Finding meaning in my past experiences” (ST7) constituted the ST-2-construct. The NPIS comprising 14 items was assessed, and 8 items were selected; “The staff nurses takes me seriously” (NPIS2), “Interaction with the staff nurses makes me feel good” (NPIS3), “The staff nurses understand me” (NPIS4), “The staff nurses treat me respectfully” (NPIS7), “The staff nurses are listening interestingly to me” (NPIS9), “Interaction with the staff nurses contributes to

meaning in my life” (NPIS11), “The staff nurses pay attention to me as a unique person” (NPIS12) and “I am satisfied with the communication with the staff nurses” (NPIS13). These in all 18 observed indicators (6ST-1; 4ST-2; 8NPIS) showed good validity and reliability (Table 3). Each item loaded on only one of the factors, which were not allowed to correlate. Correlations between residual variances and crossloadings were not included. For scaling the variances of the dependent latent variables were set at 1. Figure 2 portrays the SEM-model (Model-2) testing the hypotheses, and displays the measurement models for the latent constructs. Table 3 lists the loadings, t-values, R^2 , and composite reliability.

Insert Table 3 and Figure 2 about here

In Model-2 all estimates were significant; the factor loadings ranged between 0.41-0.81 and composite reliability ranged from 0.64-0.91 indicating strong reliability. The hypothesized Model-2 demonstrated good fit. Table 4 lists the goodness-of-fit indices, which all exceeded the recommended cut-values; χ^2 (147.98; $p=0.1619$, $df=132$), RMSEA (0.025; $p=0.99$), SRMR (0.059), NFI (0.94), CFI (0.99), GFI (0.90) and AGFI (0.87). Thus Model-2 (Figure 2) was supported.

Insert Table 4 about here

The nurse-patient-interaction is related to self-transcendence

Table 5 shows the standardized regression coefficients of the directional relationships, besides the total and indirect influences between the latent variables in Model-2. Significant paths revealed from NPIS to ST-2 ($\gamma_{2,1}=0.33^*$) and from ST-2 to ST-1 ($\beta_{1,2}=0.37^*$), while the path from NPIS to ST-1 was non-significant ($\gamma_{1,1}=-0.05$). However, one might expect patients with upper ST-levels to utilize their ST-capacity transcending difficulties, and accordingly report nurse-patient interactions exclusively positively. Therefore, as a causality check, an alternative model was tested (Model-3) reversing the paths to show an impact from

ST-1 and ST-2 on the NPIS in the model. This Model-3 was found to be a poor fit (Table 4); consequently the causality constituted in Model-2 was supported.

Insert Table 5 about here

The nurse-patient interaction affecting self-transcendence

An investigation of the effects of NPIS on ST revealed statistical significant total effect on ST-2 (0.33, $t=3.07^*$) and significant indirect effect on ST-1 (0.12, $t=2.22^*$), listed in Table 5. A scrutiny of the total effects of NPIS on each ST-item indicated that the NPIS significantly influenced the intrapersonal ST-items ST2 (accepting myself, $t=3.07^{**}$), ST4 (adjusting well to present situation, $t=3.38^{**}$), ST5 (adjusting well to physical abilities, $t=3.39^{**}$) and ST7 (finding meaning in past experiences, $t=2.73^{**}$).

DISCUSSION

The Nurse-Patient-Interaction Scale - psychometric properties

NH patients' relations to the staff nurses have occurred to be a powerful influence on patient's meaning in life and well-being (Clarke *et al.* 2003, Finch 2006, Haugan Hovdenes 2002, Heliker 2009, Hollinger-Samson & Pearson 2000, McGilton & Boscart 2007, Pipe *et al.* 2010). Thus, access to reliable questionnaires measuring NH patients' experience of the nurse-patient-interaction is fundamental. The NPIS was developed for use in the present study; we intended to specify items representing nurses' caring behavior that could increase patients' sense of well-being, derived through interaction with the staff nurses. Both EFA and CFA support a 1-dimensional structure and the CFA reveals good fit with the data. The NPIS-items showed strong reliability, except for item NPIS10: "I often get hurt or sad from how the nurses interact with me" ($\lambda=0.43$; $R^2=0.19$; the item is reversed) and item NPIS14: "Interaction with nurses is the most important to my thriving" ($\lambda=0.40$; $R^2=0.17$). Item NPIS10 (mean=8.29; Appendix 2) indicates that to some extent the nurses hurt patients' feelings, while item NPIS14 (mean 8.86) reveals the highest mean-score displaying that

patients' interaction and relationships to staff nurses are extremely important for the patients' thriving. The low R^2 -values for item NPIS10 and NPIS14 suggest that these items are less relevant in explaining the variance in ST; probably because they are too obvious. Frail and disabled NH patients' might feel vulnerable and dependent in relation to the staff nurses; most NH patients experience great dependency as well as great gratitude to the staff nurses. The mean age in the present study was 86 years, representing the NH patients' great amount of life experience, which they realize that the younger staff nurses do not yet possess. Rather than being critical, the patients may want to focus on sympathy, acceptance, tolerance, gratitude, and understanding towards the staff nurses; and hence, transcending the self-boundaries. However, internal consistence measured by Cronbach's α and composite reliability was strong; besides factor loadings and the R^2 -values were good. The NPIS demonstrated sound psychometric properties in our study population; good content validity and internal consistency.

The nurse-patient-interaction influences self-transcendence

The nurse-patient-interaction reveals statistically significant influence on the intrapersonal ST-2 and an indirect mediated influence on the interpersonal self-transcendence. Additionally, ST-2 significantly and strongly affects interpersonal self-transcendence. Thus, the hypotheses H1-H3 (Figure 1) are supported. Intrapersonal self-transcendence comprises items covering the NH patients' acceptance of him-/herself as growing older, adjusting well to changes in physical abilities and present situation, besides finding meaning in past experiences; the staff nurses' interaction with NH patients affects these intrapersonal ST-aspects, which previously have been found to be of particular significance to NH patients' well-being (Haugan *et al.* 2012c). Statistically significant indirect influence of the NPIS on the patients' interpersonal ST were shown, suggesting that qualitative good and caring nurse-patient interaction could influence the interpersonal ST-dimension as well. Thus, caring nurse-patient interactions

might vitalize and encourage both inter- and intrapersonal ST among NH patients. A former study (ibid.) revealed statistical significant influences of both intrapersonal and interpersonal ST to physical, emotional, functional, and social well-being among cognitively intact NH patients. Significant impact of self-transcendence on spiritual well-being is also recently demonstrated (Haugan *et al.* 2012b). Accordingly, advancing the staff nurses way of being present with the patient, such as listening, empathic understanding, respecting, accepting, and acknowledging the resident as a person who is to be taken seriously, can contribute to increased ST and thereby increased well-being. This finding is in accordance with previous research (Asmuth 2004, Finch 2006, Haugan Hovdenes 2002, Hollinger-Samson & Pearson 2000, Jonas-Simpson *et al.* 2006, Rchaidia *et al.* 2009). Facilitating and supporting self-transcendent patient behaviors like being involved with other people, having hobbies and interests as well as helping others, sharing their wisdom, reflecting, and learning, also appear to be vital to cognitively intact NH patients' ST (Haugan *et al.* 2012c).

The statistical tests suggest that Model-2 comprising ten ST-items and eight NPIS-items fits well. The items ST11-ST15 were dismissed due to low loadings and R^2 . This insinuates that accepting death as a part of life (ST11), letting others help when one may need it (ST13), and enjoying one's pace of life (ST14) are less relevant issues in cognitively intact NH patients' daily life. Death and end-of-life issues might be so evident in NH patients' everyday life, as it is impossible not accepting death as a part of life. Actually, many NH patients do express a longing for death (Haugan Hovdenes 2002). Letting others help does also seem as given in this life situation, whereas enjoying ones pace of life possibly seems less relevant to many, since the routines and the staff nurses strongly impact the patients' rhythm and pace of life in the NH. We were surprised that letting go of past losses (item ST15; $R^2=0.02$) and finding meaning in one's spiritual beliefs (item ST12; $R^2=0.10$) seemed less relevant. Further research is needed to explore these phenomena. In summary, the assessment of the measurement part

of Model-2 did not reveal any crucial deficiencies as nonsignificant values; good validity and reliability with factor loadings from 0.41-0.81 were displayed (Table 3).

The sample in this study was N=193 for Model-1 and N=192 for Model-2, which are considered “medium”-toward large sized samples (Harrington 2009, Kline 2005, Schumacker & Lomax 2004). However, considering the model complexity, a rule of thumb is one variable per ten subjects (*ibid.*). Model-2 comprises 18 variables, indicating a desirable N=180, thus N=192 exceeds this threshold. Information input to the SEM estimation increases both with more indicators per latent variable, as well as with more sample observations (Westland 2010). The latent variables in the model are measured by four, six, and eight indicators which strengthen the reliability. In this respect, the sample size in the present study is suitable. Nevertheless, a larger sample would significantly increase statistical power of the tests. The present sample included fewer men than women, reflecting the gender composition among the population of that age in NHs.

Strengths and limitations of the study

A notable strength of this research is the empirical examination of models and measures that have not been tested previously, and the new insights into ST associated to nurse-patient-interaction. Furthermore the present study provides validation of the NPIS showing high internal reliability and content validity. Development of a nurse-patient interaction scale reliable and valid to a NH population is of great importance. Nevertheless, the findings from this study must be interpreted in the light of some limitations. The fact that the researchers visited the participants to help fill in the questionnaires might have introduced some bias into the respondents' reporting. Participants might feel vulnerable and embarrassed when asked to evaluate and report their personal experiences of the staff nurses' caring behaviour. The STS and the NPIS were part of a battery of questionnaires comprising 130 items. Thus, frail, older NH patients might tire when completing the questionnaires; this represents a possible bias to

their reporting. To avoid such a bias, experienced researchers were carefully selected and trained in conducting the interviews following a standardised procedure, including taking small breaks at specific points during the process. Additionally, the STS is translated into Swedish, and then to Norwegian; thus translating bias might influence the results, especially regarding item 15, which shows low reliability.

CONCLUSION

The NPIS shows sound psychometric properties. Although limited by a cross-sectional design, the present study provides evidence that the nurse-patient interaction positively and significantly affects ST in cognitively intact NH patients. Both the intrapersonal and the interpersonal ST aspects were significantly influenced by the staff nurses' communication and relational behaviour. Consequently, the quality of the staff nurses' interaction with their patients has a great impact on patient's ST and thereby on their well-being.

RELEVANCE TO CLINICAL NURSING

The present study suggests that nurses' interactional behaviour affects NH patients' ST and thereby well-being multidimensionally (Haugan *et al.* 2012c). Consequently, NH staff nurses need to be aware of and focus on their interaction behaviour as a resource for facilitating ST and well-being; physically, emotionally, functionally, spiritually, and socially (ibid.). Nurses are increasingly aware that good nursing care consists of more than the competent performance of a number of nursing activities. However, for many nurses it is much less clear what this "more" means and what importance it has in nursing. The present study reveals that nurses contribute to NH patients' ST, when listening interestingly to the resident, communicating, and treating the patients with respect, by empathic understanding, and acknowledging the resident as a human person who is to be taken seriously and being attended to. Accordingly, facilitating nursing intervention to provide patients' ST would promote well-being and prevent frustration and suffering. Educational nursing curricula

should underline and facilitate nurse-patient interaction and caring behaviour. Nursing research and education should pay more attention to NH patients' perceptions of good nursing to develop a more comprehensive and practice-based view on good nursing care that really inspires NH staff nurses as they perform their daily care practices.

REFERENCES

- Appleton C (1993): The art of nursing: the experience of patients and nurses. *Journal of Advanced Nursing* **1993**, 892-899.
- Asmuth MV (2004) Developing and sustaining interpersonal relationships between certified nursing assistants and residents in long-term care facilities University of South Florida, p. 149p.
- Austgard KI (2008): What characterises nursing care? A hermeneutical philosophical inquiry. *Scandinavian Journal of Caring Science* **22**, 314-319.
- Author Y, Espnes GA, Rannestad T, Hammervold R & Garåsen H (2011): Self-Transcendence in Nursing Home Patients: A Resource for Well-Being.
- Bean KB & Wagner K (2006): Self-transcendence, illness distress, and quality of life among liver transplant recipients. *Journal of Theory Construction & Testing* **10**, 47-53.
- Clarke A, Jane Hanson E & Ross H (2003): Seeing the person behind the patient: enhancing the care of older people using a biographical approach. *Journal of Clinical Nursing* **12**, 697-706.
- Coward D & Reed P (1996): Self-Transcendence; a Source for Healing at the End of Life. *Issues Mental Health Nursing* **17**, 162-188.
- Coward DD (1990): The lived experiences of self-transcendence in women with advanced breast cancer. *Nursing Science Quarterly* **3**, 162-169.
- Coward DD (1991): Self-Transcendence and Emotional Well-Being in Women with Advanced Breast Cancer. *Oncology Nursing Forum* **18**, 857-863.
- Coward DD (1995): The Lived Experience of Self-Transcendence in a Breast Cancer Support group: II. *Oncology Nursing Forum* **30**, 291-300.
- Coward DD (1996): Self-transcendence and correlates in a healthy population. *Nursing Research* **45**, 116-121.
- Coward DD (2003): Facilitation of Self-Transcendence in a Breast Cancer Support Group: II. *Oncology Nursing Forum* **30**, 291-300.
- Diamantopolous A & Siguaw J (2008) *Introducing LISREL*. SAGE Publications Ltd, Los Angeles - London - New Dehli - Singapore.
- Drageset J (2009) Health-related quality of life among nursing home residents. Department of Public Health and Primary Health Care, Section of Nursing Sciences, University of Bergen, Bergen, p. 1 b. (flere pag.).
- Eriksson K (1995a) *Det Lidende Menneske (The Suffering Human Being)*. TANO AS, Otta.
- Eriksson K (1995b) Mot en Caritativ Vårdetik (Towards a Caritative Caring Ethics). In *VÅRDFORSKNING. Reports from the Department of Caring Science*. Åbo Akademi, Åbo.
- Eriksson K (2001) *Vårdvetenskap som akademisk disiplin [Caring science as academic discipline]*. Department of Caring Science, Åbo Akademi University, Vasa, Finland.
- Finch LP (2005): Nurses' communication with patients: examining relational communication dimensions and relationship satisfaction. *International Journal for Human Caring* **9**, 14-23.

- Finch LP (2006): Patients' communication with nurses: relational communication and preferred nurse behaviors. *International Journal for Human Caring* **10**, 14-22.
- Gastmans C, Dierickx de Casterlé B & Schotsmans P (1998): Nursing considered as moral practice: a philosophical-ethical interpretation of nursing. *Kennedy Institute Ethics Journal* **8**, 43-69.
- Guzzetta CE (2005) Holistic Nursing Research. In *Holistic Nursing. A Handbook for Practice*, 4th Edition edn (Dossey BM, Keegan L & Guzzetta CE eds.). Jones and Bartlett Publisher, Boston - Toronto - London - Singapore, pp. 211-228.
- Harrington D (2009) *Confirmatory factor Analysis*. Oxford University Press, Oxford - New York.
- Haugan G, Rannestad T, Garåsen H, Hammervold R & Espnes G (2012a): The Self-Transcendence Scale - An Investigation of the Factor Structure Among Nursing Home Patients. *Journal of Holistic Nursing* **30**, 147-159.
- Haugan G, Rannestad T, Hammervold R, Garåsen H & Espenes G (2012b): The relationships between self-transcendence and spiritual well-being in cognitively intact nursing home patients. *International Journal of Older People Nursing* **doi: 10.1111/opn.12018, in press**.
- Haugan G, Rannestad T, Hammervold R, Garåsen H & Espnes GA (2012c): Self-transcendence in nursing home patients - a resource for well-being. *Journal of Advanced Nursing* **DOI: 10.1111/j.1365-2648.2012.06106.x in press**
- Haugan Hovdenes G (1998): Et meningsfullt liv i sykehjemmet - tross alt. [A meaningful life in the nursing home - after all.]. *OMSORG - Nordisk Tidsskrift for Palliativ Medisin [CARING - Nordic Journal of Palliative Medicine]*, 70-74.
- Haugan Hovdenes G (2002): The Nurse-patient-relationship in nursing homes: fulfillment or destruction [Pleier-pasient-relasjonen i sykehjem: virkeliggjørelse eller tilintetgjørelse]. *Nordic Journal of Nursing Research & Clinical Studies/Vård i Norden* **publ. no.65, vol 22**, 21-26.
- Heliker D (2009): Enhancing Relationships in Long-term Care Through Story Sharing. *Journal of Gerontological Nursing* **35**, 43-49.
- Hollinger-Samson N & Pearson JL (2000): The relationships between staff empathy and depressive symptoms in nursing home residents. *Aging and Mental Health* **4**, 56-65.
- Hoshi M (2008) Self-transcendence, vulnerability, and well-being in hospitalized Japanese elders. University of Arizona, p. 231.
- Hu L & Bentler P (1998): Fit Indices in Covariance Structure Modeling: Sensitivity to Underparametrized Model Misspecification. *Psychological Methods* **3**, 424-453.
- Jonas-Simpson C, Mitchell GJ, Fisher A, Jones G & Linscott J (2006): The experience of being listened to: a qualitative study of older adults in long-term care settings. *Journal of Gerontological Nursing* **32**, 46-53.
- Jøreskog K & Sörbom D (1995) *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language*. Scientific Software International, Chicago.
- Kline R (2005) *Principles and Practice of Structural Equation Modeling*, Second Edition edn. The Guilford Press, London.
- Krohn B & Bergman-Evans B (2000): An Exploration of Emotional Health in Nursing Home Residents: Making the Pieces Fit. *Applied Nursing Research* **13**, 214-217.
- Levy-Malmberg R, Eriksson K & Lindholm L (2008): Caritas -- caring as an ethical conduct. *Scandinavian Journal of Caring Sciences* **22**, 662-667.
- Luleci E, Hey W & Subasi F (2008): Assessing selected quality of life factors of nursing home residents in Turkey. *Archives of Gerontology and Geriatrics* **46**, 57-66.
- Martinsen K (1989) *Omsorg, sykepleie og medisin [Care, nursing and medicine]*. TANO, Oslo.

- Martinsen K (1993) *Fra Marx til Løgstrup. Om etikk og sanselighet i sykepleien (From Marx to Løgstrup. About ethics and awareness in nursing)*. TANO A.S., Otta.
- McGilton KS & Boscart VM (2007): Close care provider-resident relationships in long-term care environments. *Journal of Clinical Nursing* **16**, 2149-2157.
- Mellors M, Riley T & Erlen J (1997): HIV, Self-transcendence, and Quality of Life. *Journal of the Association of Nurses in AIDS care* **82**, 59-69.
- Murphy F (2006): Loneliness: a challenge for nurses caring for older people. *Nursing Older People* **June 8**, 22-25.
- Nakrem S, Vinsnes AG & Seim A (2011): Residents' experiences of interpersonal factors in nursing home care: A qualitative study. *International Journal of Nursing Studies* **Nov; 48**, 1357-1366.
- Neuman B (1995) *The Neuman Systems Model*, 3rd Edition edn. Appleton & Lange, Norwalk, Connecticut.
- Nygren B, Alex L, Jonsen E, Gustafson Y, Norberg A & Lundman B (2005): Resilience, sense of coherence, purpose in life and self-transcendence in relation to perceived physical and mental health among the oldest old. *Aging and Mental Health* **9**, 354-362.
- Nåden D & Eriksson K (2004): Understanding the Importance of Values and Moral Attitudes in Nursing Care in Preserving Human Dignity. *Nursing Science Quarterly* **17**, 86-91.
- Nåden D & Sæteren B (2006): Cancer Patients' Perception of Being or Not Being Confirmed. *Nursing Ethics* **13**, 222-235.
- Pipe T, Hansen R, Hentz J & Hartsell Z (2010): Rediscovering the art of healing connection by creating the Tree of Life poster. *Journal of Gerontological Nursing* **Jun; 36**, 2010.
- Rchaidia L, Dierckx de Casterlé B, De Blaeser L & Gastmans C (2009): Cancer Patients' Perceptions of the Good Nurse: a Literature Review. *Nursing Ethics* **16**, 528-542.
- Reed PG (1986): Developmental resources and depression in the elderly. *Nursing Research* **35**, 368-374.
- Reed PG (1991a): Self-transcendence and mental health in oldest-old adults. *Nursing Research* **40**, 5-11.
- Reed PG (1991b): Toward a nursing theory of self-transcendence: Deductive reformulation using developmental theories. *Adv Nurs Sci* **13**, 64-77.
- Reed PG (1997) The place of transcendence in nursing's science of unitary human beings: Theory and research. In *Patterns of Rogerian knowing* (Madrid M ed.). National League for Nursing Press, New York.
- Reed PG (2008) Theory of Self-Transcendence. In *Middle Range Theory for Nursing* (Smith MJ & Liehr PR eds.). Springer Publishing Company, LLC, New York, pp. 105-129.
- Reed PG (2009a): Demystifying Self-Transcendence for Mental Health Nursing Practice and Research. *Archives of Psychiatric Nursing* **23**, 397-400.
- Reed PG (2009b) Nursing: The Ontology of the Discipline. In *Perspectives on Nursing Theory*, 5th Edition edn (Reed PG & Shearer NBC eds.). Wolters Kluwer - Lippincott Williams & Wilkins, Philadelphia - Baltimore - New York - London - Buenos Aires - Hong Kong - Sydney - Tokyo, pp. 615-620.
- Runquist JJ & Reed PG (2007): Self-transcendence and well-being in homeless adults. *Journal of Holistic Nursing* **25**, 5-13.
- Sattora A & Bentler P (1994) Corrections to Test Statistics and Standard Errors in Covariance Structure Analysis. In *Latent variables analysis: Applications for developmental research* (Von Eye A & Cloggs C eds.). CA:Sage, Thousand Oaks, pp. 399-419.
- Schermelleh-Engel K, Moosbrugger H & Müller H (2003): Evaluating the Fit of Structural Equation Models: Tests of Significance and Descriptive Goodness-of-Fit Measures. *Methods of Psychological Research* **8**, 23-74.

- Schumacker RE & Lomax RG (2004) *A Beginner's Guide to STRUCTURAL EQUATION MODELING*, Second Edition edn. Psychology Press, Taylor & Francis Group, New York.
- Scocco P, Rapattoni M & Fantoni G (2006): Nursing home institutionalization: a source of eustress or distress for the elderly? *Int J Geriatric Psychiatry* **21**, 281-287.
- Tabachnick BG & Fidell LS (2001) *Using Multivariate Statistics*. Allyn and Bacon, Boston.
- Teixera M (2008): Self-Transcendence, Spiritual Well-Being, and Spiritual Practices of Women With Breast Cancer. *Holistic Nursing Practice* **22**, 25-31.
- Thomas WH (1996) *Life Worth Living*. VanderWyk & Burnham, St. Louis, MO 63146.
- Travelbee J (1979) *Interpersonal Aspects of Nursing*, Second Edition edn. F.A. DAVIS COMPANY, Philadelphia.
- Watson J (1988) *Nursing: human science and human care. A theory of nursing*. National League for Nursing, New York.
- Watson J (1995): Postmodernism and knowledge development in nursing. *Nursing Science Quarterly* **8**, 60-64.
- Westland JC (2010): Lower bounds on sample size in structural equation modeling. *Electronic Commerce Research and Applications* **9**, 476-487.
- Williams B (2008) Rebirth: The Experience of Self-Transcendence in Patients who have undergone Stem Cell Transplantation. In *The College of Nursing at The College of Dentistry*. New York University, New York, p. 187.

FIGURES AND TABLES

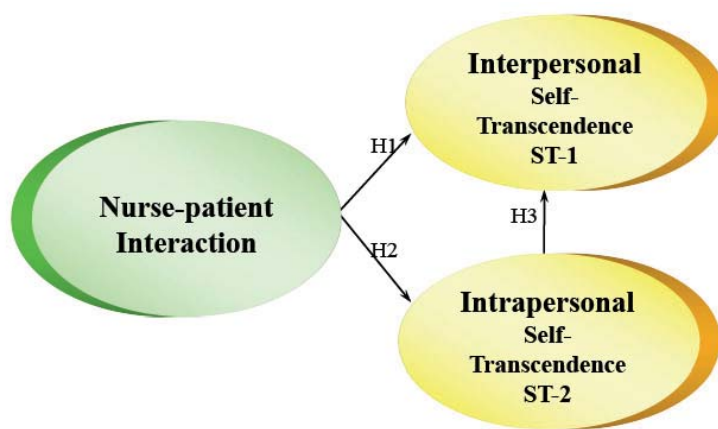


Figure 1. SEM-model and hypotheses to be tested

Note: H1=Hypothesis 1, H2=Hypothesis 2, H3=Hypothesis 3

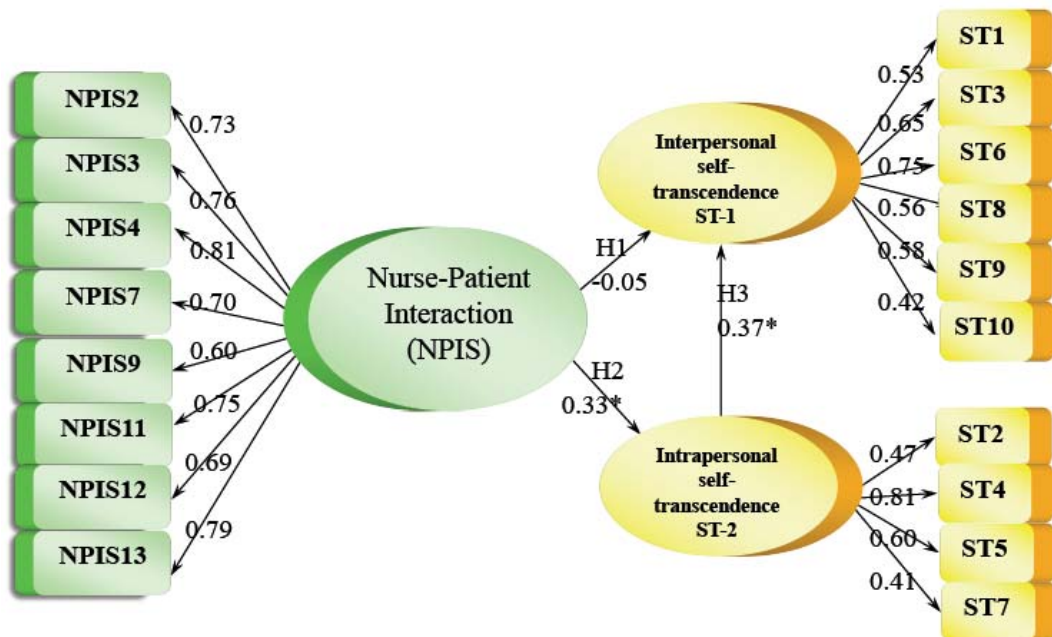


Figure 2. SEM Model-2. Measurement models and relationships between nurse-patient interaction and interpersonal and intrapersonal self-transcendence

Note: Measurement models:

- NPIS: NPIS2: “The nurses take me seriously”
 NPIS3: “Interaction with the nurses makes me feel good”
 NPIS4: “The nurses understand me”
 NPIS7: “The nurses treat me respectfully”
 NPIS9: “The nurses are listening interestingly to me”
 NPIS11: “Interaction with the nurses contributes to meaning in my life”
 NPIS12: “The nurses pay attention to me as a unique person”
 NPIS13: “I am satisfied with the communication with the nurses”
 ST-1: ST1: “Having hobbies and interests I can enjoy”
 ST3: “Being involved with other people or my community when possible”
 ST6: “Sharing my wisdom or experience with others”
 ST8: “Helping others in some way”
 ST9: “Having ongoing interest in learning something new”
 ST10: “Able to move beyond things that once seemed so important.”
 ST-2: ST2: “Accepting myself as I grow older”
 ST4: “Adjusting well to my present situation”
 ST5: “Adjusting well to changes in my physical abilities”
 ST7: “Finding meaning in my past experiences.”

Table 1. Exploratory Factor Analysis of the Nurse-Patient-Interaction Scale (NPIS).
Model-1(1 factor) and Model-2 (2 factors).

NPIS items	Model-1	Model-2	
NPIS1 Having confidence and trust in the nurses.	.667	.682	-.191
NPIS2 The nurses take me seriously.	.762	.769	-.089
NPIS3 Interaction with nurses makes me feel good.	.755	.764	-.100
NPIS4 The nurses understand how I feel.	.801	.799	.026
NPIS5 The nurses make all possible effort to relieve my plagues.	.680	.684	-.040
NPIS6 The nurses involve me in decisions regarding my daily life.	.609	.608	.010
NPIS7 The nurses treat me with respect.	.760	.767	-.079
NPIS8 The nurses ask me how I am.	.682	.672	.130
NPIS9 The nurses are listening interestingly to me.	.800	.786	.175
NPIS10 I often get hurt or sad from how the nurses interact with me.	-.468	.521	-.650
NPIS11 Interactions with the nurses contribute to meaning in my life.	.780	.763	.220
NPIS12 The nurses pay attention to me as a person.	.705	.699	.073
NPIS13 I am satisfied with the communication with the nurses.	.790	.785	.062
NPIS14 Interaction with nurses is the most important to my thriving.	.427	.375	.640
Cumulative variance explained	49.176	49.176	56.279

Cronbach's α NPIS 14 items

0.91

Note: Extraction Method: Principal Component Analysis. Model-1: Only one component was extracted. Model-2: Extraction Method: Principal Component Analysis Rotation Method: Promax with Kaiser Normalization. Rotation converged in 3 iterations.

Table 2. Confirmative Factor Analysis. Nurse-Patient-Interaction Scale (NPIS); standardized factor loadings and t-values. Squared Multiple Correlations (R^2) and composite reliability¹ (ρ_c).

Items	Parameter	Lisrel Estimate	t-value	R^2
NPIS1	λ_{x1}	0.63	6.28***	0.39
NPIS2	λ_{x2}	0.73	8.90***	0.54
NPIS3	λ_{x3}	0.73	9.98***	0.53
NPIS4	λ_{x4}	0.79	11.99***	0.62
NPIS5	λ_{x5}	0.65	6.24***	0.42
NPIS6	λ_{x6}	0.57	9.95***	0.32
NPIS7	λ_{x7}	0.73	8.69***	0.53
NPIS8	λ_{x8}	0.65	9.94***	0.42
NPIS9	λ_{x9}	0.78	15.10***	0.61
NPIS10	λ_{x10}	0.43	5.02***	0.18
NPIS11	λ_{x11}	0.76	11.50***	0.58
NPIS12	λ_{x12}	0.69	8.14***	0.47
NPIS13	λ_{x13}	0.77	9.40***	0.59
NPIS14	λ_{x14}	0.40	4.30***	0.16
ρ_c NPIS 14 items	ρ_c	0.82	-	-

Note. *** $p < 0.01$; ¹Composite Reliability $\rho_c = \frac{(\sum \lambda)^2}{[(\sum \lambda)^2 + \sum (\theta)]}$

Table 3. SEM-analysis. Model-2. Measurement models for the Nurse-Patient-Interaction Scale (NPIS), Interpersonal ST (ST-1) and Intrapersonal ST (ST-2); standardized factor loadings and t-values, squared multiple correlations (R^2). Composite reliability¹ (ρ_c) and Cronbach's alpha.

Items	Parameter	Lisrel Estimate	t-value	R^2
NPIS2	λ_{x2}	0.73	8.90***	0.54
NPIS3	λ_{x3}	0.73	9.98***	0.58
NPIS4	λ_{x4}	0.79	11.99***	0.66
NPIS7	λ_{x7}	0.73	8.69***	0.49
NPIS9	λ_{x9}	0.78	15.16***	0.36
NPIS11	λ_{x11}	0.76	11.50***	0.57
NPIS12	λ_{x12}	0.69	8.14***	0.47
NPIS13	λ_{x13}	0.77	9.40***	0.62
ST1	λ_{y1}	0.53	-	0.28
ST2	λ_{y2}	0.47	-	0.22
ST3	λ_{y3}	0.65	4.98***	0.42
ST4	λ_{y4}	0.81	3.76***	0.65
ST5	λ_{y5}	0.60	4.09***	0.36
ST6	λ_{y6}	0.75	5.38***	0.56
ST7	λ_{y7}	0.41	3.61***	0.17
ST8	λ_{y8}	0.56	4.63***	0.32
ST9	λ_{y9}	0.58	5.07***	0.34
ST10	λ_{y10}	0.42	4.05***	0.18
ρ_c NPIS 8 items	ρ_c	0.91	-	-
ρ_c ST-1 6 items	ρ_c	0.75	-	-
ρ_c ST-2 4 items	ρ_c	0.64	-	-
Cronbach's α NPIS 8 items		0.91	-	-
Cronbach's α ST-1 6 items		0.76	-	-
Cronbach's α ST-2 4 items		0.64	-	-

Note. ***p < 0.01; ¹ Composite Reliability $\rho_c = \frac{(\sum \lambda)^2}{[(\sum \lambda)^2 + \sum (\theta)]}$

Table 4. Goodness-of-fit indices for the 1-factor-model (Model-1) of the Nurse-Patient Interaction Scale (NPIS) and the two SEM-models of NPIS to ST: Model-2 and Model-3.

Fit Measure	Model-1 ¹ N=193	Model-2 ² N=192	Model-3 ³ N=192
χ^2 Satorra Bentler	92.32	147.98	272.45
p-value	0.0110	0.1619	0.0000
$\frac{\chi^2}{df}$ Satorra Bentler	1.1989	1.1211	2.0642
	Df=77	Df=132	Df=132
RMSEA	0.032	0.025	0.075
p-value (<i>close fit test</i>)	0.90	0.99	0.001
SRMR	0.045	0.059	0.110
NFI	0.97	0.94	0.88
NNFI	0.99	0.99	0.92
CFI	1.00	0.99	0.93
GFI	0.90	0.90	0.83
AGFI	0.86	0.87	0.78

Note. RMSEA=Root Mean Square Error of Approximation. SRMS=Standardized Root Mean Square Residual. NFI=Normed Fit Index. NNFI=Non-Normed Fit Index. CFI=The Comparative Fit Index. GFI=Goodness-of-Fit Index. AGFI=Adjusted Goodness-of-Fit Index. Df=Degrees of freedom ¹**Model-1:** 1-factor-model of the Nurse-Patient Interaction Scale (NPIS), 14 items. ²**Model-2:** comprising 10ST-items and 8NPIS-items. ³**Model-3:** comprising 10ST-items and 8NPIS-items, but causality reversed.

Table 5. SEM-analysis. Model-2¹. Standardized Beta² and Gamma³. Total⁴ and Indirect⁵ effects of Nurse-Patient-Interaction (NPIS) on NH patients' Self-Transcendence (ST).

Construct	Parameter	Lisrel Estimate	t-value
NPIS to ST-1	γ 1,1	-0.05	-0.56
NPIS to ST-2	γ 2,1	0.33	3.07**
ST-2 to ST-1	β 1,2	0.37	2.98**
Total effects of NPIS on ST			
NPIS on ST-1		0.07	0.77
NPIS on ST-2		0.33	3.07**
Indirect effects of NPIS on ST			
NPIS on ST-1		0.12	2.22*
NPIS on ST-2		-	-

Note. *Significant at the 5 % level. **Significant at the 0.1% level. ¹Model-2: comprising 10ST-variables and 8NPIS-variables. ²Beta; standardized regression coefficients representing directional relationships between the ST-factors. ³Gamma; standardized regression coefficients representing directional relationships between NPIS and ST. ⁴Total effects; represents the total influence of the explanatory variable on ST. ⁵Indirect effects; represents the influence of NPIS on ST mediated by intervening variables (mediators).

APPENDIX

Appendix 1. Measurement instrument; Self-Transcendence (ST) means score and standard deviation.

ST item	Total N=190		Men N=53		Women N=137	
	Mean	Sd	Mean	Sd	Mean	Sd
ST1 Having hobbies and interests I can enjoy.	2.42	.066	2.34	.893	2.45	.901
ST2 Accepting myself as I grow older.	3.10	.039	3.13	.581	3.09	.537
ST3 Being involved with other people or my community when possible.	2.65	.063	2.79	.894	2.60	.868
ST4 Adjusting well to my present life situation.	3.11	.043	3.21	.508	3.07	.624
ST5 Adjusting well to changes in my physical abilities.	2.89	.045	2.92	.640	2.88	.615
ST6 Sharing my wisdom or experience with others.	2.49	.057	2.45	.705	2.50	.829
ST7 Finding meaning in my past experience.	3.08	.047	3.13	.640	3.06	.669
ST8 Helping others in some way.	2.66	.059	2.75	.774	2.62	.832
ST9 Having ongoing interest in learning.	2.36	.069	2.57	.915	2.28	.971
ST10 Able to move beyond things that once seemed so important.	2.79	.056	2.74	.849	2.82	.765
ST11 Accepting death as a part of life.	3.11	.044	3.06	.621	3.12	.592
ST12 Finding meaning in my spiritual beliefs.	2.54	.073	2.36	1.001	2.61	.998
ST13 Letting others help me when I may need it.	3.24	.036	3.30	.548	3.21	.497
ST14 Enjoying my pace of life.	2.88	.045	2.91	.519	2.88	.653
ST15 Letting go of my past losses.	3.37	.059	3.20	.894	3.43	.758
ST: total means score	2.83	.352	2.85	.345	3.04	.355

Note: The STS is based on a 4-point scale ranging from 1 (not at all), 2 (very little), 3 (somewhat) to 4 (very much).

Appendix 2. Measurement instrument; Nurse-Patient-Interaction (NPIS) means score and standard deviation.

NPIS item	Total N=199		Men N=56		Women N=143	
	Mean	Sd	Mean	Sd	Mean	Sd
NPIS1 Having confidence and trust in the nurses ^a .	8.75	1.948	8.84	1.886	8.71	1.977
NPIS2 The nurses ^a take me seriously.	8.44	2.185	8.43	2.214	8.44	2.181
NPIS3 Interaction with the nurses ^a makes me feel good.	8.02	2.252	8.21	2.230	7.94	2.264
NPIS4 The nurses ^a understand me.	7.65	2.419	7.71	2.341	7.63	2.457
NPIS5 The nurses ^a make all possible effort to relieve my plagues.	8.80	1.969	9.02	1.753	8.71	2.047
NPIS6 The nurses ^a involve me in decisions regarding my daily life.	6.96	2.984	6.45	2.923	7.16	2.993
NPIS7 The nurses ^a treat me with respect.	8.68	2.175	8.70	2.097	8.68	2.213
NPIS8 The nurses ^a ask me how I am.	7.70	2.959	7.82	2.924	7.66	2.981
NPIS9 The nurses ^a are listening interestingly to me.	7.47	2.743	7.74	2.474	7.37	2.840
^b NPIS10 I often get hurt or sad from how the nurses ^a interact.	8.29	2.510	8.15	2.825	8.35	2.386
NPIS11 Interaction with the nurses ^a contributes to meaning in my life.	7.83	2.531	8.04	2.449	7.75	2.567
NPIS12 The nurses ^a pay attention to me as a person.	8.07	2.266	8.13	2.281	8.05	2.268
NPIS13 I am satisfied with the communication with the nurses ^a .	8.32	2.126	8.54	2.097	8.23	2.138
NPIS14 Interaction with nurses ^a is the most important to my thriving.	8.86	2.066	9.09	1.890	8.78	2.131
NPIS: total means score	8.13	1.630	8.21	1.654	8.11	1.626

Note: The NPIS is based on a 10-point scale ranging from 1 (not at all) to 10 (very much). ^aNurses: the concept nurses involve all of the staff nurses. ^bThe item NPIS10 is reversed

SUPPLEMENTAL INFORMATION - APPENDIX

- APPENDIX 1: The self-transcendences measurement instrument
- APPENDIX 2: The Functional Assessment of Chronic Therapy-General (FACT-G) measurement instrument
- APPENDIX 3: The Functional Assessment of Chronic Illness Therapy-Spiritual well-being (FACIT-Sp) measurement instrument
- APPENDIX 4: The Nurse-Patient-Interaction measurement instrument
- APPENDIX 5: Brev av 29.03.2007 Norsk samfunnsvitenskapelig datatjeneste (NSD):
TILRÅDING AV BEHANDLING AV PERSONOPPLYSNINGER [Letter dated
03/29/2007 Norwegian Social Science Data Services (NSD):
RECOMMENDATIONS OF THE PROCESSING OF PERSONAL DATA]
- APPENDIX 6: Brev av 10.04.2007 Regional komite for medisinsk forskningsetikk (REK)
Helseregion Midt-Norge [Letter dated 10.04.2007 Regional Committee for
Medical Research Ethics (REK) in Middle Norway]
- APPENDIX 7: Brev av 03.12.2008 Regional komite for medisinsk forskningsetikk (REK)
[Letter dated 03.12.2008 Regional Committee for Medical Research Ethics
(REK)]
- APPENDIX 8: Informasjonsskriv til potensielle deltagere i studien [Information note to potential
participants in the study]
- APPENDIX 9: Samtykke-erklæring [Consent Statement]

Appendix 1

Measurement instrument; self-transcendence (ST) means score and standard deviation.

ST item	Total N=190		Men N=53		Women N=137	
	Mean	Sd	Mean	Sd	Mean	Sd
ST1 Having hobbies and interests I can enjoy.	2.42	.066	2.34	.893	2.45	.901
ST2 Accepting myself as I grow older.	3.10	.039	3.13	.581	3.09	.537
ST3 Being involved with other people or my community when possible.	2.65	.063	2.79	.894	2.60	.868
ST4 Adjusting well to my present life situation.	3.11	.043	3.21	.508	3.07	.624
ST5 Adjusting well to changes in my physical abilities.	2.89	.045	2.92	.640	2.88	.615
ST6 Sharing my wisdom or experience with others.	2.49	.057	2.45	.705	2.50	.829
ST7 Finding meaning in my past experience.	3.08	.047	3.13	.640	3.06	.669
ST8 Helping others in some way.	2.66	.059	2.75	.774	2.62	.832
ST9 Having ongoing interest in learning.	2.36	.069	2.57	.915	2.28	.971
ST10 Able to move beyond things that once seemed so important.	2.79	.056	2.74	.849	2.82	.765
ST11 Accepting death as a part of life.	3.11	.044	3.06	.621	3.12	.592
ST12 Finding meaning in my spiritual beliefs.	2.54	.073	2.36	1.001	2.61	.998
ST13 Letting others help me when I may need it.	3.24	.036	3.30	.548	3.21	.497
ST14 Enjoying my pace of life.	2.88	.045	2.91	.519	2.88	.653
ST15 Letting go of my past losses.	3.37	.059	3.20	.894	3.43	.758
ST: total means score	2.93	.352	2.85	.345	3.04	.355

Note: The STS is based on a four-point scale ranging from 1 (*not at all*), 2 (*very little*), 3 (*somewhat*) to 4 (*very much*).

Appendix 2

Well-being (FACT-G) mean-score and standard deviation (*S.D.*)

FACT-G Items	Mean	S.D.
PWB1 I have lack of energy.	2.66	1.22
PWB2 I have nausea.	3.72	.750
PWB3 Because of my physical condition, I have trouble meeting the needs of my family.	2.75	1.56
PWB4 I have pain.	2.97	1.31
PWB5 I am bothered by side effects.	3.82	.621
PWB6 I feel ill.	3.37	.968
PWB7 I am forced to spend time in bed.	3.28	1.13
SWB8 I feel close to my friends.	1.73	1.30
SWB9 I get emotional support from my family.	2.67	1.15
SWB10 I get support from my friends.	1.39	1.30
SWB11 My family has accepted my life situation.	2.88	.881
SWB12 I am satisfied with family communication about my situation.	2.56	1.10
SWB13 ^a I feel close to my partner or the person who is my support.	2.04	1.69
SWB14 ^a I am satisfied with my sex life.	1.95	.848
EWB15 I feel sad.	3.06	1.11
EWB16 I am satisfied with how I am coping with my situation.	2.72	.825
EWB17 I am losing hope in this life situation.	3.43	1.04
EWB18 I feel nervous.	3.47	.917
EWB19 I worry about dying.	3.70	.685
EWB20 I worry about that my condition will get worse.	2.85	1.18
FWB21 ^a I am able to work (include work at home).	0.63	1.02
FWB22 ^a My work (include work at home) is fulfilling.	0.91	1.39
FWB23 I am able to enjoy life.	1.85	1.02
FWB24 I have accepted my situation.	2.56	.980
FWB25 I am sleeping well.	2.60	1.09
FWB26 I am enjoying the things I usually do for fun.	2.28	1.08
FWB27 I am content with the quality of my life right now.	2.09	1.03

Note: The FACT-G is based on a five-point ranging from 0 (*not at all*), 1 (*a little bit*), 2 (*somewhat*), 3 (*quite a bit*) and 4 (*very much*). ^aItems excluded as irrelevant.

Appendix 3

Measurement instrument; FACIT-Sp mean-score and standard deviation.

FACIT-SP item	Total N=186		Men N=51		Women N=135	
	Mean	SD	Mean	SD	Mean	SD
FACIT-Sp1 I feel peaceful.	2.23	.985	2.21	1.057	2.24	.959
FACIT-Sp2 I have a reason for living.	2.26	1.141	2.21	1.140	2.28	1.146
FACIT-Sp3 My life has been productive.	2.99	.791	2.96	.785	2.99	.795
FACIT-Sp4 ^a I have trouble feeling peace of mind.	3.42	1.004	3.49	.998	3.39	1.001
FACIT-Sp5 I feel a sense of purpose in my life.	1.86	1.132	1.79	1.155	1.88	1.125
FACIT-Sp6 I am able to reach down deep into myself for comfort.	1.84	1.137	1.66	1.109	1.91	1.143
FACIT-Sp7 I feel a sense of harmony within myself.	2.06	1.083	1.98	0.981	2.08	1.123
FACIT-Sp8 ^a My life lacks meaning and purpose.	2.90	1.145	2.80	1.123	2.93	1.153
FACIT-Sp9 I find comfort in my faith or spiritual beliefs.	1.86	1.374	1.36	1.324	2.05	1.345
FACIT-Sp10 I find strength in my faith or spiritual beliefs.	1.83	1.364	1.44	1.344	1.98	1.346
FACIT-Sp11 My illness has strengthened my faith or spiritual beliefs.	0.91	1.123	0.78	1.066	0.96	1.144
FACIT-Sp12 I know that whatever happens with my illness/situation, things will be okay.	2.17	1.083	2.09	1.143	2.19	1.063
FACIT-Sp MEANING mean score	2.50	0.744	2.45	0.715	2.52	0.756
FACIT-Sp PEACE mean score	2.39	0.741	2.33	0.722	2.42	0.750
FACIT-Sp FAITH mean score	1.69	0.964	1.41	0.937	1.80	0.970
FACIT-Sp: total means score	2.19	0.624	2.05	0.615	2.24	0.621

Note: The FACIT-SP (Spiritual Well-Being) is based on a 5-point scale ranging from 0 (*not at all*) to 4 (*very much*). ^aItem is reverse scored. Listwise N=186.

Appendix 4

Measurement instrument; Nurse-Patient-Interaction mean-scores and standard deviation.

NPIS item	Total N=199		Men N=56		Women N=143	
	Mean	Sd	Mean	Sd	Mean	Sd
NPIS1 Having confidence and trust in the nurses ^a .	8.75	1.948	8.84	1.886	8.71	1.977
NPIS2 The nurses ^a take me seriously.	8.44	2.185	8.43	2.214	8.44	2.181
NPIS3 Interaction with the nurses ^a makes me feel good.	8.02	2.252	8.21	2.230	7.94	2.264
NPIS4 The nurses ^a understand me.	7.65	2.419	7.71	2.341	7.63	2.457
NPIS5 The nurses ^a make all possible effort to relieve my plagues.	8.80	1.969	9.02	1.753	8.71	2.047
NPIS6 The nurses ^a involve me in decisions regarding my daily life.	6.96	2.984	6.45	2.923	7.16	2.993
NPIS7 The nurses ^a treat me with respect.	8.68	2.175	8.70	2.097	8.68	2.213
NPIS8 The nurses ^a ask me how I am.	7.70	2.959	7.82	2.924	7.66	2.981
NPIS9 The nurses ^a are listening interestingly to me.	7.47	2.743	7.74	2.474	7.37	2.840
^b NPIS10 I often get hurt or sad from how the nurses ^a interact.	8.29	2.510	8.15	2.825	8.35	2.386
NPIS11 Interaction with the nurses ^a contributes to meaning in my life.	7.83	2.531	8.04	2.449	7.75	2.567
NPIS12 The nurses ^a pay attention to me as a person.	8.07	2.266	8.13	2.281	8.05	2.268
NPIS13 I am satisfied with the communication with the nurses ^a .	8.32	2.126	8.54	2.097	8.23	2.138
NPIS14 Interaction with nurses ^a is the most important to my thriving.	8.86	2.066	9.09	1.890	8.78	2.131
NPIS: total means score	8.13	1.630	8.21	1.654	8.11	1.626

Note: NPIS=Nurse-Patient Interaction Scale. The NPIS is based on a 10-point scale ranging from 1 (*not at all*) to 10 (*very much*). ^aNurses: the concept nurses involve all of the staff nurses. ^bThe item NPIS10 is reversed

Appendix 5

Norsk samfunnsvitenskapelig datatjeneste AS
NORWEGIAN SOCIAL SCIENCE DATA SERVICES



Harald Hårfagre gate 29
N-5007 Bergen
Norway
Tel: +47-55 58 21 17
Fax: +47-55 58 96 50
nsd@nsd.uib.no
www.nsd.uib.no
Org.nr: 985 321 884

Gørill Haugan
Institutt for sosialt arbeid og helsevitenskap
NTNU
Dragvoll
7491 TRONDHEIM

Vår dato: 29.03.2007

Vår ref: 16443/SM

Deres dato:

Deres ref:

TILRÅDING AV BEHANDLING AV PERSONOPPLYSNINGER

Vi viser til melding om behandling av personopplysninger, mottatt 23.02.2007. Meldingen gjelder prosjektet:

16443	<i>Livskvalitet hos langtidspasienter i sykehjem</i>
Behandlingsansvarlig	<i>NTNU, ved institusjonens overste leder</i>
Daglig ansvarlig	<i>Gørill Haugan</i>

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, eventuelle kommentarer samt personopplysningsloven/-helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget skjema, <http://www.nsd.uib.no/personvern/endingsskjema>. Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en offentlig database, <http://www.nsd.uib.no/personvern/database/>

Personvernombudet vil ved prosjektets avslutning, 01.12.2010 rette en henvendelse angående status for behandlingen av personopplysninger.

Vennlig hilsen


Vigdis Namtvedt Kvalheim


Siv Midthassel

Kontaktperson: Siv Midthassel tlf: 55 58 83 34

Vedlegg: Prosjektvurdering

Avdelingskontorer / District Offices:

OSLO: NSD, Universitetet i Oslo, Postboks 1055 Blindern, 0316 Oslo. Tel: +47-22 85 52 11. nsd@uio.no
TRONDHEIM: NSD, Norges teknisk-naturvitenskapelige universitet, 7491 Trondheim. Tel: +47-73 59 19 07. kjrrre.svarva@svt.ntnu.no
TROMSØ: NSD, SVF, Universitetet i Tromsø, 9037 Tromsø. Tel: +47-77 64 43 36. rsdmaa@svt.uit.no

Appendix 6

NTNU
Norges teknisk-naturvitenskapelige
universitet

Det medisinske fakultet
Regional komite for medisinsk forskningsetikk
Helseregion Midt-Norge



Professor Geir Arild Espnes

Saksbehandler
Seniorkonsulent Jacob Hølen
Telefon 73 86 72 72
Epost: jacob.chr.holen@ntnu.no
rek-4@ntnu.no
Postadresse: Det medisinske fakultet
Medisinsk teknisk forskningssenter
7489 Trondheim
Besøksadr: ISM, Røde Kors 3 etg.
St.Olavs Hospital

Vår dato:
10.04.2007

Vår ref.:
4.2007.645

Deres dato:

Deres ref.:

Livskvalitet hos langtidspasienter i sykehjem.

Komiteen vurderte prosjektet i møte 23. mars 2007 med følgende merknader og tilråding:

Målsetningen er å beskrive langtids sykehjemspasienters livskvalitet. Hvordan har pasientene det? Hvilke behov er ivaretatt - hvilke behov er ikke ivaretatt? Man ønsker å utforske eventuelle sammenhenger mellom sykehjemspasientens fysiske og åndelige funksjon; for eks. hvordan samvarierer pasientens fysiske plager som smerte, kvalme, fatigue etc. med åndelige kvaliteter som håp, mening, selv-transcendens? Det skal kartlegges hvordan sykehjemspasienten vurderer sentrale kvaliteter i pasient-pleier-relasjonen. Man skal bidra til en utvidelse av den bio-psyko-sosiale modellen for helse til en biopsykososial-åndelig modell for helsearbeid. Til slutt ønsker man å veilede sykehjemspersonell og sykepleiestudenter for å videreutvikle den kliniske sykehjemssorgens kvalitet. Undersøkelsen er en tverrsnittundersøkelse. Data samles inn ved at deltakerne sammen med forsker fyller ut validerte spørreskjema.

Følgende spørreskjema er aktuell for studien:

1. EORTC QLQ-C15-PAL, FACT-G:27, FACIT-Sp-12, HERTHS HÅPS-INDEKS, SELF-TRANSCENDENCE SCALE (STS), Purpose In Life-test-20 items, HADS: Hospital Anxiety and Depression Scale, Family and Friendship Contact Scale-8, VAS-skala PASIENT-PLEIER-RELASJONEN.

Det er planlagt å gjennomføre en pilot-test for å vurdere hvordan spørsmålene fungerer samt hvor lang tid utfyllingen tar. Ut fra disse erfaringene gjøres en utvalgelse av spørreskjema blant de 9 ovenfor nevnte. Studien har to utvalg: et bestående av 200 kognitivt intakte langtidspasienter i sykehjem, og et utvalg av sykepleiere i sykehjem.

- Komiteen viser til prosjektprotokollen og et sentralt spørsmål er hvordan samtykkekompetansen til potensielle deltakere skal vurderes. Komiteens foreslag er at samtykkekompetansen vurderes av tilsynslegen i samarbeide med den sykepleier som kjenner pasienten best.
- Komiteen stiller spørsmål ved om responsbyrden er for stor for denne pasientgruppen da det legges opp til at de skal besvare et stort antall relativt kompliserte spørreskjemaer.

Postadresse
Medisinsk teknisk forskningssenter
7489 Trondheim
dmf-post@medisin.ntnu.no

Besøksadresse
Medisinsk teknisk forskningssenter
Olav Kyrres gt 3
www.medisin.ntnu.no

Telefon +47 73 59 88 59
Telefaks +47 73 59 88 65
Org. nr. 974 767 880

Side 1 av 2
4.2007.645.doc

- Komiteen vurderer dette som en pilot-studie og en eventuell hovedstudie må fremlegges komiteen på nytt.
- Komiteen viser til informasjonsskrivet som må gjøres mindre førende. Jeg-formen fjernes og appellerende utsagn bør utelates.
- Det må stå at studien er meldt til Norsk Samfunnsvitenskapelig Datatjeneste (NSD) og Regional komité for Medisinsk Forskningsetikk, Midt-Norge.
- Nytt skriv må sendes inn og godkjennes på fullmakt før studien settes i gang.

Tilråding:

"Komiteen godkjenner at prosjektet gjennomføres med de merknader som er gitt."

Med hilsen


Arne Sandvik
Professor
Leder i komiteen


Jacob C Hølen
Seniorkonsulent

Appendix 7

NTNU
Norges teknisk-naturvitenskapelige
Universitet

Det medisinske fakultet
Regional komité for medisinsk og
helsefaglig forskningsetikk
Helseregion Midt-Norge



Professor Geir Arild Espnes

Saksbehandler
Seniorrådgiver Arild Hals
Telefon 73 59 75 06
Epost: Arild.Hals@ntnu.no
rek-4@medisin.ntnu.no
Postadresse: Det medisinske fakultet
Medisinsk teknisk forskningscenter
7489 Trondheim
Besøksadr: Bygg for samfunnsmedisin, 5.etg.
Håkon Jarls gt. 11

Vår dato:
3. desember 2008

Vår ref.:
4.2007.645

Deres dato:

Deres ref.:

Livskvalitet hos langtidspasienter i sykehjem"


Komiteen viser til endringsmelding fra prosjektleder hvør han har kommentert og gjort greie for de endringer som er gjennomført. Opplegget er justert og de merknader som komiteen hadde ved første gangs behandling er slik komiteen nå ser det stort sett tatt hensyn til. Det er gjennomført en pilot med 28 intervju, og erfaringer fra dette vil bli tatt med når hovedstudien settes i gang.

Vedtak:

"Regional komité for medisinsk og helsefaglig forskningsetikk, Midt-Norge godkjenner de endringer det er gjort greie for i meldingen."

Vedtaket kan påklages og klagefristen er tre uker fra mottagelsen av dette brev, jf. fvl. §§ 28 og 29. Klageinstans er Den nasjonale forskningsetiske komité for medisin og helsefag (NEM), men en eventuell klage skal rettes til REK Midt-Norge. Avgjørelsen i NEM er endelig. Det følger av fvl. § 18 at en part har rett til å gjøre seg kjent med sakens dokumenter, med mindre annet følger av de unntak loven oppstiller i §§ 18 og 19.

Med hilsen


Arne Sandvik
Professor
Leder i komiteen


Arild Hals
Seniorrådgiver

Postadresse
Medisinsk teknisk forskningscenter
7489 Trondheim
dmf-post@medisin.ntnu.no

Besøksadresse
Medisinsk teknisk forskningscenter
Olav Kyrres gt 3
www.medisin.ntnu.no

Telefon +47 73 59 88 59
Telefaks +47 73 59 88 65
Org. nr. 974 767 880

Side 1 av 1
til 4.2007.645.doc

Appendix 8

Informasjonsskriv PASIENTER

Forespørsel om å delta i vitenskapelig undersøkelse om "Livskvalitet hos klare langtidspasienter i sykehjem".

Forskningsprosjektets hensikt er å beskrive og utforske livskvalitet hos pasienter i sykehjem. Prosjektet henvender seg til sykehjemsbeboere og ber om anledning til å samtale med den enkelte for å få svar på ca.130 spørsmål i et spørreskjema. Spørsmålene har faste svaralternativ hvor det krysses av for det svar som passer best. De handler om hvordan du har det; om du evt. har fysiske plager – hvilke plager, om du opplever håp og mening i ditt liv. Forskeren vil være til stede og evt. hjelpe deg i utfyllingen av skjemaene, som vil foregå på ditt værelse eller et annet passende rom ved sykehjemmet. Dette vil ta 1-1 1/2 time. Vårt møte vil skje etter avtale med deg på et passende tidspunkt. Bli du sliten underveis kan vi ta en pause, eller avtale nytt tidspunkt for å fortsette senere. Deltakelse vil også innebære at en sykepleier gir noen journalopplysninger og sin vurdering av pasientens livskvalitet.

Forsker er sykepleier, ansatt som 1.lektor ved Høgskolen i Sør-Trøndelag og doktorgradsstudent ved NTNU. Tillatelse til gjennomføring av prosjektet er innhentet fra kommunen. Studien er meldt til Personvernombudet for forskning, Norsk Samfunnsvitenskapelig Datatjeneste (NSD) og godkjent av Regional komité for Medisinsk Forskningsetikk, Midt-Norge. Prosjektet har en prosjektmedarbeider som er sykepleier og ansatt ved Høgskolen i Sør-Trøndelag. Forskerne har taushetsplikt, ingen opplysninger som publiseres skal kunne spores tilbake til deg som person. Ved prosjektslutt i 2010 destrueres de utfylte spørreskjemaene, navneliste og samtykkeerklæring. Indirekte personidentifiserbare opplysninger skal fjernes eller anonymiseres tilstrekkelig. *All deltagelse er frivillig.* Det står den enkelte fritt å trekke seg fra deltagelse også underveis i prosjektet uten å måtte begrunne dette. Deltakelse vil ikke påvirke behandlingen man får ved sykehjemmet.

Arbeidet med å samle inn opplysningene vil starte i mai 2007. Dine erfaringer og opplevelser kan medvirke til økt forståelse av norske sykehjemspasienters livskvalitet. Dersom du eller dine pårørende har spørsmål om undersøkelsen, kan du kontakte sykepleier ved din avdeling eller ta direkte kontakt med undertegnede på telefon 73 55 92 96 eller mobil: 975 03 375.

Trondheim, den 2007.

Vennlig hilsen

Gørill Haugan, Hist og NTNU
Doktorgradsstudent i helsevitenskap

Prof. Geir Arild Espnes, NTNU
Prosjektansvarlig

Appendix 9

Informasjonsskriv PASIENTER

SAMTYKKE-ERKLÆRING

Jeg har lest informasjonsskrivet og har hatt anledning til å stille spørsmål om prosjektet "*Livskvalitet hos klare langtidspasienter i sykehjem*". Jeg samtykker i å delta i prosjektet.

Sted: _____ den ____ / ____ /2007

Underskrift: