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## Dietetic documentation

*Content, language and the meaning of  
standardization in Swedish dietitians' patient record  
notes*

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### **Abstract**

Lövestam, E. 2015. Dietetic documentation. Content, language and the meaning of standardization in Swedish dietitians' patient record notes. *Digital Comprehensive Summaries of Uppsala Dissertations from the Faculty of Social Sciences* 118. 88 pp. Uppsala: Acta Universitatis Upsaliensis. ISBN 978-91-554-9359-2.

The aim of this thesis was to explore dietetic notes in Swedish patient records regarding content, language and the meaning of standardization.

Firstly, an audit instrument for dietetic notes in patient records, Diet-NCP-Audit, was elaborated and tested. The instrument, a 14-item scoring questionnaire based on the four steps of the Nutrition Care Process (NCP), proved to have high content validity and moderate to high inter- and intra-rater reliability. The instrument was then used in an evaluation of the content, language and structure of 147 Swedish dietetic notes. Although the nutrition intervention and some information about the evaluation were well documented, the overall result showed a need for improvement in several aspects of documentation, such as nutrition prescriptions, goals and the connection between problem-etiology-symptom.

After this, 30 of the audited dietetic notes were also included in a critical linguistic study exploring how the patients and dietitians were referred to in the notes. The dietetic notes contained several linguistic devices that impersonalized and passivized both the patient and the dietitian. Thus, the grammar of the dietetic notes did not enhance or reflect the patient-centered care and the active patient-caregiver relationship that is emphasized in most health care guidelines today.

Finally, a focus group study was performed. Swedish dietitians' experiences of the standardized Nutrition Care Process (NCP) and its connected terminology (NCPT) were explored and analyzed from the perspective of Habermas' system and lifeworld concepts. While recognizing many advantages with the NCP and NCPT, dietitians also expressed difficulties in combining the structured and standardized process and terminology with a flexible, patient-centered approach in nutrition care.

In summary, I argue that strategies for the improvement of dietetic documentation are needed. I also suggest that the NCP and NCPT play an essential role in dietetic professionalization. At the same time, however, this standardization may entail the risk of a reductionist view and difficulties regarding how to balance the different ideals of health care. Thus, there is a need for discussions concerning how to use and develop the NCP and dietetic language in a way that ensures the best possible care for the patient.

*Keywords:* Nutrition informatics, dietitians, Nutrition Care Process, patient records, professionalization

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*"It is more fun to talk with someone  
who doesn't use long, difficult words  
but rather short, easy words like  
"What about lunch?"*

–Winnie the Pooh



# List of Papers

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

- I. Lövestam E., Orrevall Y., Koochek A., Karlström B., Andersson A. (2014). Evaluation of a Nutrition Care Process-based audit instrument, the Diet-NCP-Audit, for documentation of dietetic care in medical records. *Scandinavian Journal of Caring Sciences* 28(2):390-397.
- II. Lövestam, E, Orrevall, Y., Koochek, A., Karlström, B., Andersson, A. (2015). Evaluation of Nutrition Care Process documentation in electronic patient records: Need of improvement. *Nutrition & Dietetics* 72(1):74-80.
- III. Lövestam, E., Fjellström, C., Koochek, A., & Andersson, A. (2015). The power of language on patient-centredness: linguistic devices in the dietetic notes of patient records. *International Journal of Applied Linguistics* 25(2):225-245.
- IV. Lövestam E, Orrevall Y, Koochek A, Andersson A. The struggle to balance system and lifeworld – Swedish dietitians' experiences of the Nutrition Care Process and standardized terminology. Submitted.

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# Contribution of authors

## Papers I and II

All authors were actively involved in the conception and design of the study. Elin Lövestam, Ylva Orrevall, Agneta Andersson and Afsaneh Koochek participated in the data collection. Elin Lövestam performed the statistical analysis of data and was responsible for drafting the manuscript. All authors contributed with continuous critical revision and interpretation of data.

## Paper III

All authors were actively involved in the conception and design of the study. A small sample of the data described in paper II was used. Elin Lövestam performed the linguistic analysis and interpretation in cooperation with Christina Fjellström and Agneta Andersson. Elin Lövestam was responsible for writing the manuscript. All authors contributed with continuous critical revision.

## Paper IV

All authors were actively involved in conception and design of the study. Elin Lövestam was responsible for data collection and transcribing, thematic analysis and the writing of the manuscript. All authors contributed with continuous critical revision and interpretation of data.

# Contents

Background.....	11
Introduction .....	11
Documentation and patient records in health care .....	12
Standardized care models and terminologies .....	14
Content in the patient record .....	17
Approaches used in patient record audits .....	18
Linguistic characteristics of the patient record.....	19
Critical perspectives of documentation practices in health care.....	21
Standardized care models and terminologies.....	22
The multiple role of the patient record in contemporary health care .....	23
Placing this thesis in the field of dietetics .....	24
Theoretical approaches .....	26
A social constructionist perspective.....	26
The patient record from a social constructionist perspective.....	27
Professionalization .....	28
Communicative action – system and lifeworld .....	30
Aims.....	32
Methods .....	33
Overview .....	33
Elaboration and evaluation of audit instrument (Paper I) .....	34
Elaboration of the instrument .....	34
Content validity and clarity tests .....	35
Inter- and intra-rater reliability tests .....	35
Evaluation of dietetic documentation (Paper II) .....	36
Sample .....	36
Procedure, analysis and statistical methods.....	37
Critical linguistic analysis of patient records (Paper III).....	38
Sample .....	38
Linguistic analysis .....	38
Focus group study (Paper IV) .....	40
Focus group discussions .....	40
Analysis .....	41
Ethical considerations .....	41

Findings .....	44
Paper I .....	44
Content validity and clarity .....	44
Reliability .....	44
Paper II .....	46
Documentation quality.....	46
Comparisons between hospitals and primary care centers .....	48
Comparisons between different patient groups .....	48
Paper III.....	48
Paper IV .....	49
Discussion.....	52
Principal findings .....	52
Discussion .....	52
Balancing reliability and validity in quality measurement .....	53
The content and clarity of dietetic documentation.....	55
The language and the patient .....	57
The standardized process and the individual patient .....	59
Professionalization and the NCP(T) .....	61
Dealing with different ideals in the contemporary patient record .....	63
Further methodological considerations.....	64
Conclusions.....	69
Continued research.....	71
Svensk sammanfattning .....	72
Acknowledgements.....	76
References.....	79
Appendix 1. Diet-NCP-Audit .....	88

# Abbreviations

NCP	Nutrition Care Process
NCPT	Nutrition Care Process Terminology
IDNT	International Dietetics and Nutrition Terminology (the former name of NCPT)
PES	Problem, Etiology and Signs/symptoms
AND	Academy of Nutrition and Dietetics
DRF	Dietisternas Riksförbund (Swedish Association of Clinical Dietitians)
EFAD	European Federation of the Associations of Dietitians
CVI	Content Validity Index
I-CVI	Item-related Content Validity Index
S-CVI	Scale-related Content Validity Index
CVI-UA	Content Validity Index Universal Agreement
CVI-Ave	Content Validity Index Average



# Background

## Introduction

In this thesis I have explored dietitians' notes in patient records from the perspective of quality improvement, but also from a critical perspective, questioning established norms and values in record writing. The dietetic note functions as a thinking facilitator and a memory note for the dietitian to organize and remember important information about a certain patient. It is also a tool for communication between the dietitian and her/his colleagues involved in the care of the patient, who may be dietitians or other health care professionals such as doctors or nurses. In addition, it is a tool for communication between the dietitian and the patient, as many patients can now access their own patient records (Socialdepartementet, 2008). Just like most other communication tools, the patient record has its own norms and rules, and it sends out several types of messages and signals simultaneously. In this thesis, I have explored some of these norms, and what types of messages the dietetic notes contain, as parts of the construction of the dietetic profession. I have taken into account both content and language, and looked at these from several different perspectives. The meaning of standardization in the patient record has played an essential role in this thesis, focusing on the Nutrition Care Process (NCP) and Nutrition Care Process Terminology (NCPT, formerly International Dietetic and Nutrition Terminology, IDNT), which is a standardized working framework and terminology that has been embraced by the dietetic profession in several parts of the world in recent years (Bueche et al., 2008a, 2008b).

I find the profession of the dietitian interesting from different aspects. Firstly, the dietitian works in health care, which is a world of its own with clear hierarchies and deeply rooted norms and value systems. The female dominated dietetic profession has many parallels to the nursing profession, whose struggle in the hierarchical health care area, often dominated by male doctors, has been described by, for example, Coombs (2004) and Salhani and Coulter (2009). However, the dietetic profession is much smaller, with only about 1200 clinical dietitians working in Swedish health care, as compared to 107 000 nurses (SCB, 2013). The dynamics between different professions in health care is a fascinating topic, just like the relation between the dietitian and the patient. Secondly, the dietitian's area of expertise is food, which is a complex phenomenon with numerous cultural, social and

physiological meanings (Germov, 2008). The symbolic and everyday meaning of food is important to most people, and this makes it very different from, for example, pharmaceutical drugs and medical treatment, which are the doctor's areas of expertise. The dietitian, representing health care, where a scientific and objective perspective is highly valued, and dealing with a topic so filled with symbols and so close to most people's everyday life, needs to be able to handle the clashes between different discourses and perspectives (Gingras, 2010).

I have chosen to look at the dietetic profession through the lens of patient records. Working on this thesis has been a journey for me where I started from more of a realist perspective, focusing on the measurable quality of patient records, and ended up in a critical constructionist perspective, highlighting and questioning the established norms in patient records and how the standardization of dietetic notes affects the dietetic profession as well as the patient. Thus, there have been clashing perspectives for me too.

This mix of approaches has brought with it some difficult decisions about how I should present the text in this thesis. Different research fields have different ways of writing, for example regarding the expressions and wordings that are acceptable to use and how research results should be presented. This has become very apparent to me in the work with this thesis, placing it and myself between two very different research perspectives. Dietetics is a young research field, and research about dietitians and dietetic notes in patient records is very limited. I have therefore searched for similar research in parallel fields such as nursing. Research in the dietetic, nursing and medical fields is often closely connected to a medical discourse, highlighting measurements and causal effects, and written in a language seen as objective or impersonal. Mixing this medical discourse with the more sociological, critical research about the cultural and symbolic meanings of the patient records in health care, where the researchers often write in the first person and in a more personal language, has made me think about my own use of language in this thesis. Acknowledging both the sociological and the medical approaches, I have used concepts and wordings from both traditions, trying to reach a balance between them.

## Documentation and patient records in health care

According to Swedish law, a patient record must be kept for each patient who has contact with the health care services, to document the care provided (Socialdepartementet, 2008). Although the main purpose of the patient record is to ensure safe and high quality care of the patient, it has also multiple cultural and social meanings, some of which will be further discussed in this thesis. Internationally, medical documentation has a long history, starting with the description of patient cases in ancient Greece.

During the last centuries, due to the development of medical science, demands for a systematic documentation emerged, resulting in the strictly regulated and highly technically developed electronic patient records of today (Nilsson & Nilsson, 2003).

Current Swedish legislation demands that health care professionals must document all information that is needed for high quality and patient-safe care. This should be done clearly and using language that is as easy as possible for the patient to understand (Socialdepartementet, 2008). Since 2006, the dietitian has been a registered health care profession in Sweden, emphasizing that those requirements clearly apply to the nutrition care given by dietitians. Care givers, such as county councils or private health care companies, are required to develop routines and systems to meet the demands of high quality health care documentation (Socialstyrelsen, 2006). The Swedish Patient Data Act defines patient records as the written, pictorial or tape-recorded information established or received in connection with the health care of patients (Socialdepartementet, 2008).

The patient record is thus a communication tool, which aims to ensure that each patient receives high quality care. Different international and Swedish guidelines in health care define high quality care as safe, effective, patient-centered, given in time, efficient and equitable (Institute of Medicine. Committee on Quality of Health Care in America, 2001; Socialstyrelsen, 2006). This means that the care given should not cause the patient any injuries, and that the methods used in all parts of the care should be based on scientific knowledge and clinical expertise, in a way that avoids the waste of resources such as money and time. The care provided should be respectful of and responsive to the patient's preferences, needs and values, and should not vary in quality depending on the patient's gender, ethnicity or socioeconomic status (Institute of Medicine. Committee on Quality of Health Care in America, 2001; Socialstyrelsen, 2006). High quality documentation is often highlighted as a prerequisite for patient-safe care (Edwards & Moczygemba, 2004). In a report by the American Institute of Medicine, clinicians' access to accurate and timely information was suggested as one of many important factors affecting patient safety (Kohn, Corrigan, & Donaldson, 2000). According to Pirkle et al. (2012), incomplete information in the patient record can reduce the quality of care, for instance by impairing the possibilities for clinicians to make informed decisions.

Today, almost all Swedish health care professionals use electronic patient record systems for clinical documentation, and the documentation of dietetic care often has a specific section in the cohesive record, as does other data such as laboratory values and nursing documentation. The design and

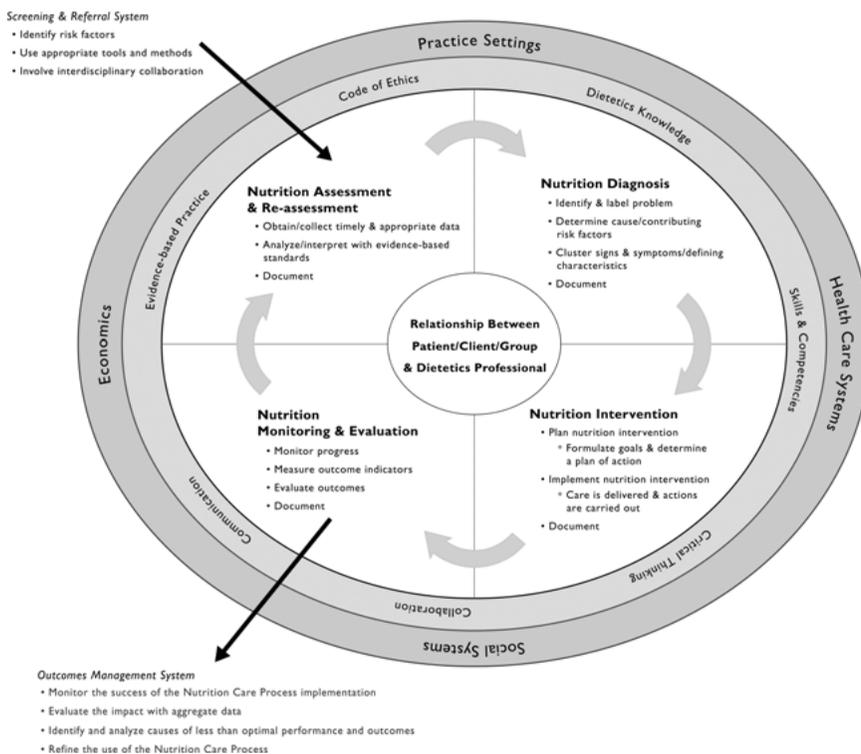
structure of the record systems vary, but often contain a mix of free text fields with pre-set keywords and scrollbars or checkboxes.

According to Swedish law, the patient record should provide the patient with information about his or her state of health, and the care that is planned and/or provided (Socialdepartementet, 2008). The use of electronic patient record systems is increasingly opening up the possibility for patients to log in and read their own records through electronic identities on the Internet. This possibility is already available in several Swedish county councils (Jerlvall, 2014). Thus, the demands for clarity and comprehensibility in the patient record do not only concern health care professionals, but also the patients (Keselman et al., 2007).

## Standardized care models and terminologies

During recent decades, dietitians have developed different models describing their work, of which the most internationally widespread is the NCP (Bueche et al., 2008a; Hammond, Myers, & Trostler, 2014; Lacey & Pritchett, 2003). According to Bueche et al. (2008a), this is a framework for logical thinking and decision-making, describing the essential parts and processes of nutrition care, and providing a structure for dietetic professionals. In conjunction with the NCP, the terminology NCPT has also been developed (Bueche et al., 2008b). This terminology provides standardized terms for different assessment parameters, nutrition diagnoses and interventions as well as terms for monitoring and evaluation. In an effort to improve health care with regard to safety and effectiveness as well as patient-centeredness, many professions in health care have developed such standardized models of health care processes, and standardized terminologies and/or taxonomies. When using the term standardization in this thesis, I refer to this kind of standardized working model and terminology system. The international Snomed CT is probably the largest and most widely used terminology system in health care, containing over 300 000 medical terms (International Health Terminology Standards Development Organisation; Stearns, Price, Spackman, & Wang, 2001). Several nursing terminologies have also been developed, often connected to the Nursing Process which was developed in the US during the 1950's and with many similarities to the NCP (Bulechek, Butcher, & Dochterman, 2008; Cuesta, 1983; Herdman, 2011; Moorhead, Johnson, & Maas, 2004; Yura, Walsh, & Garzón, 1988). In a meta-analysis by Saranto and Kinnunen (2009) regarding nursing documentation, most of the studies included in the analysis showed standardization as having positive effects on the quality and content of clinical documentation.

The NCP model is presented in Figure 1 and a brief explanation of some NCP key concepts is found in Table 1. An updated version of the NCP model was introduced in 2015, but as the studies in this thesis were performed before 2015, they all relate to the 2008 version of the NCP model as shown in Figure 1. In this thesis, both the NCP (the process) and the NCPT (the terminology) are referred to when using the abbreviation NCP(T).



**Figure 1.** The Nutrition Care Process Model © 2008 Academy of Nutrition and Dietetics (AND, formerly American Dietetic Association). In 2015 this version was replaced by an updated version. The 2015 version can be found at <http://ncpt.webauthor.com>, where it is also possible to subscribe to access the current terminology for nutrition care.

**Table 1.** Nutrition Care Process key concepts (Academy of Nutrition and Dietetics; Bueche et al., 2008a, 2008b).

<b>Concept</b>	<b>Explanation</b>
<b>NCP</b>	Nutrition Care Process. Consists of the four steps: Nutrition Assessment, Nutrition Diagnosis, Nutrition Intervention and Nutrition Monitoring and evaluation. The dietitian-patient relationship is situated in the core of the NCP model, representing the collaborative and essential relation between these two.
<b>NCPT</b>	Nutrition Care Process Terminology, with terms for each NCP step. Contains, for example, about 80 pre-formulated nutrition diagnostic terms.
<b>Nutrition Diagnosis</b>	A unique step of the NCP, meaning the dietitian’s identification and labelling of an existing nutrition problem connected to its etiology and signs and symptoms. The nutrition diagnosis is expressed through a PES statement.
<b>PES statement</b>	The standardized nutrition diagnostic term is to be connected to a specified non-standardized etiology and measurable signs and symptoms, forming a P(roblem)-E(tiology)- S(igns/symptoms) statement. This can, for example, be formulated as follows: “(P:) Inadequate energy intake (E:) related to lack of appetite and poor food selection (S:) as evidenced by a daily intake of less than 75 % of estimated needs”.
<b>Nutrition Problem</b>	Describes alterations in the patient’s nutritional status by using the NCPT diagnostic terms, such as “inadequate energy intake”, “excessive energy intake”, “swallowing difficulty” and “food-and nutrition-related knowledge deficit”. There are three main domains of nutrition problems: intake, clinical and behavior-environmental.
<b>Etiology</b>	Describes the cause of or risk factors contributing to the nutrition problem. The etiology is individualized and formulated in free-text in the patient record. The Academy of Nutrition and Dietetics has suggested 10 different categories of etiologies such as cultural, physical function and beliefs-attitudes.
<b>Signs and symptoms</b>	Data used to determine and show the severity of a patient’s nutrition diagnosis. Signs and symptoms are supposed to be specific and measurable. There are specific criteria for each nutrition diagnostic term regarding which signs/symptoms should be present.

International interest regarding the NCP(T) has grown among dietitians during recent years. A questionnaire by the European Federation of the Associations of Dietitians (EFAD) (2012) indicated an increasing interest among European dietitians concerning a standardized language for

documentation of dietetic care. Several international dietetic associations as well as the Swedish Association of Clinical Dietitians (Dietisternas riksförbund, DRF) have welcomed the development and implementation of a standardized nutrition care process and terminology (Dietisternas Riksförbund, 2013; European Federation of the Associations of Dietitians Professional Practice Committee, 2014; International Confederation of Dietetic Associations). In an Australian survey by Porter et al. (2015), almost all of the 70 participating dietitians reported that they valued NCP(T) and saw it as applicable to their practice. In total, 75 % of the dietitians reported a belief that the implementation of NCP(T) would improve patient care. The Swedish NCP(T) implementation process started in 2011 after translation of the standardized terminology initiated by the DRF and the Department of Clinical Nutrition and Dietetics at Karolinska University Hospital (2011). The initial focus during the Swedish implementation process has been on the nutrition diagnosis, as this step is new to many dietitians.

A number of studies concerning the implementation of NCP(T) have been published during recent years. Rossi et al. (2014) compared the use of NCPT in paper-based and electronic health care systems, drawing the conclusion that electronic systems can enhance the implementation of NCPT through checkboxes and other nutrition diagnosis features. In their study, patients received more nutrition diagnoses in the electronic system than in the paper-based system. Memmer (2013) and Steiber (2014) have both published articles aiming to guide and enable the implementation of NCP(T) by renal dietitians. Corado and Pascual (2008) reported that, in an NCP(T) implementation project at an American hospital, the acknowledgement of dietetic recommendations by primary care providers improved due to dietetic notes being easier to read, and team discussion with the physicians increased.

## Content in the patient record

Jefferies et al. (2010) have suggested that high quality documentation contains details of all relevant parts of the care that is given, and reflects the clinical judgement in a logical and sequential manner. There have been a limited number of studies exploring the quality of dietitians' documentation, especially in Europe. Audit studies by American and Australian dietitians, focusing on the documentation's content in relation to the NCP(T), have indicated that documentation is fragmentary, with parts of the four steps of the NCP missing, and that dietitians are more likely to document the initial assessment and care plans than their evaluation of outcomes or transfer of information (Bieseemeier & Chima, 1997; Ibrahim, 2010). Hakel-Smith et al.

(2005) found, however, that an initial orientation in the NCP increased the documentation of nutrition assessment, nutrition intervention and the setting of goals. A small American study, where a survey was completed by 27 dietitians functioning as preceptors in an internship program, showed that one third of them reported the use of standardized language such as nutrition diagnoses in their clinical documentation (McCarthy, Pavlinac, & Ryan-Borchers, 2008). However, no previous studies have been published regarding dietetic documentation in Europe, and most of those published concerning an American or Australian context have focused on the dietitians' own reporting of their documentation practices, or the documentation at just one or a few specific hospitals. Also, no analyses of dietetic documentation from a critical perspective have been published in which the norms of dietetic documentation are explored and questioned.

Several studies have, however, been undertaken by nurses both in Sweden and in other countries to investigate whether nursing notes meet the criteria for high quality documentation. Similar to the studies regarding dietetic documentation, most such studies have shown fragmentary and inconsistent documentation in the nursing records. In studies measuring documentation in relation to the Nursing Process, deficiencies have, for example, often been found regarding the documentation of assessment and interventions (Ehrenberg, Ehnfors, & Ekman, 2004; Gunningberg & Ehrenberg, 2004; Gunningberg, Lindholm, Carlsson, & Sjoden, 2000; Souder & O'Sullivan, 2000; Voutilainen, Isola, & Muurinen, 2004). Ehrenberg and Ehnfors (2001) found gaps between the actual care given and the care documented, comparing information from interviews with the nurses with the content of the nursing records. Several studies have also shown that medical measurements and technical assessments are more consistently documented than patients' experiences and feelings (Hyde et al., 2005; Laitinen, Kaunonen, & Åstedt-Kurki, 2010; Törnvall, Wilhelmsson, & Wahren, 2004).

### Approaches used in patient record audits

Even though there have been several studies regarding nursing documentation, the different approaches that can be used for documentation audits have been scarcely discussed. Ehrenberg et al. (2001), however, explored different dimensions used for auditing nursing records and identified four main approaches that are often used. Firstly, in the formal structure approach the audit focuses on formal aspects of the record, such as whether the signature of the recorder is there, whether the patient identity is correctly filled in and whether abbreviations occur or not. According to the authors, this approach gives an incomplete account of the record content and may give a false portrayal of high quality. Secondly, the process

comprehensiveness approach focuses, instead, on the coherence or comprehensiveness of the information of the different steps of the nursing process. The authors argue that this approach gives a more solid picture of the comprehensiveness of the record content, but leaves questions about the actual quality of the care or the relevance of the recorded data for the patient. Thirdly, the knowledge-based approach aims to assess the actual relevance of the record content in relation to different clinical guidelines, care programmes or protocols regarding specific patient groups or problems. This approach is more specific and focuses on information that is pertinent to the patient. Lastly, in the accuracy approach the audit focuses on the concordance between the nursing record and the actual care given. The authors conclude that to gain a more reliable and comprehensive picture of the quality of patient records, audits should use the process comprehensiveness approach in combination with a critical review of the knowledge base regarding the four steps of the Nursing Process.

The importance of using a validated audit instrument for care documentation has been emphasized in nursing (Saranto & Kinnunen, 2009; Wang, Hailey, & Yu, 2011). In a meta-analysis by Wang et al. (2011), 70 % of the documentation audit studies included in the analysis used instruments that were tested regarding validity and reliability. The most common test was the inter-rater reliability test, where different persons use the same instrument after which their results are compared. The most common validity test focused on content validity, where an expert panel rated the validity of the different items in the instruments. Only one validated audit instrument regarding dietitians' documentation has been published so far. This instrument, developed by Hakel-Smith et al. (2005), was based on an older 6-step version of the NCP and had undergone content validity and inter-rater reliability tests.

## Linguistic characteristics of the patient record

A characteristic of medical language is the frequent use of technical terms, both in oral communication and in patient records. The Swedish sociolinguist Melander Marttala (1998) has proposed that words used in oral health care communication can be divided into three groups: “specialist terms”, “terms for specific purposes” and “common words”. The “specialist terms” are often very specific and unambiguous, but on the other hand, they are only understood by those educated in health care and medicine. The “common words”, on the other hand, are easily understood by most people, but are often more ambiguous and vague. The frequent use of highly specialized terms in patient records has been described, for example, by Pyper et al. (2004), who found that almost half of the patients presented with their own

records needed help in understanding the medical terms and abbreviations used.

Besides the medical and technical terms, the language in patient records has several other special characteristics. According to Hobbs (2003) and Smith (2014), clinicians have developed certain linguistic devices to enable quick writing and reading of the patient record due to the time pressure in health care. Xu et al. (2007), for example, described the frequent use of abbreviations in patient records, while Paparella (2004) argued that the use of ambiguous abbreviations might lead to misunderstandings that put patient safety at risk. Friedman et al. (2002) described the language used in the clinical domain, calling it a sublanguage with a specific grammar of its own. Smith et al. (2014) explored the linguistic features of Swedish patient records, describing a frequent use of technical terms and abbreviations. They also found texts consisting of short, incomplete sentences where subjects, verbs and function words were often omitted. This fragmentary language of patient records has also been described by Friedman et al. (2002), Allvin et al. (2011) and Bretschneider et al. (2013).

According to Hunter (1991, p. 102), the patient record is a document which can only be understood by those “who know both the code and the cultural expectations that inhere in the situation it inheres”. Berg (1998) also discusses this issue, stating that what is often seen as and criticized for being incomplete and incomprehensible recording, really is a certain type of writing embedded in the medical context, understandable for any insider that knows the ward’s working routines, recognizes the clinician writing the note, is familiar with the special demands of this specific medical situation and so on. Thus, he concludes, the possibility of understanding the patient record is based upon a shared understanding of practical tasks, experiences and contexts. However, both Hunter and Berg discussed this issue before the implementation of electronic health care records and long before patients’ electronic access to their own records became reality. In contrast to their arguments, one can also recognize that, according to Swedish law, the language in patient records is required to be clearly written and as easy as possible for the patient to understand (Socialdepartementet, 2008).

There are as yet no published linguistic analyses of either dietetic notes in patient records or of dietitians’ meetings with patients. However, food is often talked and written about in an everyday discourse, where its cultural and symbolic meaning is clearly present. At the same time it also belongs to a medical discourse with specialist terms and a focus on nutritional content and physiological effects. This certainly makes food and dietetics a very interesting field for linguistic and discursive analyses.

## Critical perspectives of documentation practices in health care

In analyses of patient records, criticism has often been directed towards the exclusion of the patients' voice (Björnsdóttir, 2001; Hellesø, 2006; Irving et al., 2006). According to Ekman et al. (2014, p. 90), today's patient record systems are focused on and structured according to the general characteristics of diseases and do not allow space for the patients' non-generalizable narratives. In a systematic review of linguistic and social science analyses of nursing records, Buus and Hamilton (2015) concluded that the records often focused on the patients' bodies, ignoring other aspects of nursing care and the patients' points of view. According to Hyde et al. (2005), nurses have a tendency in the patient record to prioritise the patient's physical condition above all other health domains, such as psychological, social and spiritual. Donnelly (1988) argued several decades ago that by selecting and reformulating the information given by the patient, the doctor constructs a new narrative that does not belong to the patient.

The impersonalizing language of patient records and patient case descriptions has also been criticized. In a Foucauldian discourse analysis of nursing records, Heartfield (1996) found that the patients were described as medical objects rather than individual persons, often referred to by descriptive labels like "patient" or "59-year old man". Earlier, Anspach (1988) also described the common rhetorical practice in medical case presentations of referring to the patient solely as a biological specimen, such as "The patient is a 21 year old Gravida III, Para I, AbI black female at 32 weeks gestation". Björnsdóttir (2001) criticized the detached and impersonal description of patients in nursing notes, arguing that the use of language is closely attached to our understanding and construction of knowledge. Another common rhetorical practice criticized by Anspach (1988) was to omit the patient as well as the doctor as agents in case presentations by the use of passives, such as "the infant was transferred..." These practices were also criticized by Donnelly (1997) for objectifying and passivizing the patient, and concealing the doctor's role in the actions taken. More recently and in a similar way, MacLeod (2011) also criticized the use of the passive voice in patient descriptions in problem-based learning. Hobbs (2003), however, discussed similar devices such as agentless passives and the omission of personal pronouns in her analysis of patient records from a teaching hospital, explaining that "physicians have developed a number of conventions which serve both to standardize their written communications and to promote the economy of form that is crucial in a field where time pressure may be literally a matter of life or death" (p.471).

According to Anspach (1988) there is a hierarchy regarding the collection of information in medicine, where the information collected by technical devices such as laboratory equipment is ranked highest, followed by the doctor's observations, and with the patient's own observations at the bottom of the hierarchy. Donnelly and Brauner (1992) also argued that the patient's reality is constantly being diminished in the patient record while the doctor's reality is being exaggerated. According to Donnelly (1997) and Anspach (1988), this is achieved by connecting evidential markers to the patient's observations, such as "the patient *claims*", while information collected from technical devices is often referred to as "the EKG *shows* or *reveals*". In this thesis, the term evidentiality will be used to describe this way of referring to the source of information. More recently, Hobbs (2003) also described the evidential marking of information originating from the patient, such as "complains of" or "patient states". According to her, however, these devices are a necessary way for physicians to code information for reliability and source of data in their notes.

## Standardized care models and terminologies

In the 1980's and 90's there was discussion and debate among nurses about whether the standardized nursing process was consistent with a holistic and patient-centered nursing approach. Critics of the nursing process and standardized nursing diagnoses claimed that the system, as derived from a medical scientific culture, implied inherent reductionist values and that it solidified an already unequal relationship and hierarchy between nurse and patient. Furthermore, some critics argued that the diagnostic judging and labeling of patients' attitudes, beliefs and behaviors could have devastating consequences for the relationship between nurses and patients (Barnum, 1987; Henderson, 1987; Lützn & Tishelman, 1996; Mitchell, 1991; Powers, 2002; Shamansky & Yanni, 1983; Stanitis & Ryan, 1982). Even though the development and implementation of the nursing process has many similarities to the NCP(T), no such official discussion has occurred among dietitians.

In a case study based on observations of a psychiatrist using the diagnostic classification system DSM-III, McCarthy (1991) established the term "DSM III-selectivity", meaning that the diagnostic manual affected the psychiatrist's assessment and analysis of information from the patient. According to McCarthy, the classification system has thus epistemological and textual consequences: "DSM III-selectivity, then, determines the type, amount and sources of data that Dr Page gathers during the evaluation process, and it shapes her presentation of data" (p. 370). McCarthy also discussed the clear dominance of a biomedical approach, reflected by, for example, the requirement to formulate clear specific etiologies to different psychiatric problems,

which is not always consistent with the multiple, interacting causes that are often assumed in psychiatry.

Paans et al. (2013) explored the impact of standardized manuals on actual patient-nurse meetings, finding that nurses using a diagnostic manual asked the patient more questions than those without such diagnostic resources. However, the researchers also found that nurses without diagnostic manuals asked the patient open-ended questions to a greater extent, while the larger number of questions asked by the other nursing group mainly concerned closed-ended questions. The use of open-ended questions is often highlighted as a successful and patient-centered way of guiding the patient regarding important life-style related issues in health care, such as in motivating interviewing (Rubak, Sandbæk, Lauritzen, & Christensen, 2005).

## The multiple role of the patient record in contemporary health care

During the last century, the patient record has moved from functioning mainly as the physician's own memo notes to being a communication tool between health care professionals (Nilsson & Nilsson, 2003). This has, of course, brought with it increased demands for clarity in the patient record. In recent decades, yet another purpose has emerged as the patient record has, to a greater extent, come to function as an information source for the patient. Even though patients have previously had the possibility to read their own patient records, the implementation of electronic health care systems has increased and facilitated this possibility (Ross & Lin, 2003). These multiple roles of the patient record as a communication tool are also reflected in studies focusing on care professionals' own understanding of the function of the patient record (Ehrenberg, 2001).

Ward and Innes (2003) interviewed patients who had read their own patient records and found that some of the patients worried about the risk of being labelled in the documentation, and that this might affect their treatment by other clinicians. Several of the patients also discovered errors in their patient records, which they could correct. Wibe et al. (2011) carried out similar interviews with patients, finding one of the main themes to be "Not feeling respected as a person". This theme included examples such as patients' experiences of symptoms not being taken seriously, or health care professionals wrongly connecting certain medical conditions with stigmatizing lifestyle problems that the patients claimed not to have.

Besides functioning as a communication tool between health care professionals, and between health care professionals and patients, the patient record has several more functions. For example, it is common to use patient records as information sources in research and health care quality audits, which implies demands for sufficient, clearly written and accurate information (Classen, Lloyd, Provost, Griffin, & Resar, 2008; vonKoss Krowchuk, Moore, & Richardson, 1995).

Another dimension of the role of the patient record is that the documentation task is often not highly valued among health care professionals. Ehrenberg et al. (2001), for example, found that many nurses prefer oral communication to written. In a focus group study by Björvell et al. (2003), nurses stated that administrative tasks such as documentation cause feelings of stress and guilt, as they take time that the nurses could otherwise spend with the patients. Allen (1998) found that nurses felt ambivalent in relation to the patient record as the task of clinical documentation was seen as a symbol of their professionalism, but at the same time decreased their time spent with patients.

## Placing this thesis in the field of dietetics

The Academy of Nutrition and Dietetics (2015) has defined dietetics as follows:

Dietetics is the integration, application and communication of principles derived from food, nutrition, social, business and basic sciences, to achieve and maintain optimal nutrition status of individuals through the development, provision and management of effective food and nutrition services in a variety of settings.

On searching scientific journals and databases for research in dietetics, most of the research found addresses the intake of food items or nutrients, or the effects of different diets on diseases and nutritional problems. According to Payne-Palacio and Canter (2006), research dietitians are mainly involved in research concerning nutritional needs, interaction between drugs and diet, effect of certain food items and similar medical issues. Thus, until now, dietetic research seems to have been dominated by a nutritional and medical scientific perspective.

However, during the past decade a profession-related research field has also emerged in dietetics, focusing on the profession of dietetics. According to AND (2014), for example, two important areas of research among dietitians are the identification of the most effective methods for provision of dietetic services, and the identification of the best methods for attracting, educating

and retaining competent dietitians. An important research area is emerging concerning nutrition informatics, which is defined by AND as: “The effective retrieval, organization, storage, and optimum use of information, data, and knowledge for food- and nutrition-related problem solving and decision-making. Informatics is supported by the use of information standards, processes, and technology” (Charney, 2012, p. 1). Research in nutrition informatics concerns, among other things, the elaboration and validation of NCPT terms, evaluations of different documentation systems for dietitians, and the use of technical resources to facilitate the provision of nutrition care (Charney, 2006; Chen, Hsu, Liu, & Yang, 2012; Enrione, 2008; Hammond et al., 2014). There is also a growing interest in dietetic research for critical and sociological perspectives, as reflected by, for example, research concerning how dietitians perceive their professional identity and the relationship between education and practice discourses, (Gingras, 2010), the socialization process into the professional identity of a dietitian, (MacLellan, Lordly, & Gingras, 2011) the motivations and expectations of dietetic students (Baker & Cotugna, 2013; Hughes & Desbrow, 2005), and discussions about the dietetic profession from a perspective of critical theory (Gingras et al., 2014).

With this thesis, I want to contribute to this emerging research field concerning the dietetic profession itself. I want to combine two of the approaches mentioned above, namely nutrition informatics, focusing on information technology and the development of standardized terminologies and classifications, and the sociological perspective, exploring the different constructions of the dietetic professional role. For me, an important aspect of dietetics is how professional dietitians themselves contribute to the construction of dietetics through their approaches and working methods. This means that, through the way dietitians act at work and how they talk about dietetics, they contribute to how dietitians, other health care professionals, patients and other parts of our community understand and conceptualize dietitians and dietetics. In this thesis, I want to focus on the picture of dietetics that is given through dietitians’ notes in patient records, and through discussions between dietitians about the patient record and the NCP(T).

# Theoretical approaches

In this section I briefly describe the different theoretical standpoints and approaches applied. Firstly, the social constructionist perspective is a theoretical orientation and worldview characterizing this thesis. Secondly, professionalization is more of a theoretical concept, defining what a profession is and the process of becoming a profession. Thirdly, I will briefly describe Habermas' theory of communicative action and the concepts of system and lifeworld. During the analyses of the studies in this thesis, I found the two latter concepts and theories useful for my understanding and interpretation of the results. The analyses were thus driven by data rather than theory, as the choice of theories and theoretical concepts was preceded by the analysis.

## A social constructionist perspective

This thesis is based on a social constructionist perspective. According to Burr (2003), social constructionism can be seen as a theoretical orientation which contains many different approaches and perspectives. As Gergen (1985) describes it, a basic principle in social constructionism is to question the established ways of seeing the world and the knowledge that is taken for granted, and to recognize that there are other ways to understand the world. He further argues that knowledge is created collaboratively by people within a social situation, and that the terms in which the world is understood are culturally and socially situated. This means that the way we understand and interpret the world is shaped by the culture and context that we live in, and that other interpretations of the world would be possible.

The social constructionist perspective is often used as a theoretical tool in different research disciplines and can be interpreted in different ways (Burr, 2003). A distinction can, for example, be made between the ontological and epistemological perspectives as well as between the two positions of relativism and realism. The epistemological perspective deals with what we can know about the world, while the ontological question concerns the true nature of the world (Nightingale & Cromby, 1999). A relativist position assumes that there is no such thing as essential truth, but that all different interpretations and perspectives are given the same value, while a realist position assumes that it is possible to reach a true knowledge about the world

through our senses (Burr, 2003; Nightingale & Cromby, 1999). As a researcher, these different assumptions about reality and our knowledge of it play an essential role in the research process. I therefore want to place this thesis in this wide field of theoretical assumptions and perspectives.

In this thesis, my arguments are based upon an epistemological relativism, which means that I assume that the knowledge and ideas that we have about the world are constructed in a social context (Gergen, 1985). According to Berger and Luckman (1966), introducing social constructionism in their classic *Social Construction of Reality*, reality is created in social interaction. However, what they mean by reality is not what is usually meant by the term, such as the world that exists independently of our beliefs and wishes. Instead, they declare that by reality, they only mean our beliefs about the world, thus our conception of reality and not reality itself. Adopting this assumption means that I recognize that, for example, my idea of documentation quality is shaped by the world I live in, and that in other contexts there would be other ideals dominating health care documentation. Gergen (1999) emphasized the role of language in the way we understand reality, stating that the very minute we try to describe the world, by our choice of words and formulations, we enter a tradition and value system, contributing to the construction of reality. Focusing on the patient record, I also assume that language, in both written text and speech, plays an active role in our formation of reality.

### The patient record from a social constructionist perspective

According to Berg (1996, 1998), the medical record is not reflecting or mirroring medical work as much as it is participating in the construction of the medical work. For example, the writing of a patient record is an important part of the clinician's mental process and decision-making. The clinician is thus not recording his or her thought process, but the patient record is a part of this thought process itself. Through the selection, abstraction and reformulation of the, often complex, patient stories, the clinician is constructing a picture of the patient and his or her problems in the record writing. Through the structure and setup of the patient record, the clinician's thought process is structured by, for instance, pre-printed forms to fill in and different pre-set keywords with different amounts of space assigned to them. According to Hewett et al. (2009), through the text in patient records, medical doctors also construct and express their identity as professionals.

As a social constructionist, I see text and speech as social practices that contribute to the constitution of situations, objects of knowledge, and the social identities of and relationships between people and groups of people (Van Dijk, 2011). At the same time, these practices are not the products of any one

person; they are rather constituted in the context of such things as discourse and genre (Wodak, 2011). Winther Jørgensen and Phillips (2000) explain discourse as a certain way of talking about and understanding the world. Genres are, according to Bergström and Boreus (2012, p. 22), different types of texts that follow certain conventions regarding how they are written and read. Dietitians writing a note in a patient record do not themselves set up the norms for how to formulate the content but are, instead, guided by such things as the traditional form of the patient record and the language used in health and medical care, which contribute to the discourse and genre of a patient record. Language is thus at the same time both constitutive and constituted (Fairclough, Mulderrig, & Wodak, 2011; Potter & Wetherell, 1987). This being said, I see the dietetic note as a device contributing to the overall construction of dietetics, including the roles of dietitians and patients as well as the dietary care and food.

## Professionalization

In the discussion part of this thesis, the concept of professionalization and its different connected aspects have provided important tools. The meanings of the concept of profession have been widely discussed among different theorists, and the interpretations of the term are numerous. Elliot Friedson (1970) is one of those theorists who, focusing on medical professions, states that a profession distinguishes itself from an occupation by, for instance, having the right to control its own work:

It is useful to think of a profession as an occupation which has assumed a dominant position in a division of labour, so that it gains control over the determination of the substance of its own work. Unlike most occupations, it is autonomous or self-directing. The occupation sustains this special status by its persuasive profession of the extraordinary trustworthiness of its members. The trustworthiness it professes naturally includes ethicality, and also knowledgeable skill. In fact, the profession claims to be the most reliable authority on the nature of the reality it deals with (p. xvii).

Friedson (1988) further connects the concept of profession to a higher education and employment in particular positions. Glazer (1974) and Evetts (1999) discussed the concept of profession in similar terms, stating that professional practice is specialized, clearly delineated, scientific and standardized through self-regulation.

To describe the process by which an occupation develops these characteristics of independency and autonomy, the terms professionalization or professionalism are often used synonymously. The feminist sociologist Anne Witz (1992) has discussed the concept of professionalization, meaning the efforts

used to improve an occupation's professional status. According to Witz, through a "professional project" an occupation seeks recognition from higher instances to gain professional privileges, such as the exclusive right to treat a certain condition or to diagnose patients. Witz further argues that the status and acknowledgement of different professions is connected to gender issues, and that the professionalization of, for example, nurses is a gender related process. According to the American sociologist Douglas Klegon (1978), the development of the social position of a particular occupation is characterized by "efforts of practitioners to raise their status, define services which they perceive only they can perform properly, and to achieve and maintain autonomy and influence" (p.278). These efforts are, for example, characterized by the development of codes of ethics and professional associations. Other such strategies include the regulation of entry into the profession by controlling the requirements and level of competence required. The terms semi-profession and pre-profession have often been used to describe the different stages of the professionalization process. For example, both Friedson (1970) and Hammond (1990) have stated that nursing is a semi-profession, which has initiated several professional strategies during the past decades. The Swedish sociologist Brante (2009) discussed the term pre-profession, briefly exemplifying this with, among other areas, the field of food and its related occupations, which is now undergoing a process towards higher education and the creation of a body of specialized scientific knowledge. Placing the dietitian between the semi-profession of nursing and the pre-profession of food related occupations, I see the concept of professionalization as highly relevant for dietitians.

The sociologist Abbot (1988) argued that there is a certain social network consisting of professions, in which professions in similar fields compete and try to monopolize areas. For example, he described the way that, during the 19<sup>th</sup> century, the medical profession separated and distinguished itself from other professions in the health care field and achieved the dominant position that it still has today. According to Abbot, this process included many of the strategies mentioned above, such as the demand for a medical license.

Discussing the professionalization of nurses, Keogh et al. (1997) emphasize the increasing autonomy among nurses which has developed during the last century. They argue that record keeping and reporting of observations are functions that support the autonomy of nurses. In addition, the establishment of nursing diagnoses is mentioned as an important device for autonomy, as nurses are independently drawing conclusions and making intervention decisions after the assessment of a patient and his or her problems. The authors argue that these and other nursing functions together contribute to giving nursing the status of a profession. Ruddy (1998) also discusses the professionalization of nursing, stating that the development of a nursing terminolo-

gy contributes to the uniqueness of nursing and the differentiation from other professions in the health care field, which are essential parts of the professionalization process. In a genealogic discourse analysis of nursing diagnoses, Powers (2002) states that nurses have used the nursing diagnoses and the discourse of nursing process to standardize the concept of nursing and distinguish it from the medical profession as a contribution to their endeavor towards attaining professional status. Discussing the historical roots and context of nursing diagnoses, she argues that they are built upon discourses of medicine, science and professionalism.

## Communicative action – system and lifeworld

The German sociologist and philosopher Jürgen Habermas is known for his work concerning the development of society, democracy and communication theories, which are to a great extent built upon a critical analysis of Max Weber's theories about modernity. In his theory of communicative action, Habermas (1985) established the concepts of system and lifeworld, which in this thesis have come to play an important role in Paper IV as well as in the overall discussion. The system is a rationalized, impersonal sphere, constituted by, for example, institutions and economical systems. This sphere focuses on technical-scientific rationality and strives for a constant systematization and efficiency. Scambler's (1987) interpretation of this is that: "Social systems, most notably the market economy and the state apparatus, follow functional imperatives and serve as formally organized systems of action based on what Habermas calls 'steering media' (that is, money and power)" (p.171). The lifeworld, on the other hand is the intimate sphere in which human beings live as subjects. It is characterized by background assumptions, convictions and relations which play an important role in the communication between persons. Scambler (1987) has interpreted the lifeworld as "a medium, or 'symbolic space' within which culture, social integration and personality are sustained and reproduced" (pp 170-171).

Connected to these two opposite spheres, Habermas describes two different action orientations. The system is linked to a strategic and purposive-rational action with an orientation towards success, while the lifeworld is linked to a communicative action that strives towards meaning-making and a mutual understanding. There is a constant struggle between the two different spheres as they both seek to control the social order of society. According to Habermas (1985), in the modern world the system, with its purposive-rational action, is prone to extend its influence at the expense of the lifeworld. He refers to this domination of the system as the colonization of the lifeworld. Habermas argues that system features are always derived from lifeworld phenomenon, but as the system has inherent characteristics of effectivity and

success, it has become the dominant sphere in many fields of modern society.

In Habermas' development of his theory, he draws further on the role of strategic and communicative action in different spheres of society. His categorical division between, for example, private and public spheres has been criticized by feminists and critical theorists such as Fraser (1985), arguing that a broader and more multifaceted perspective is needed. However, I have found the theory of communicative action, and especially the distinction between system and lifeworld, useful in parts of this thesis and will not go further into the discussion about Habermas' broader theories of modernity and democracy development.

Habermas' theory of communicative action has been used to discuss a holistic view in health care, where the dominance of the bio-medical reductionist approach over the patient-centered holistic approach has been connected to the system's colonization of the lifeworld (Porter, 1997; Scambler, 1987). Greenhalgh, Robb and Scambler (2006) studied interpreted consultations in health care, stating that the system-connected strategic action seemed to be dominant in these situations, and that the lifeworld-connected communicative action was less present. Mishler's (1984) study of the interactions between doctors and patients in medical interviews described the contrast between the "voice of lifeworld" and the "voice of medicine" emerging in medical interviews. He described the struggle between these two voices and the dominance of the voice of medicine, which, according to Mishler, leads to inhumane care. Barry et al. (2001), however, criticized this conclusion, arguing that the use of the medical voice would not necessarily lead to inhumane care, as long as it is not used to suppress the patient's voice of lifeworld. Hyde et al. (2005) used Habermas' theory of communicative action to analyse patient records written by nurses. They found that the content of the patient records was dominated by medico-technical details and purposive-rational action, which they interpreted as another example of the system's colonization of lifeworld.

# Aims

The main aim of this thesis was to explore the content and language as well as the meaning of standardization in dietetic notes in Swedish patient records.

Specific aims of the studies included were:

- to translate, elaborate and evaluate an audit instrument, based on the four-step NCP model, for documentation of dietetic care in patient records (Paper I).
- to analyse the quality of outpatient dietetic notes in patient records in relation to the relevant parts of the NCP as well as other quality aspects (Paper II).
- to explore dietetic notes with a focus on linguistic devices regarding agency sources as well as evidentiality (Paper III).
- to explore Swedish dietitians' experiences of the NCP(T) in relation to dietetic documentation, the patient and the dietetic professional role (Paper IV).

# Methods

## Overview

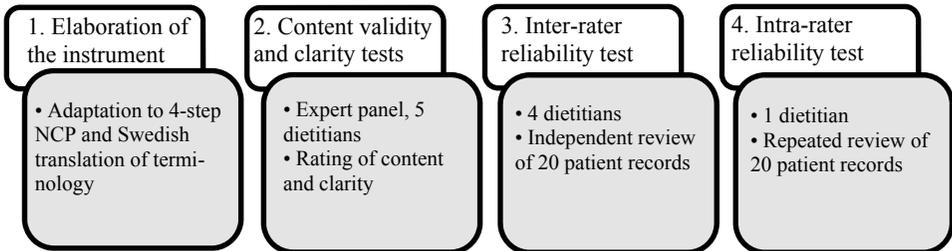
This thesis was initiated in 2011 and involves four different studies with different approaches and designs. A quantitative design was used to investigate the content of patient records in relation to the NCP model, while I found a qualitative design useful to explore the further meanings of the language in patient records. In Paper I, the elaboration and evaluation of an audit instrument for dietetic documentation is described. This instrument was used in Paper II to evaluate the documentation by Swedish dietitians in patient records. Paper III has a qualitative approach and describes a discourse analysis regarding a sample of the patient records analysed in Paper II. Paper IV describes a focus group study regarding dietitians' experiences of the NCP(T). Table 2 provides an overview of the four studies.

**Table 2.** Overview of the included papers.

<b>Paper</b>	<b>Focus</b>	<b>Material</b>	<b>Design</b>	<b>Analysis</b>	<b>Theories/ approaches</b>
<b>I</b>	Development and evaluation of audit instrument	Audit instrument, 20 dietetic notes	Quantitative	Content validity test Inter-rater reliability test Intra-rater reliability test	Nutrition Care Process
<b>II</b>	The quality of dietetic notes	150 dietetic notes	Quantitative	Quantitative content analysis, using audit instrument	Nutrition Care Process
<b>III</b>	Linguistic devices regarding agency sources and evidentiality in dietetic notes	30 dietetic notes	Qualitative	Substitutional linguistic analysis	Critical discourse analysis and critical linguistics
<b>IV</b>	Dietitians' experiences and thoughts about NCP and NCPT	7 focus group discussions with 37 dietitians.	Qualitative	Thematic analysis	Habermas' concepts of Lifeworld and System

## Elaboration and evaluation of audit instrument (Paper I)

In Paper I, an audit instrument for dietetic documentation was developed and tested. This was a multistep process, as illustrated in Figure 2, starting with the initial elaboration of the instrument, which was followed by careful tests of validity and reliability.



**Figure 2.** The elaboration of the Diet-NCP-Audit instrument.

### Elaboration of the instrument

The dietetic documentation audit instrument was based on an earlier instrument used by Hakel-Smith et al. (2005). In a pilot study by the Swedish dietitian Franzén (2010) this earlier instrument was adapted to the present four-step NCP and the Swedish translation of the NCPT (Dietisternas Riksförbund & Dietistkliniken Karolinska Universitetssjukhuset, 2011). A detailed manual was also developed in the pilot study, and further elaborated in the present study, to facilitate interpretation of the instrument. The manual contains definitions of terms as well as examples of how to score different formulations in the audited notes. Since the Swedish NCP(T) implementation was at a very early stage when the instrument was being elaborated, the instrument was designed to measure the presence of the four main NCP steps and not whether the correct NCP-related terminology was used. The final audit instrument was named Diet-NCP-Audit and can be found in Appendix 1.

The Diet-NCP-Audit is a 14-item questionnaire addressing the four steps of the NCP. The quality of the documentation can be scored using the instrument, whereby each of 12 items can be given 0-2 points, and items 13 and 14 can be given 0-1 points. This gives a maximum total score of 26 points. Depending on the total score, each record is placed into one of three quality levels: A (75-100 % of maximum score), B (50-75 % of maximum score) and C (0-50 % of maximum score).

## Content validity and clarity tests

The content validity and clarity of Diet-NCP-Audit was tested by an expert panel consisting of five registered dietitians with experience and knowledge of documentation development and the NCP. Independently of each other, the five dietitians rated the relevance and clarity of the 14 instrument items on a scale from 1-4, where 1 corresponded to not relevant/not clear and 4 to highly relevant/highly clear. Ratings of 3 or 4 were considered to represent approved validity or clarity (Lynn, 1986). A content validity index (CVI) was calculated for the entire instrument scale (S-CVI) as well as for each item (I-CVI). The I-CVI is defined by Polit and Beck (2006) as the number of experts rating the specific item 3 or 4, divided by the total number of experts, while the S-CVI is defined as the instrument's proportion of items rated 3 or 4 by all experts (S-CVI-UA) and alternatively, the average proportion of items rated 3 or 4 across the various experts (S-CVI-Ave). According to Polit and Beck, the standard criteria for S-CVI-UA should be 0.8 and for S-CVI-Ave 0.9. For the entire instrument scale, CVI was both calculated as universal agreement between the five experts (S-CVI-UA) as well as the average proportion of the items rated 3 or 4 (S-CVI-Ave). The same procedure was performed regarding the instrument's clarity, which is presented as a clarity index, rated and calculated in the same way as CVI.

The content validity and clarity tests were performed twice. Minor adjustments to the instrument and manual were made after the first rating, and then a second rating was performed in the same way and by the same experts.

## Inter- and intra-rater reliability tests

To test the inter-rater reliability, four registered dietitians independently reviewed 20 dietetic notes from electronic medical records, using the audit instrument. The 20 dietetic notes were systematically collected from one hospital and two primary care centers in central Sweden. The notes had been written by several different dietitians, all with at least one year's clinical experience. They concerned patients' first visits as outpatients and included several different patient groups. Only the dietetic documentation part of the medical record was analysed and was therefore separated from other parts of the record such as medical documentation and laboratory values.

Each of the four dietitians audited the 20 dietetic notes regarding the instrument's 14 items, e.g. in total 280 items. After independently auditing the dietetic notes, the four dietitians' results were compared pairwise. The comparisons were made regarding:

- total scores for each dietetic note (6x20=120 pairwise comparisons)
- quality level result for each dietetic note ( "C -lower range", "B-medium range", "A- higher range") (6x20=120 pairwise comparisons)
- each rated item in all dietetic notes together (6x14x20=1680 pairwise comparisons)
- separate scores for each of the 14 items (6x20=120 pairwise comparisons)

To measure the inter-rater reliability regarding the four points above, Krippendorff's  $\alpha$  as well as percentages of agreement were calculated (Krippendorff, 2004).

To measure intra-rater reliability, I performed a test-retest. Twenty dietetic notes in medical records were reviewed twice, with nine weeks between the two reviews. The results for each record were then compared in the same way as inter-rater results, using Krippendorff's  $\alpha$  and percentages of agreement (Krippendorff, 2004).

Krippendorff's  $\alpha$  cut-off criteria should be set depending on the nature of the material and the possible consequences of low reliability, but according to Krippendorff  $\alpha = 0.67$  or higher is considered an acceptable agreement if tentative judgements are deemed acceptable; otherwise  $\alpha = 0.80$  is required (Krippendorff, 2004).

## Evaluation of dietetic documentation (Paper II)

A retrospective audit of 150 dietetic notes in Swedish patient records was performed using the Diet-NCP-audit instrument elaborated in Paper I. This audit was set as a baseline study, describing the quality of dietetic documentation before the implementation of NCP(T), which started in Sweden in 2011.

### Sample

The dietetic notes originated from four hospital and six primary care dietetic departments in central Sweden. According to the inclusion criteria, the dietetic notes were written by different dietitians, all with at least one year's clinical experience. Each dietitian was instructed orally, and in writing to contribute two to three systematically collected notes concerning different patients. The dietetic notes concerned only patients' first visits as outpatients and were all written during the months of November 2009 or February 2010,

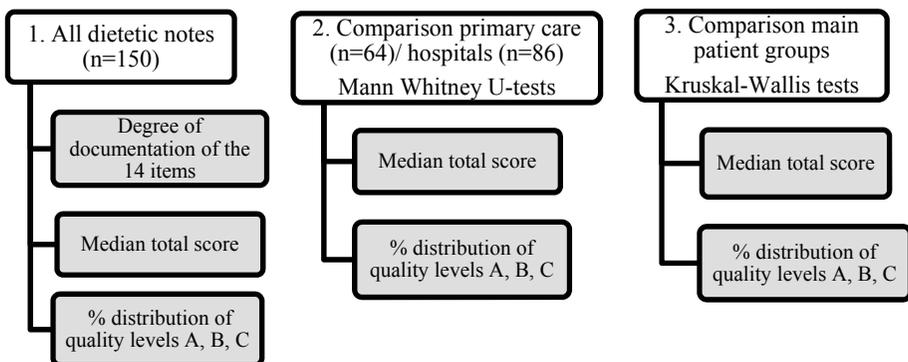
i.e. before the start of the Swedish NCP(T) implementation. Only the dietetic documentation part of the patient record was analysed.

## Procedure, analysis and statistical methods

In total, 150 dietetic notes were included and audited by me regarding documentation quality. As an additional reliability test of the audit instrument, a random sample of 15 (10 %) of the dietetic notes was selected to also be audited by three of my co-authors. Comparisons were made regarding the total score of each dietetic note and its placement in quality levels A, B or C, showing Krippendorff's  $\alpha$  of 0.74 and 0.82 respectively, which was considered to be high reliability, thus supporting and strengthening the earlier reliability results (Krippendorff, 2004).

Since the focus of the audit was documentation quality, this concept should be highlighted. The concept of documentation quality may, of course, have multiple meanings, depending on the perspective from which it is discussed, but in this paper the concept was defined by the 14 items in Diet-NCP-Audit, that is, documentation of all relevant parts of the NCP using a clear language and structure.

Using the instrument with its associated instrument audit manual, I thoroughly audited the 150 dietetic notes included. The audit was followed by three different analyses of the material, as shown in Figure 3.



**Figure 3.** The procedure of the audit analysis.

Firstly, all of the dietetic notes included were analysed together, examining to what degree each of the 14 items of the instrument was considered to be clearly documented, partly documented or missing. The total score was pre-

sented using the median score. The percentage distribution among the three quality levels (A, B, C) was also calculated.

Secondly, the dietetic notes originating from hospitals were compared to those originating from primary care centers, with regard to the median score for total score and the distribution among the three quality levels. Comparisons between primary care centers and hospitals were made using a Mann Whitney U-test. In the comparison of distribution among the three quality levels, the U-test was followed by Pearson's  $\chi^2$  test to investigate the differences in greater detail.

Thirdly, to gain a better understanding of the results, the dietetic notes were divided into different groups based on the main medical diagnosis/health problem reported in the patient record. Only conditions that were represented in more than 10 dietetic notes were included. Comparisons between different patient groups were made using a Kruskal-Wallis test to investigate whether any significant differences existed between patient groups. The level of significance was set at  $p < 0.05$ . To adjust for the number of repeated tests and the inflated risk of type I-error, Holm-Bonferroni-adjustments of the p-values were performed for the Mann Whitney and Kruskal Wallis tests (Ludbrook, 2007).

## Critical linguistic analysis of patient records (Paper III)

In this paper, a small sample of dietetic notes was analysed linguistically, using approaches from Critical Discourse Analysis and Critical Linguistics (Fairclough et al., 2011; Wodak, 2011).

### Sample

Due to the detailed linguistic analysis that we planned to perform, a sample of 30 dietetic notes was systematically selected from the 150 dietetic notes from Paper II. The sample involved dietetic notes from both hospitals and primary care centers, and concerned patients with different problems. Most of the notes contained between 150 and 300 words. Six of the notes were written regarding pediatric patients, and all the other notes regarded adult patients.

### Linguistic analysis

This study was based upon a constructionist perspective, using tools from Critical Discourse Analysis and Critical Linguistics (Fairclough et al., 2011; Wodak, 2011). In this approach, language is viewed as a constitutive, social

practice. Bergström and Boreus (2012) describe social practices as being the ways that interacting people do things according to behaviour patterns, habits and conventions. We analysed the dietetic notes included in the study from the perspectives of agency sources, that is who or what is presented as the source of agency, and evidentiality, that is how the source of information is presented and connected to the certitude of knowledge.

During the analysis, the dietetic notes were carefully read and re-read, and different kinds of statements and grammatical constructions were placed in themes and broad categories. This first stage of analysis focused on how the patient and dietitian, respectively, were referred to, and how clauses that did not refer to either patient or dietitian were constructed. We also focused on how the source of different statements was presented. After the initial analysis, a deeper analysis was performed for each theme regarding sub-themes and narrower grammatical categories.

As the first author, I performed the main part of the analysis and carefully read all the notes; however, all authors read parts of the analysed dietetic notes and all identified similar themes and categories as presented in the results. After analysing part of the notes, it was clear to us that no new themes had appeared and that no new insights were obtained regarding the aim. However, we continued the analysis of 30 notes. During this further analysis no new themes appeared.

For the analysis of agency sources, a model for substitutional analysis developed by van Leeuwen (1993) was used. According to this model, a participant of an event can be either included or excluded from a text describing this event. The exclusion of a participant can be either partial (backgrounding or elision) or complete (suppression). When included, the participant can be personalized or impersonalized, which implies being or not being referred to by “a noun or pronoun with the semantic feature ‘human’” (Van Leeuwen, 1993, p. 204). Personalization can be effected in different ways, such as referring to the participant by name (nomination), by gender or age (classification) or by his or her institutional role (functionalization). We used parts of this model and concepts in our analysis, focusing on sources of agency and how the reference to people was performed in the dietetic notes. We also used the concepts of nominalization, i.e. the transforming of a verb into a noun, and passivization, i.e. the use of passive verbs.

In our analysis, we also focused on evidentiality, which can be explained as connecting the certainty of knowledge to the source of information (Chafe & Nichols, 1986). For example, referring to a person as “reporting” or “claiming” something brings with it different connotations about a statement’s trustworthiness. We thus looked at the reported source of information in the

dietetic notes and how the reference to these sources was performed linguistically.

More specifically, we focused on the following items:

- How was the patient referred to/not referred to?
- How was the dietitian referred to/not referred to?
- What kinds of passivizing and nominalizing forms were present?
- What evidential markers were present?

## Focus group study (Paper IV)

### Focus group discussions

Seven focus group discussions were held in different parts of Sweden. A focus group discussion is according to Wibeck (2000) a group interview where people meet to discuss a specific subject. An advantage of focus groups is that it provides the researcher with the possibility to study interaction in the group situation, and to follow how meanings and interpretations are constructed in the group (Bryman, 2012). In this study, between 3-8 dietitians participated in each group. Most, but not all of the participants had taken some initial orientation course in and started implementation of the NCP(T). The focus group discussions lasted for 90-120 minutes. I acted as moderator and audiotaped and transcribed the discussions. In addition, a dietitian functioning as observer was present at the focus group discussions, taking notes to facilitate the transcribing and analysis.

The focus group participants were recruited by e-mails sent to the largest hospitals in Sweden as well as to all members of the Swedish Association of Clinical Dietitians. The e-mails gave information about the study and asked for participants from different parts of Sweden. When dietitians from different areas had answered this call, directed e-mails were also sent to other dietitians in the same areas to encourage them to join the planned focus groups. The purpose was not to include a representative sample to be able to draw generalized conclusions, but rather to gain a broad sample of dietitians interested in discussing the NCP(T). In most of the groups, some of the dietitians knew each other and were, or had been, colleagues. There was only one group in which all the dietitians were colleagues.

The discussions were all opened with a broad question regarding the dietitians' experiences of the NCP(T). To facilitate the focus groups, a discussion guide was used containing discussion issues based upon the NCP(T) in relation to the documentation quality, the patient and the dietetic professional

role. Visual material was also used during the discussions, containing a drawn picture of a dietitian-patient meeting, a picture of the Nutrition Care Process model and a copy of the Nutrition Diagnostic Terms from the NCPT. Before each focus group, the participants were asked to complete a short questionnaire with information about their background as dietitians.

Prior to these focus group discussions, two pilot focus groups were held, one with three and one with five participants. The inclusion criteria were the same as for the ordinary focus groups and the participants were recruited by e-mails to hospitals and primary care centers in the two counties closest to the university where this study was performed. As the discussion guide and the visual material seemed to work well they were not changed and the pilot discussions were also included in the analysis of the focus groups.

## Analysis

A qualitative thematic analysis was performed, condensing the text to meaning units and classifying them into different codes and categories/themes. During the analysis, the codes and categories were reviewed several times, resulting in re-categorization of meaning units, codes and categories, as well as renaming, merging or division of codes and categories (Braun & Clarke, 2006).

I performed most of this analysis but my co-authors also read at least parts of the material. We all met at different stages of the analysis for discussions until all had agreed upon the final analysis. The dietitian functioning as observer at the focus group discussions also read the transcripts and the analysis, and agreed with the themes that were found.

In the analysis of the focus group discussions, an inductive approach was used. During the thematic analysis, we found the Habermasian concepts of system and lifeworld, and colonization of lifeworld useful in our understanding and interpretation of the material. These concepts are further described under the “theoretical approaches” section.

## Ethical considerations

All four studies in this thesis were deemed exempt by the Regional Ethical Review Board of Medical Sciences in Uppsala. However, this does not leave me without responsibility for the ethical perspective of the design and content of the studies. In this section, I would therefore like to discuss some ethical perspectives of the studies included in this thesis.

There are several national and international ethical rules and guidelines, aiming to protect the participants in different research. One important perspective is the principle of informed consent. For example, the UNESCO's Code of Conduct for Social Science Research states that informed consent should be obtained from all human subjects, and that potential participants should be informed of the context, purpose, nature, methods, procedures and sponsors of the research. This information should be given in a manner and in a language they can understand. Another important principle is that of confidentiality, meaning that the anonymity of participants in research should be maintained (de Guchteneire, 2004).

Concerning Papers I-III, dietetic notes written by dietitians in patient records were used as the material for analysis. There could be different views regarding who the participants of the studies really are – is it the dietitians as authors of the patient records, is it the patients that the records concern or is it both? As the scope of our studies was to explore the work of the dietitians, and not the state of the patient, I see the dietitians as the “real” participants of the study. At the same time, a patient record contains a lot of information about the patient concerned, of which some could be sensitive, which is why the patient's perspective must also be carefully considered. In our collection of patient records, the procedure was designed so as not to allow me or any of the other researchers to obtain any personal information about the patients concerned in the dietetic notes or the dietitians writing them, thus respecting the principle of confidentiality. The notes were printed out by dietitians at the different sites, with the removal of any information about the patient, such as name, age or place for the appointment with the dietitian. After this procedure, the de-identified notes were delivered to me. Of course, this method of collecting the material could be criticized from the perspective of informed consent, as the patients that the dietetic notes concerned were not aware that their records were being used in our study. The choice of method was thus a balance between the two principles of informed consent and confidentiality.

The names of the dietitians who had written the notes were also removed from the records before I gained access to them. I also informed all dietitians concerned about the study, both orally in meetings at their different work places, and in writing with information letters sent to their work places. As I did not know which specific dietitians had written the different dietetic notes included in the studies, I did not have the possibility to give specific information to every dietitian involved.

Concerning Paper IV, in the recruitment of participants for the focus groups, we carefully informed the dietitians that their participation was completely voluntary, and that they could interrupt their participation at any time. Fortu-

nately, none of the participating dietitians decided to interrupt their participation in the study, as this could have required some difficult ethical decisions, such as whether or not to include a recorded and transcribed focus group discussion where one of the participants had since retracted their consent. As some of the participants were colleagues and the focus groups often took place at their places of work, we considered the risk that someone may feel pressure from colleagues to participate in the group discussion. We therefore emphasized the possibility to interrupt their participation both in advance of the focus group meeting and in connection with the discussion.

Regarding the principle of confidentiality, in a focus group there is always a risk that anything said in the discussion is disseminated by any of the participants. Therefore, confidentiality cannot be guaranteed. However, we promised the participants that the audiotape and transcribed material were not to be accessed by any unauthorized person.

# Findings

## Paper I

### Content validity and clarity

The validity test was performed twice. At the second rating, the content validity index was calculated as 1.0 regarding both S-CVI-UA and S-CVI-Ave. The I-CVI was 1.0 for each of the items. The clarity of the instrument was calculated to be S-Clarity-Index-UA 0.88 and S-Clarity-Index-Ave 0.98. The clarity index for the different items (I-Clarity index) ranged between 0.8-1.0. Both the content validity and the clarity of the instrument were considered to be very good.

### Reliability

The results from the reliability tests are shown in Table 3. Examining the agreement between the four reviewers regarding total score for each dietetic note, the Krippendorff's  $\alpha$  showed 0.65, which implies a moderate degree of agreement. The intra-rater test showed a Krippendorff's  $\alpha$  of 0.86, which indicates very strong agreement.

The test showed rather strong agreement between the four reviewers on grouping the audit results in quality levels A-C (Krippendorff's  $\alpha=0.74$ ). The intra-rater test showed moderate agreement of Krippendorff's  $\alpha$  at 0.64.

Comparing each rated item in all dietetic notes together ( $n=1521$ ), the Krippendorff's  $\alpha$  regarding inter-rater agreement showed moderate agreement at 0.67. Intra-rater agreement was rather strong at Krippendorff's  $\alpha$  0.79.

Comparisons between the four reviewers for each item showed degrees of agreement that ranged from  $\alpha=0.12$  to  $\alpha=0.90$  as shown in Table 3. In the intra-rater reliability test, the level of agreement between the test and the retest ranged from  $\alpha =0.28$  to  $\alpha =0.91$ . The largest discrepancy in both inter-rater and intra-rater agreements appeared in items 12-14, which focus on the overall structure and clarity of the medical record. There was also a lower degree of agreement for item 10, which focuses on evaluation indicators.

**Table 3.** Inter- and intra-rater agreement in the reliability tests regarding the 14 different items as well as the entire Diet-NCP-Audit instrument.

Item	Inter-rater agreement			Intra-rater agreement		
	n <sup>1</sup> =	Krippendorff's $\alpha$ CI <sup>2</sup> 95 %	%	n <sup>1</sup> =	Krippendorff's $\alpha$ CI <sup>2</sup> 95 %	%
<b>Assessment, diagnosis</b>						
1. Nutrition problem	120	0.53 (0.38-0.65)	61	20	0.70 (0.48-0.89)	60
2. Etiology	111	0.47 (0.32-0.59)	49	20	0.50 (0.48-0.89)	65
3. Signs and symptoms	111	0.57 (0.43-0.69)	60	20	0.83 (0.68-0.95)	75
4. Relationship items 1-3	105	0.46 (0.29-0.62)	66	20	0.59 (0.18-0.91)	75
5. Nutrition prescription	108	0.55 (0.39-0.70)	66	20	0.85 (0.58-1.00)	85
6. Nutrition intervention	108	0.62 (0.45-0.78)	85	20	0.68 (0.00-1.00)	95
7. Evidence for nutrition intervention	108	0.30 (0.16-0.46)	55	20	0.86 (0.58-1.00)	95
8. Nutrition goal	108	0.50 (0.26-0.73)	83	20	0.72 (0.43-0.99)	80
9. Nutrition monitoring and evaluation	105	0.90 (0.85-0.95)	83	20	0.91 (0.78-1.00)	90
10. Indicators/plan for monitoring and evaluation	105	0.27 (0.02-0.51)	72	20	0.28 (-0.23-0.74)	60
11. Structure according to the Nutrition Care Process	108	0.47 (0.34-0.61)	68	20	0.73 (0.45-0.97)	80
12. Clear language	108	0.12 (-0.10-0.32)	61	20	0.48 (0.04-0.87)	80
13. No irrelevant information	108	0.15 (-0.14-0.44)	75	20	0.65 (-0.05-1.00)	95
14. All relevant information gets response	108	0.17 (-0.03-0.36)	46	20	0.36 (0.00-0.70)	55
All items	1521	0.67 (0.59-0.75)	67	280	0.79 (0.72-0.85)	63
Total score	108	0.65 (0.54-0.74)	67	20	0.86 (0.76-0.94)	78
Total instrument quality groups A-C	108	0.74 (0.67-0.81)	84	20	0.64 (0.42-0.85)	65

<sup>1</sup> n= number of pairwise comparisons used for calculating Krippendorff's  $\alpha$  as well as percentages of agreement.

<sup>2</sup> CI= confidence interval

## Paper II

### Documentation quality

In total, 147 dietetic notes were included in the audit, as three notes were excluded due to illegibility and clearly stated absence of nutrition problem. The total score of the notes varied between 8-21 points, with a median of 14.5 points. On dividing the total score of the audit into the different quality groups, 98 % of the dietetic notes were placed in groups B and C, as shown in Table 4.

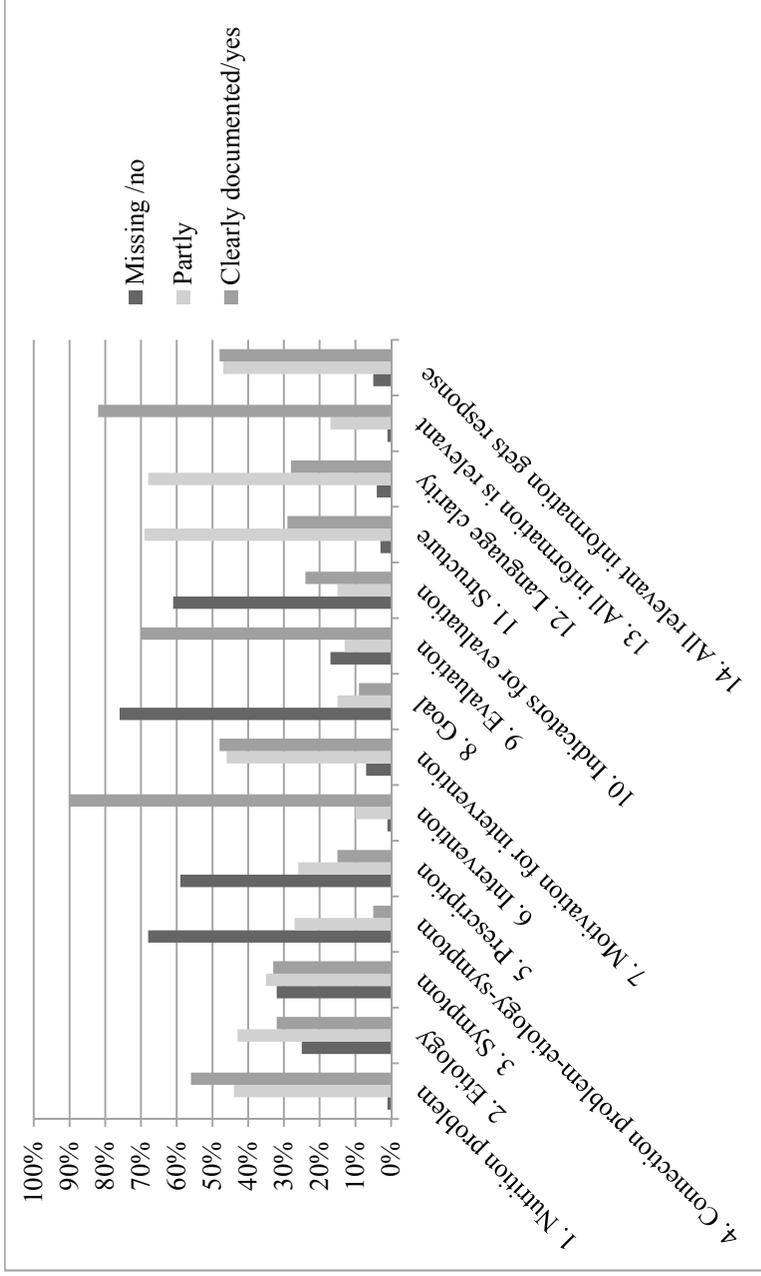
**Table 4.** Audit results: percentage of the audited notes placed in the three different quality levels.

Quality level based on the Diet-NCP-Audit instrument	All notes (n=147) <sup>1</sup>	Comparison setting		p-value <sup>2</sup>
		Primary care (n=63)	Hospitals (n=84)	
Level A (20-26p), %	3	5	1	0.188
Level B (13,5-19,5p), %	61	73	51	0.007
Level C (0-13p), %	37	22	48	0.002

<sup>1</sup>Due to rounding off, the sum exceeds 100 %.

<sup>2</sup>Pearson Chi-square test.

Figure 4 shows the scorings of items 1–14. The most frequently documented item was nutrition intervention, followed by evaluation and nutrition problem. The least documented items were goals, the connection between problem-etiology-symptoms (PES connection), nutrition prescription and indicators for monitoring and evaluation at follow-up visits. Regarding other quality aspects (items 11-14), the item “all information is relevant” was the highest scored. Regarding structure and language clarity, a majority of the reviewed records showed some shortcomings. Nearly half of the records contained relevant information in the assessment part that received no response in the intervention or evaluation part of the record.



**Figure 4:** Audit results: Documentation frequency of the 14 different items regarding all included dietetic notes (n=147).

## Comparisons between hospitals and primary care centers

Dietetic notes from primary care centers turned out to have statistically significantly higher total scores than notes from hospitals. Notes from hospitals were also more often placed into quality group C, as shown in Table 4.

## Comparisons between different patient groups

In the 147 dietetic notes, 10 different patient groups were represented, such as patients with kidney diseases, bowel diseases and cancer. Of these, 7 groups contained 10 dietetic notes or more, and thus were included in comparisons between the patient groups. The median total score for the dietetic notes regarding the different patient groups varied between 12.5 and 15.5, however no statistically significant differences were shown.

## Paper III

The most common way of referring to the patient in the dietetic notes was by functionalization, i.e. to call him or her “patient” or any of the abbreviations “pat” or “pt”. The use of the patient’s name only occurred in paediatric notes. Personal pronouns such as “he” or “she” were often omitted, and almost only used in subordinate clauses where their omission would have resulted in a rather incomprehensible clause. An example of this is “Says that she eats very little”.

The clauses were often constructed in a way that excluded any reference to the patient. We found that a common way of constructing clauses without subjects in the dietetic notes was to leave out the verb of the clause. In the analysed records, this was performed in three ways that often co-occurred:

- Fragmentary clauses where the verb is omitted
- Enumerations and lists where a keyword and a colon (:) have the function of compensating for the loss of verb
- Verbs transformed to nouns - nominalization

For example, a fragmentary clause missing both verb and subject is “Very rarely vegetables, not fond of”, or “Candy on Saturdays”. Large parts of the notes were built-up by enumerations and lists, where the colon played a central role, such as in “Alcohol usage: No”. This clause is also an example of a co-occurrence with nominalization, as the active verb “use” (in Swedish: använda) has been transformed to the noun “usage” (in Swedish: användning).

Some of the notes did not contain any reference to the patient at all. The dietitian was also omitted from the notes by fragmentary clauses, lists and nominalizations, but in an even more extensive way.

The use of passive verbs was common. Another common linguistic device in the notes was to present actions so that they appeared to be taken by things. For example, in the clause “Solid food aggravates the symptoms, especially meat and potatoes” the “solid food” is put as the agent and the patient is left out of the clause. In some notes, “*there*” or “*it*” is presented as the agent, which linguists refer to as existential there-sentences (Lakoff, 1987): “There are often potato chips on Fridays”.

The notes contained several evidential markers regarding information collected from the patient, such as “the patient says that” or ‘according to the patient’. There were no evidential markers regarding information gained by the dietitian.

## Paper IV

The analysis of the transcribed focus groups resulted in three different themes; “system perspective”, “lifeworld perspective” and “weaving together the perspectives”.

The system perspective was characterized by the emphasis of the importance of structure, measurability and clarity in patient records as well as in overall health care. The structured NCP was often described as a help for the dietitian to sort out information and identify the most important nutrition problem:

[...] and with regard to the documentation, I think this gives you a more effective, structured way to work, so it helps me a lot to clarify what I do with the patient and what the goal with this patient is.

*(Focus group 1)*

Patient safety and nutrition care quality were often discussed as being dependent on structure and standardization of caring processes and terminology. Measurability was raised as an important feature of the NCP(T), and many of the dietitians reported an increased focus on measurability and quantification in their assessments of patients. Non-measurable symptoms and problems were often discussed as problematic.

The role of NCP(T) in dietitians’ professionalization was also raised in the system perspective. For example, some dietitians argued that the clear struc-

ture and medical-like wordings of nutrition diagnoses brings with it an increased visibility of dietitians and a focus on the dietitians' unique competence in health care.

The lifeworld perspective was characterized by statements emphasizing that the patients' problems are often comprehensive and do not always easily fit into the pre-formulated nutrition diagnosis with its demands for measurability and clarity:

But when I have read yours, and sometimes other's [notes], I think that in some way, even though background information is included, it somehow sort of simplifies the patient's problem. I may think that "ok, it is like this, it's this easy". It looks very easy, but to the patient who has a background with many problems, you kind of don't see them in that.

*(Focus group 6)*

The patient-dietitian relationship was also emphasized in this perspective, arguing that you need to consider the whole patient and his or her needs, and to be flexible in the use of NCP(T). For example, dietitians discussed that you might not want to bother a sick patient with measurements of weight or a detailed record of the dietary intake, and you might therefore skip the nutrition diagnosis.

Also the NCPT language was discussed, as some dietitians found the language stiff and stilted. Many of the participants also considered some standardized diagnoses to be harsh and offensive, and believed that they might affect the patient-dietitian relationship. Examples of such nutrition diagnoses are "*Inability to manage self-care*", and "*Unsupported beliefs/ attitudes about food- or nutrition-related topics*".

The third theme, "weaving together the perspectives" was characterized by statements highlighting both measurability/structure as well as a holistic and flexible view as important perspectives. The statements placed in this perspective also described different strategies to meet both these different ideals. One such strategy was, for example, to formulate a preliminary diagnosis at the first visit and then revise the diagnosis as the dietitian gained more insight into the patient's problem over time. Another strategy was to not interpret the NCP(T) literally, but to use the system in a flexible way:

Sometimes you feel after thinking a while that, no, I can't make it any better, and then you might have to freestyle a little or something, if you can't get it to sound ok. You can't sit there and thoroughly read it through [the NCP(T) manual].

*(Focus group 7)*

Many dietitians stated that they appreciated the concise problem formulation of the PES statement, but at the same time they acknowledged that the problem background is often more complex than what fits into a list of standardized diagnoses. One strategy often mentioned being used to overcome this conflict was to combine the PES statement with a more verbose free-text summative view of the assessment in the patient record:

*Dietitian 1:* We noticed that this nutritional summative view and the nutrition diagnosis were actually the same thing.

*Dietitian 2:* Yes, that easily happens.

*Dietitian 1:* But then we said, we'll keep the summative view keyword, and there you might expand a bit. There might be other things that don't show in the PES statement, so you might still keep that. But if you don't need to write under "summative view", you don't have to. Then the nutrition diagnosis is enough.

*(Focus group 5)*

Another strategy mentioned in the "weaving together" theme, was to participate in the development of NCP(T) and to address shortcomings found in the present system to enable improvements of the NCP(T) system. However, not all dietitians saw this as a realistic option, as it requires comprehensive effort in addition to the usual work with patients.

# Discussion

## Principal findings

In summary, here are the principal findings of this thesis:

- The Diet-NCP-Audit instrument was found to have high content validity and clarity, and moderate to high reliability. We therefore consider the instrument useful for evaluation of dietetic documentation.
- Based on the NCP model, there is a need for improvement in Swedish dietetic documentation, especially regarding goal-setting and outcome parameters.
- The dietetic notes contained several linguistic devices that did not enhance or reflect the patient-centered care that is currently emphasized in most health care guidelines.
- Discussing the NCP(T), dietitians were torn between the different ideals of standardization and measurability on the one hand, and holistic view, flexibility and patient centeredness on the other.

## Discussion

This whole thesis can be seen as an illustration of the struggle to balance the different ideals of health care. It can also be seen as an example of dietetic professionalization, highlighting and discussing the role of the dietetic professional, and contributing to the construction and description of the dietetic profession. Different perspectives of clinical documentation and patient records are presented in this thesis as well as, in a broader sense, different perspectives on research and the construction of knowledge. I have written this thesis starting from what can be seen as a more traditional realist perspective, ending in a clear critical constructionist view of the dietetic note and its content and structure. If my thesis is viewed through the Habermasian lens, a system perspective is emphasized in Papers I and II, seeing the quality of clinical documentation as measurable and idealizing the standardization of

documentation. In these papers, the role of language is not discussed, other than regarding the importance of clear and unambiguous formulations. In Paper III, the role of language is developed further and seen as a social practice that contributes to our perception of the world. In this paper, the ideal of patient-centered care is highly valued and quality is seen as something other than just following a given structure. In Paper IV, I discuss how clinical dietitians are torn between these different ideals of standardization/structure and patient-centeredness/holistic view. Thus, in this thesis, just like the dietitians in Paper IV, I am struggling to combine the different ideals and perspectives of health care.

### Balancing reliability and validity in quality measurement

The use of a standardized audit instrument to draw conclusions about the quality of the documentation in patient records puts high demands on the validity and reliability of the instrument. For example, the definition of documentation quality must be congruent with the surrounding society's perception of quality or else the instrument will be considered invalid, and as such useless. In the instrument Diet-NCP-Audit developed in Paper I and used in Paper II, the quality measures that were prioritized were documentation of all NCP steps, language clarity, clear structure and documentation of relevant information, which could be defined as a process comprehensiveness-focused approach (Ehrenberg et al., 2001).

In Paper I, the instrument showed high content validity from the expert panel's ratings of the different items in relation to their relevance and importance for dietetic documentation quality. For some items reliability was rather low, but in total we considered the instrument to have acceptable reliability. The quality of a text such as a dietetic note in a patient record certainly is more of a latent and qualitative content, rather than a manifest and quantitative (W. J. Potter & Levine-Donnerstein, 1999). The quantitative measurement of such content therefore implies some difficulties balancing validity and reliability. For example, the instrument's reliability could have increased if the instrument's items had been narrower and allowed fewer possibilities for interpretation. However, a narrower formulation of the items would, at the same time, have decreased the validity of the instrument, as the risk for underestimation of the documentation quality would have increased. According to Potter and Levine-Donnerstein, (1999), the more complicated the decisions that the coders of a text are required to make, the less objective they become as they bring their own preconceptions into the audit. Potter and Levine-Donnerstein therefore emphasize the importance of intersubjectivity among coders, meaning that their preconceptions about the different items in an instrument should be similar, to avoid different interpretations. The development of a manual connected to the instrument was a way to in-

crease the intersubjectivity among the four raters, which probably contributed to an increase in the reliability. A problem with the NCP steps as quality measures is, however, that the NCP(T) is still under development and implementation. Thus, dietitians have not yet reached a stage where the interpretations of different NCP(T) concepts are always the same. Also, the features of overall documentation quality have been rarely discussed among Swedish dietitians, which is why there is no clear consensus about, for instance, what counts as relevant information in the patient record. I regard these factors as important reasons for the moderate reliability of the instrument.

One important aspect of the Diet-NCP-Audit instrument is that it was constructed to evaluate patient records written before and in the early stages of the Swedish NCP(T) implementation. The way in which the dietetic notes in Paper II were written varied greatly, and therefore a broad formulation of the items was necessary to include the range of different documentation styles. Using a structured documentation model, patient records probably will become more uniform. Later stages of the NCP(T) implementation might therefore allow the use of more narrowly formulated items, hopefully leading to higher reliability in future elaborations of the instrument.

In its present form, the Diet-NCP-Audit instrument responds to a process comprehensiveness-focused approach. Ehrenberg et al. (2001) suggested that it would be a good idea to combine this with a knowledge-based approach, connecting the content of the patient record to clinical guidelines regarding specific patient groups when auditing patient records. At the time of the elaboration of the Diet-NCP-Audit, there were very few such Swedish clinical guidelines available, and for practical reasons we therefore decided to focus mainly on the process comprehensiveness. An interesting possibility for future development of the instrument, however, would be to combine the process focused Diet-NCP-Audit with a comparison with dietetic clinical guidelines.

Earlier nursing documentation audits have shown that inadequate information was recorded about the patient's preferences and needs, as well as his or her background and quality of life (Cadd et al., 2000; Laitinen et al., 2010). These aspects are certainly also of importance for health care quality and are missing in the Diet-NCP-Audit. Another implication for elaboration of the Diet-NCP-Audit instrument would therefore be to also include such patient-centered parameters.

## The content and clarity of dietetic documentation

When the NCP(T) was implemented in Sweden in 2011, Swedish dietitians were already familiar with large parts of the model, since similar dietetic processes had been described in earlier Swedish and international models (Dietisternas Riksförbund, 2005; Hammond et al., 2014). In Paper II, it is clearly shown that, even before the implementation of NCP(T), Swedish dietitians already included several parts of the NCP in their clinical documentation, such as nutrition problem, intervention and evaluation. However, it is interesting to focus on the less documented parts of the NCP, as they reveal areas where improvement of the documentation is possible.

For example, although the nutrition problem was often documented, it was more seldom connected to an etiology, and even more seldom to signs and symptoms. According to Lacey and Pritchett (2003), it is important to identify not only the problem, but also the cause, for several reasons. For example, this will help the dietitian to determine whether or not a certain nutritional intervention will improve the situation or not and to prioritize between different interventions. It will also help to identify whether the patient's problem is the dietitian's responsibility or not. In a systematic review regarding nursing documentation, Müller-Staub (2009) showed that merely stating a nursing diagnosis was insufficient to capture patients' needs, but that diagnoses containing a specific etiology provided a basis for choosing effective nursing intervention, which in turn led to better outcomes. The signs and symptoms are, in turn, supposed to provide evidence that the nutrition problem actually exists. I agree with Lacey and Pritchett, as well as Müller-Staub, regarding the importance of highlighting dimensions other than just the nutrition problem itself, and that for high quality nutrition care, the dietetic note needs to contain a more consistent picture of the problem and its background.

An important aspect of nutrition care is the possibility to evaluate whether a certain intervention has had an effect on an individual patient's problem. Since the audited documentation omitted, to a large extent, indicators for evaluation and goalsetting, this kind of evaluation is very difficult. Nowadays, critical thinking is often mentioned as an important part of health care professionals' competence, including skills such as analysis, evaluation and inference (Fesler-Birch, 2005; Profetto-McGrath, 2005). The Academy of Nutrition and Dietetics describes the NCP as a framework and method developed to promote critical thinking and facilitate decision-making among dietitians (Bueche et al., 2008a). Documenting items such as goalsetting and evaluation indicators would, in my opinion, certainly facilitate the utilization of those skills among dietitians. However, it is also important to keep in mind that there are often discrepancies between the patient record and the

actual care (Ehrenberg & Ehnfors, 2001). Thus, we cannot draw conclusions about the actual thinking and actions of the dietitians, but only state that important parts of the dietetic decision process are missing in several dietetic notes.

The focus on clarity as well as on the sufficient and accurate content of dietetic notes in Papers I-II originates from the perspective that the patient record is considered to be an important tool in the efforts towards a high quality and patient-safe care in health care (Edwards & Moczygamba, 2004; Gearing et al., 2005; Schiff & Bates, 2010). The American National Patient Safety Foundation has defined patient safety as the avoidance, prevention and amelioration of adverse outcomes or injuries stemming from the processes of health care (Cooper, Gaba, Liang, Woods, & Blum, 2000). According to Pirkle et al. (2012) incomplete documentation may reduce the quality of care. The incomplete recording seen in this study is in line with the results of earlier audit studies in both nursing and dietetics (Bieseimer & Chima, 1997; Hakel-Smith et al., 2005; Ibrahim, 2010; Saranto & Kinnunen, 2009; Wang et al., 2011).

An essential aspect of many of the audit studies above, including Papers I-II, is the definition of high quality documentation. Using the NCP as a model for the content of high quality documentation will of course lead to the conclusion that an implementation of that same model would increase documentation quality. However, as mentioned before, the NCP is not a newly invented model, but has instead been developed to systematize and describe the already existing work processes of dietitians (Hammond et al., 2014). Therefore, most parts of the NCP describe what many dietitians already see as essential parts of the nutrition care that should be included in dietetic documentation. If the NCP had been combined with earlier models of dietitians' work, the items of the Diet-NCP-Audit would probably have been basically the same. Therefore, my suggestion is that the implementation of the Swedish NCP(T) might increase the quality of documentation, provided that quality is defined as all the relevant parts of the nutrition care being documented in a clearly written way. It would therefore be extremely interesting to audit Swedish dietetic notes again, as the implementation has now been ongoing since 2011 in many Swedish dietetic settings.

When discussing the content of the patient record, I find it important to keep in mind the context of record keeping, for example the dietitians' work environment with heavy workloads and time pressure. In a focus group study by Björvell et al. (2003), nurses expressed conflicts of loyalty and feelings of guilt connected to administrative tasks like documentation. Time was often mentioned as an obstacle to high quality documentation. Berg (1998) also discussed the content of patient records, arguing that the selection, concen-

tration and abbreviation of information in the record is performed in the very context of health care, and that which seems incomprehensible to an outsider is understandable in the right context for an insider. According to Berg (1998), the purpose of the patient record is not to give a fully detailed picture of the patients' situation, but to convey information that is to be completed through communication with other involved personnel as well as through talking with the patient him/herself: "The record is just one of the many *re-sources* for the ongoing work; not the one, penultimate, complete *record* of this work" (p. 299).

## The language and the patient

In earlier analyses of patient records, the language as well as the selection of content used has been criticized for impersonalizing and objectifying the patient (Björnsdóttir, 2001; Buus & Hamilton, 2015; Donnelly, 1988; Donnelly & Brauner, 1992; Heartfield, 1996). Björnsdóttir (2001) argued that language plays an important role in our perception of reality and construction of knowledge. Focusing on the language and specific functional grammar of patient records in this thesis, we found that the dietetic notes contained linguistic devices that contribute to the construction of the patient as a passive receiver of care, omitted from the text as a person. As Heartfield (1996) argued, by the form and content of the patient record, the person concerned loses all the complexity and encumbrance of his or her life and is transformed into a "patient". I believe that the omissions of the patient's name, the referring to him or her by functionalization ("pat") or other similar linguistic devices all contribute to this construction of the patient in health care. In their analysis of nursing notes, Laitinen et al. (2010) also described the frequent omitting of the patient as a person through the use of the passive voice and fragmentary sentences, stating that the language of the notes somehow signaled institutionalized thinking. In an ethnographic field study at a Swedish hospital, Wolf et al. (2012) criticized the practice whereby patients were often referred to by room or bed number, arguing that this is dehumanizing and objectifying. I find this practice to be very similar to the functionalization that we identified, and the referring to "pat" in the dietetic notes has, I believe, similar consequences.

The grammar used in the patient record also affects the image of the dietitian, who is omitted from the texts to a greater extent than the patient. Even though obviously present at the patient meeting and participating in the conversation with the patient, the dietitian is almost completely omitted from the patient record. None of the evidential markers found in the analysis referred to the dietitian as a source of information, which gives the reader an impression of the dietitian as an objective and invisible observer. Heartfield (1996) and Laitinen et al. (2010) also noticed this invisibility of the writer in nurs-

ing notes, arguing that the price of this is that nurses do not reveal their active role in the caring process. This ostensible objectivity has also been described by Foucault (1973), who explains that by using this medical gaze, the clinician attains the function of an objective observer of the patient's body, registering signs that, together, will lead to the truth about the disease.

Even though dietitians in the focus groups in Paper IV did raise certain aspects of language from a patient-centeredness perspective, such as the harsh formulation of some nutrition diagnoses, none of them brought up this “every day grammar” and its consequences for patient-centeredness. My interpretation of this is that the language patterns of health care are a deeply rooted norm, which is difficult to see and even more difficult to challenge. Hellesø (2006) has described the frequent omission of verbs and pronouns in nursing notes, but does not, however, discuss any further implications of these features. As Hobbs (2003) states, this is everyday language for health care professionals, developed due to time pressure and high workloads. Thus, there are reasons for the different grammatical features found in the analysis. However, from my perspective, time pressure and high workloads are not the only reasons for the omission of subjects and other similar linguistic devices. As mentioned earlier, health care is dominated by a medical discourse, where the use of scientific and medical language is associated with high value. The language in patient records is very similar to that of scientific language, using different techniques to exclude the subject from sentences to give the sense of an objective observer (Rundblad, 2007). To me, the grammar of the patient record has therefore a clear function, that of constructing a professional medical and scientific identity through language.

Similar to the earlier discussion about the content of the patient record, there is, of course, a difference between the actual nutrition care and the language of the dietetic notes. However, I am convinced that language does contribute to the way we understand and experience the world, and therefore contributes to the dietitians' construction of the patient and the nutrition care situation. Also, as the internet-based electronic patient record is increasingly becoming a part of the communication between dietitian and patient, it is possible that it will soon be considered a part of the actual care situation.

Writing this thesis, I have of course been thinking a lot about scientific language and its similarities to medical discourse and patient records. From a critical perspective, questioning the norms of scientific discourse and recognizing that other ways are possible, I have therefore chosen to write large parts of this thesis in the first person.

## The standardized process and the individual patient

Many of the dietitians in the focus groups highlighted standardization of caring processes and language as important features that can increase nutrition care quality as well as professionalism. At the same time, the importance of flexibility and a holistic view was also emphasized. We interpreted these two perspectives as representing the Habermasian concepts of system and lifeworld.

In the system perspective, aspects such as the importance of measurability and a standardized language were embraced, often connected to statements about professionalism and the dietitian's role in health care. According to Glazer (1974), standardization is an important part of professional practice. The participating dietitians stated that the use of a stringent nutrition care process and an exact terminology results in a professional appearance. Traditionally, many features of the system perspective, such as precision, measurability and standardization, are highly valued in health care. For example, Olin Lauritzen and Sachs (2001) pointed out that numeric measurements and tests in health care play a major role in the assessment and diagnosis of patients as well as in the doctors provision of information to the patient. Standardized caring processes, terminologies and other approaches in health care are often emphasized as important contributions to patient safety, for example by reducing the risk of medical errors (Kohn, Corrigan, & Donaldson, 2000; Rozich et al., 2004). Also, as mentioned earlier, the use of a scientific and medical discourse contributes to a connection between the dietetic professional and the highly valued medical profession. Hyde et al. (2005) found that patient records written by nurses were dominated by medico-technical details rather than lifeworld-related patient information. Similarly, I see the dominance of medical and technical discourses at the expense of the patient's experiences and thoughts about his or her situation and everyday food discourse as a clear example of the Habermasian colonization of lifeworld.

However, a parallel lifeworld discourse was also present in the discussions, highlighting the importance of a holistic view and a meaningful relationship between the patient and dietitian. According to Mead and Bower (2000), an important feature of patient-centered care is to see the patient as an experiencing individual, "exploring both the presenting symptoms and the broader life setting in which they occur" (p. 1089). Nurses advocating a holistic view have earlier criticized the standardized nursing process and nursing diagnoses for having intrinsic philosophical values of reductionism, and increasing the inequalities in the relation between patient and nurses (Barnum, 1987; Lützén & Tishelman, 1996). Many of the dietitians seemed to connect the NCP(T) with a system perspective, emphasizing advantages such as measurability, clearness and improved possibilities for evaluating nutrition care, and

disadvantages such as rigidity and inability to include the whole patient and his or her complex background. This is similar to the critique directed against the nursing process and nursing diagnoses 30 years ago.

The tension between the ideals of standardization and patient-centered care is an interesting phenomenon, which has led me to question whether these two ideals are compatible with each other. They are clearly both present in national and international guidelines in health care, emphasizing both standardization and holistic, patient-centered care (Institute of Medicine. Committee on Quality of Health Care in America, 2001; Socialstyrelsen, 2006, 2011). On the one hand, standardization of care processes and terminologies brings with it increased control over health care, which will most probably have the advantage of a more consistent and patient-safe care. As the clearness of the standardized patient record also increases the possibility to evaluate the given care, another advantage is that standardization also creates the potential for improvement of nutrition care methods. At the same time, there was criticism, both in previous literature and among the dietitians in Paper IV, of the standardized systems' inability to include the whole picture and to manage the flexibility that is always necessary when human beings are involved. As described by McCarthy (1991) and Paans et al. (2013), the use of a diagnostic manual really does affect the clinician's assessment as well as their analysis of the patient's situation. Lacey and Pritchett (2003) draw a clear division between standardized care and standardized care processes, as the former implies giving the same care to patients with a certain condition, while the latter refers to a consistent structure that can support individualized care. According to Wolf and Carlström, standardization implies risks of reductionism, but at the same time, a certain degree of standardization is needed to ensure the maintenance of patient-centered routines where they have been implemented. They argue, therefore, that standardization supports a sustainable person-centered care, as long as it is combined with flexibility, adaptability and a willingness to listen to the patient's needs (Ekman, 2014, pp. 113-128).

In my understanding, the NCP(T) is constructed to allow the dietitian to consider lifeworld features, which is shown in nutrition diagnoses such as "*impaired nutrition-related quality of life*", and the possibility to include lifeworld etiologies related to cultural and social issues. According to Lacey and Pritchett (2003), the NCP "assists dietetics professionals to scientifically and holistically manage nutrition care" (p. 1063). However, the dietitians in Paper IV mainly focused on the medical and technical features of the NCP(T), with diagnoses such as "*inadequate energy intake*", and did not mention the possibilities of using the etiology to describe the patient's complex background and problems. Nutrition diagnoses approaching lifeworld features were mostly mentioned as examples of harsh and offending diagno-

ses, such as *“Inability to manage self-care”* or *“Unsupported beliefs/attitudes about food- or nutrition-related topics”*. This is interesting in two ways.

Firstly, there is a clear dominance of medical discourse at the expense of social or cultural perspectives in the participating dietitians’ views of the NCP(T). I see this as an example of a Habermasian colonization of lifeworld. A possible explanation for the dietitians’ focus on these perspectives is that educational occasions and implementation processes have focused mainly on the bio-medical aspects of the NCP(T). In Gingras’ (2010) study of dietitian subjectivity, dietitians experienced a discontinuity between educational and practice contexts. They stated that the dietitians’ education is based more upon a medical model focusing on “facts and figures, and percentages and milligrams” while dietitians in reality have to deal with very ill people where different cultural and social issues play an important role (p.443). The lack of documented etiologies in the audit in Paper II also indicates that the search for the causes of nutrition problems, often lifeworld related, has not previously been prioritized by dietitians. The very context of the education and implementation of the NCP(T) can thus be seen as permeated by a system perspective.

Secondly, food and nutrition can be used as an illustrative example of the tensions between Habermas’ system and lifeworld. Food and nutrition contain the social, cultural and symbolic aspects of meals and eating, as well as being able to be divided into measurable units such as calories and grams. As seen in the dietitians’ aversion towards the more lifeworld-like diagnoses, the systemization and categorization of the complex issues in human beings emotional lives and relations that are connected to food are not as easy as the counting of calories and milligrams. My experience is that these nutrition diagnoses are easily interpreted as normative and paternalistic, judging the patient’s behavior and feelings against an idea of normality. According to Habermas (1985), systems are always deriving from lifeworld features, but as the inherent characteristic of the system is effectivity and success, in modern society the expansion of the system will be at the expense of lifeworld. I am skeptical that these lifeworld issues are at all possible to categorize and quantify without bringing into play a reductive view that transforms them to system features. Instead, I see a paradox in this as the minute we try to bring lifeworld into the system, we also start a possible colonization of lifeworld.

## Professionalization and the NCP(T)

Food and nutrition, the area of expertise of the dietitian, is an area closely connected to the everyday knowledge of many people, but at the same time

also connected to a highly specialized medical knowledge (Germov, 2008). In society, there are major differences in how these two types of knowledge are valued. Studies among nurses show that the tasks connected to everyday knowledge are constantly undervalued and hierarchically dominated by more medical-technical tasks, as these provide a higher status (Heartfield, 1996; Hyde et al., 2005). Since the 1950's, there have been explicit endeavors among nurses towards a more professional approach, with the purpose of increasing the status of nurses and emphasizing their professional autonomy and expertise (Powers, 2002).

The development and implementation of a specific professional nutrition care process and a standardized terminology are clearly parts of such a professionalization strategy, delineating and protecting the special competence and responsibility of the dietitian. According to Freidson (1999), one important aspect of professionalism is the creation and extension of the profession's body of knowledge. A strive towards professionalism implies refining, revising and codifying the existing body of knowledge. Another important aspect of professionalization is the endeavor to set the boundaries of a profession and distinguish it from other similar occupations (Witz, 1992). Rutty (1998) discussed the professionalization of nurses, arguing that the development of theories and terminologies specific for nursing are ways of differentiating nursing from other health care professionals and advancing the profession of nursing. Powers (2002) argued that the nursing diagnosis has the advantage of being able to both emphasize the similarities as well as the differences between nursing and medicine. Through nursing diagnoses the profession of nursing is thus clearly differentiated from other care professionals whilst, at the same time, the highly valued medical discourse is emphasized.

As I see it, the development of NCP(T) implies a development of the dietetic profession's body of knowledge as well as the setting of a boundary towards other health care professions. At the same time, the emphasis on nutrients and anthropometrical status in the NCP(T) at the expense of specific food items and food related status such as appetite, clearly reflects the dominance of specialized medical knowledge over everyday food discourse in health care. According to Powers (2002), analysing nursing diagnoses from a genealogy perspective, the choice of the word "diagnosis" is important as it reflects the dominance of the medical discourse in the context of the emergence of the nursing profession. She argues that the nursing diagnosis was constructed using the highly valued and socially desirable discourses of medicine and science as models with professional status as a goal.

It is not a coincidence that many parallels between nursing and dietetics have been drawn in this thesis. The similarities between the nursing and dietetic

professionalization are numerous, even though nursing is a much larger professional group who started their professional process earlier than the dietitians. I also found in most of the studies included in this thesis the presence of the professionalism discourse that has characterized large parts of nursing research during recent decades. In the focus group study, it is clear that many of the participating dietitians see the NCP(T) as a possible way of raising the dietitians' status in health care, for instance by emphasizing the unique competence of the dietitian using a type of language that is highly valued in health care. Examining the origins of the NCP(T), it is obvious that the nursing process and nursing diagnoses provided a role model for dietitians to follow. According to Hammond et al. (2014), the first draft of a dietetic model of counseling and nutrition diagnosis started at the Department of Nutritional Sciences at The Pennsylvania State University in the 1970's, about 20 years after the initial development of the nursing process and nursing diagnoses. Papers I and II in this thesis are themselves examples of professionalism strategies among dietitians striving for dietitians' documentation in patient records to better correspond to the ideals of high quality dietetic documentation. Those ideals, as incorporated in my studies, imply for instance an emphasis on the unique dietetic competence and contribution to health care through the formulation of nutrition diagnoses, nutrition recommendations and similar devices, in a medical-technical type of language. In addition, Papers III and IV contribute to the construction of dietetics and a dietetic body of knowledge, whilst from a critical perspective questioning the dominance of medical discourse in dietetics.

### Dealing with different ideals in the contemporary patient record

With the changing role of the patient record, new demands on documentation are emerging. The importance of relevant and complete information in clinical documentation has been emphasized for a long time, connecting the quality of patient records to patient safety and care quality (Jefferies et al., 2010; Nilsson, 2007). The demands for a respectful tone and patient-friendly language when documenting have also been highlighted in several guidelines during the past decades (Socialdepartementet, 2008). However, the rapid technical development, whereby an increasing number of patients can, via the Internet, now access their own patient records from home, contributes to an actualization and further emphasizing of this aspect (Jerlvall, 2014). In Paper IV, several dietitians in the focus groups mentioned the patients' increasing access to their own records and saw this as a reason to really consider how patients would perceive the language and content of different nutrition diagnoses. Patient records are also being used in research and quality monitoring, which is facilitated by systematization and standardization of their structure and content (Classen et al., 2008; vonKoss Krowchuk et al., 1995).

The patient record today thus comprises numerous ideals regarding, for example, content, structure, language, patient-centeredness, professionalization, holistic view and standardization, which are all visible in this thesis. As seen in Paper IV, these ideals are not always compatible with each other, which might lead to frustration among dietitians and other health care professionals who are supposed to meet these ideals. The NCP(T) has, to a great extent, been embraced and welcomed by dietitians all over the world, and one reason for this might be this frustration and the need for a framework to facilitate the balance between different ideals. The NCP(T) provides answers regarding the content that should be documented and in which structure and type of language. The model is promoted as a holistic framework, placing the patient-dietitian relationship in the core, at the same time as the content and language is systematized and classified (Bueche et al., 2008a, 2008b). Besides this, it is certainly also a tool for making the competence of dietitians more visible in health care.

### Further methodological considerations

The papers in this thesis refer, to a great extent, to the NCP model of 2008. In 2015, an updated version of the model was released containing the same four steps, but with some differences in terminology. For example, in the 2008 model, the core of the model consisted of the statement “Relationship between patient/client/group and dietetics professional”, while in the updated version the formulation is “Individual/population interacts with professional” (Academy of Nutrition and Dietetics; Bueche et al., 2008a). Even though some details of the model have changed, I believe that most parts of the studies included in this theses are still relevant for the updated NCP(T) version. However, it cannot be excluded that some results of the studies could have differed if the 2015 model had been used as the model for Diet-NCP-Audit, or as a visual material in the focus group discussions.

### Paper I

Earlier studies have shown that the validation of audit instruments for clinical documentation is often very briefly and unclearly reported (Wang et al., 2011). Therefore in Paper I, we wanted to carefully describe the elaboration and evaluation of Diet-NCP-Audit. Many of the strengths and weaknesses of the instrument have already been discussed, as well as the considerations taken in the evaluation of the instrument. However, there are some methodological aspects from Paper I that have not already been discussed that I would like to mention.

Firstly, the inclusion of four different raters testing inter-rater reliability is an advantage of this study. This implied six pairwise comparisons for each item or dietetic note total score. Earlier similar instruments have only undergone

smaller inter-rater reliability tests with two or three pairwise comparisons (Bjorvell, Thorell-Ekstrand, & Wredling, 2000; Hakel-Smith et al., 2005; Hansebo, Kihlgren, & Ljunggren, 1999; Larson, Bjorvell, Billing, & Wredling, 2004; Voutilainen et al., 2004).

The inclusion of an intra-rater reliability test is another advantage, as this is often omitted in the testing of audit instruments (Wang et al., 2011). One way to further strengthen this study would, however, be to perform two parallel intra-rater reliability tests and thus include one more rater.

The dietetic notes in the test were all written by Swedish dietitians so before using the audit instrument on dietetic notes from other countries, reliability should also be tested regarding notes from other countries or written in different documentation systems.

## **Paper II**

The dietetic notes included in this study were written regarding patients of all ages and with different types of medical conditions. They were also collected from both hospitals and primary care centers from three different county councils with different types of electronic record systems. This increases the generalizability of Paper II.

Also, 147 dietetic notes were included, compared with earlier dietetic documentation audits that included 60 and 85 notes respectively (Hakel-Smith et al., 2005; Ibrahim, 2010). This makes this study the largest audit of dietetic documentation so far. Similar studies in nursing have often included 50-200 nursing notes, although some nursing studies have included even larger samples (Saranto & Kinnunen, 2009). Including a larger sample of dietetic notes might have facilitated the comparison between different patient groups, which in the test did not show any significant differences. However, this comparison was not a part of the main aim but was rather performed as an additional test. Therefore, in relation to both earlier dietetic and nursing documentation audits, I consider the sample size sufficient.

The earlier two audit studies regarding dietetic documentation both addressed inpatient documentation at hospitals (Hakel-Smith et al., 2005; Ibrahim, 2010). As Paper II concerns outpatient documentation at hospitals and primary care centers, this may complicate a direct comparison between the different audit studies. The inclusion of inpatient documentation would have resulted in a broader range of notes and might also have affected the results. However, as we wanted a broad but still somewhat coherent sample of dietetic notes from both primary care centers and hospitals, we decided to focus mainly on outpatient notes from hospitals, as these patient visits are more similar to those at primary care centers.

The validity and reliability of Diet-NCP-Audit have been discussed earlier in this thesis. As some of the items of the instrument showed a rather low reliability, this is a limitation of the documentation evaluation in Paper II. Regarding those items, such as relevance of the content in the patient record or the clarity of the language used, no clear conclusions can be drawn. However, regarding total score of the audited records as well as their placement in different quality groups, the instrument proved to have moderate to high reliability. Therefore, in total, the reliability and validity of the instrument can be seen as an advantage of this study.

### **Paper III**

Analysing relations between different care professions as well as between care professions and patients, the medical record is a valuable source of information. Even though the primary purpose of the medical record is to provide information about patient care, much more information can be found in the record, such as patient's accounts of illness and the opinions of medical staff. Cultural, institutional and professional values and perspectives can thereby be found through an analysis of medical records (Risse & Warner, 1992).

An advantage of studying medical records is that these texts are produced with no involvement at all from the researcher analysing them, unlike other materials such as those from interviews. Within discourse analysis, there has been a debate regarding the quality of different materials analysed, where such naturally occurring texts and talks have been argued to have the highest quality (Lynch, 2002; J. Potter, 2002; Speer, 2002a, 2002b; ten Have, 2002).

Due to the detailed and comprehensive linguistic analysis, only 30 of the 147 patient records from Paper II were included in this study. However, most of the linguistic characteristics identified, such as the omitting of verbs and subjects, occurred in all of the 30 dietetic notes included. They were also in line with linguistic descriptions of larger samples of patient records (Friedman et al., 2002; Smith et al., 2014). Therefore, in this paper, I discuss the linguistic characteristics of dietetic notes in general terms, even though the small sample of 30 dietetic notes may not be enough to be able to generalize.

The detailed linguistic analysis is an unusual approach for a discourse analysis of patient records. Most of the earlier discourse analyses have used broader approaches, focusing on the content, the social context and broad linguistic patterns in the records (Heartfield, 1996; Hyde et al., 2005). However, in Paper III, I have chosen a method more focused on linguistic details. Such detailed analyses are more common in linguistic research aiming to merely describe the linguistic characteristics of a text, for example, to enable

electronic data processing of patient records (Friedman et al., 2002; Smith et al., 2014). In critical linguistics and critical discourse analysis, focus is put on often detailed linguistic characteristics, which are assumed to reflect or reproduce the social context in which they were produced. A common critique within critical discourse analysis is, however, that research in the field often lacks focus on either the language or the social context (Breeze, 2011). Widdowson (1998) directed critique towards the narrow focus of grammatical features like passivization and nominalization in critical discourse analysis, arguing that an analysis with such narrow linguistic focus might risk ignoring other parts of the texts that have a contradictory content. However, as the narrow linguistic analysis of Paper III was preceded by a broader analysis, and as the results are in line with earlier results of broader discourse analyses of patient records, I have hopefully avoided such mistakes.

#### **Paper IV**

I see our experienced realities in life as being socially and contextually constructed, to a great extent. A consequence of this assumption is that the findings and interpretations of the focus group discussions in Paper IV do not represent the essential truth about the NCP(T) or about dietetics in general. The results are no less interesting to discuss, however, when seen as the jointly constructed interpretations and experiences of several groups of dietitians. According to Bryman (2012), an advantage of focus groups as a method is that it allows the researcher to follow how meanings and interpretations are constructed in a group.

The choice of participants for inclusion in the study should be discussed from a methodological point of view. Most of the dietitians in the focus groups were recruited through the Swedish Association of Clinical Dietitians, which is explicitly in favor of the implementation of NCP(T). We thereby might have excluded the views of some non-members who could have contributed other perspectives of the NCP(T). However, our purpose with this study has not been to generalize our results to all Swedish dietitians, but to gain an understanding of the broad spectrum of experiences and ideas that dietitians have regarding the NCP(T). Searching for this broad spectrum, the inclusion of dietitians from several geographical parts of Sweden is an advantage as the dietitians have experience from different county councils and have received their dietetic education from different universities. Also the broad inclusion of dietitians from hospitals, primary care centers and municipalities, and of recently educated as well as experienced dietitians, contributed to this broad spectrum of experiences and thoughts that we sought to include.

My own preconceptions and interpretations certainly played a role in the analysis of the focus group discussions. To avoid the analysis being too in-

fluenced by my own thoughts and experiences, I worked closely with my co-writers whilst performing the analysis and regularly discussed the analysis with them. All co-writers read at least some of the transcribed focus group discussions and we met several times to discuss the analysis and the identified themes. An external observer was present during the focus groups and the analysis was also presented and discussed with her to check that it was consistent with her impressions of the focus group discussions. In this way, we have done our best to enhance the credibility of this analysis.

# Conclusions

The four papers in this thesis have dealt with content, language and the meaning of standardization in the dietetic note. Through the NCP(T), language and content in dietetic notes are to a greater extent becoming standardized. In this thesis I have discussed the meanings of this standardization from different perspectives. One essential question that has emerged during this research project concerns how the implementation of a standardized model, such as the NCP(T), influences and affects a profession such as dietitians.

In Papers I and II, the need for a structured method to increase the completeness and relevance of the content of dietetic notes was highlighted. The NCP(T) is a tool that might improve those aspects of the patient record and in this way contribute to a more qualitative and patient-safe nutrition care. Besides these effects on nutrition care, the NCP(T) also has clear impacts on the dietetic profession and its role in health care. The professionalization discourse permeated the dietitians' discussions about the NCP(T) in Paper IV and it is clear that the model is seen as a way to increase status in the hierarchical world of health care.

However, there are also other perspectives on the use of the NCP(T). The linguistic analysis in Paper III showed that the very grammar of the patient record is constructed in a way that excludes the patient and dietitian as persons from the dietetic note, and emphasizes medical and technical aspects at the expense of everyday food discourse. By using the standardized language of NCP(T), the dietitian is pushed even further into a medical discourse that emphasizes certain aspects of food and nutrition and ignores others. The patient and his or her relation to the multiple cultural, social and symbolic meanings of food are easily lost in this standardized, medico-technical language, especially in the hierarchical and scientific context of health care.

The NCP(T) is definitely a system originating from the lifeworld of dietitians who are experiencing a need for a structured way to decrease the gap between the multiple ideals of nutrition care and the actual care situation. However, the implementation of this system cannot be viewed as the only solution, but must be constantly anchored in and discussed in relation to lifeworld aspects such as the social, cultural and symbolic meanings of food.

To avoid a gap between the professional dietitian and the patient with his or her everyday relation to food, the critical thinking of dietitians must also include a critical view of the NCP(T) itself. Thus, there is a need for a discussion concerning how to use and develop the NCP and dietetic language in a way that ensures the best possible care for the patient.

## Continued research

Being the first explorative study of Swedish dietitians' patient record notes and the meaning of standardization, this thesis has answered some questions, but at the same time raised others.

Concerning the audit instrument developed and used in this thesis, there are many possibilities for its further elaboration, for example:

- The adaption and testing for use in other settings, such as in-patient care or care settings in other countries than Sweden.
- The formulation of narrower items adjusted to the later stages of the NCP(T) implementation.
- The inclusion of patient-centered parameters in the instrument, such as whether or not the patient's preferences and opinions are documented in the dietetic note.
- The combination of the NCP-based content with a knowledge-based approach, connecting the content of the patient record to clinical guidelines regarding specific patient groups.

With regard to issues about the meaning of standardization and language in dietetic notes, a number of studies could be undertaken to broaden and deepen our understanding, such as:

- To explore how patients perceive the language and content of dietetic notes. It would, for example, be interesting to allow patients to read the dietetic notes regarding themselves, followed by an interview about their impressions and feelings about the note. The meaning of standardization could be explored by including notes that are written according to the NCP(T) and those that are not.
- In a similar way, it would be interesting to explore how other professions, such as medical doctors and nurses, understand and perceive the dietetic note. This could, for example, be explored in relation to theories about professionalization and inter-professional relationships.
- The relation between the actual care situation and the dietetic note would also be an interesting topic for a study. Observations of dietitian-patient meetings could, in this study, be combined with audits of the patient record notes concerning the same patients.

# Svensk sammanfattning

I den här avhandlingen har jag undersökt svenska dietisters dokumentation i patientjournaler, dels ur ett kvalitetsperspektiv men också ur ett kritiskt perspektiv där jag velat belysa och ifrågasätta rådande normer och värderingar inom journalföring.

Svenska dietister är enligt lag skyldiga att föra patientjournal vid vård av patienter, vilket innebär att all information som är viktig för nutritionsvårdens kvalitet ska dokumenteras på ett tydligt sätt. Patientjournalen har en funktion som minnes- och kommunikationsverktyg hos hälso- och sjukvårdspersonal. Med den tekniska utveckling och övergång till elektroniska patientjournaler som skett det senaste decenniet har dock patientjournalen kommit att få en allt tydligare roll också som informationskälla för patienten. I många landsting kan idag patienter själva exempelvis med hjälp av e-legitimation logga in och läsa sin egen journal på internet.

Under de senaste åren har strukturen och språket i dietisters journalanteckningar börjat diskuteras i relation till Nutritionsbehandlings-processen (Nutrition Care Process, NCP). Detta är en modell framtagen för att beskriva de viktigaste stegen i dietistens arbetsprocess, och för att strukturera och underlätta dietistens logiska tänkande och beslutsfattande. I NCP beskrivs de fyra stegen nutritionsutredning, nutritionsdiagnos, nutritionsåtgärd och nutritionsuppföljning. Kopplat till NCP finns även den standardiserade nutritionsterminologin NCPT (Nutrition Care Process Terminology), med termer för de fyra stegen i NCP. Bland dietister i Sverige har framför allt nutritionsdiagnosen lyfts fram sedan NCP-implementeringen påbörjades 2011. Denna nutritionsdiagnos skrivs som ett standardiserat PES-uttalande, och består av de tre delarna (P) problem, (E) etiologi eller orsak och (S) symptom eller tecken, d.v.s. mätbar information som visar att problemet finns och som kan följas upp vid ett återbesök för att kontrollera effekten av nutritionsåtgärderna.

Det finns ett fåtal studier kring innehållet i dietisters anteckningar i patientjournaler, och dessa studier har ofta visat att stora delar av nutritionsbehandlingen inte dokumenteras i journalen. Även tidigare studier av sjuksköterskors dokumentation har visat att anteckningarna i patientjournalen ofta är fragmentariska och att viktiga steg i vårdprocessen missas i dokumentation-

en. Inom sjuksköterskeområdet finns även ett mindre antal analyser av journalanteckningar ur ett kritiskt perspektiv, där man ser på språk och innehåll i patientjournalen som en del i ett större sammanhang och en kultur i hälso- och sjukvården. I sådana studier har man t.ex. kritiserat frånvaron av patientens perspektiv i patientjournalen. Man har även lyft att det syns tydligt att den medicinska diskursen dominerar i dessa texter med tekniska termer och fokus på mätbarhet och att en syn på patienten som medicinskt objekt snarare än tänkande och kännande subjekt förmedlas. I ett fåtal studier har man fokuserat på språkets roll i patientjournaler. Lingvistiska analyser har visat att språket ofta är fragmentariskt, med ofullständiga meningar och många förkortningar. I kritiska diskursanalyser har man lyft fram att patienten ofta avpersonifieras genom språket i patientjournalen.

Dietistens roll i sjukvården har tydliga paralleller med sjuksköterskeyrket, då de båda är kvinnodominerade yrken inom en hälso- och sjukvård som ofta beskrivs som ett hierarkiskt system med tydlig fördelning av ansvarsområden och roller. Dietistens expertområde, mat och måltider, är ett område med tydliga kulturella och sociala betydelser i vårt samhälle. Dietisten balanserar på så vis mellan det medicinska området, där ett vetenskapligt och objektivt förhållningssätt och språk dominerar, och det mer vardagliga området mat och måltider som är så laddat med symboler och kulturella och sociala betydelser.

Bakgrunden till denna avhandling är alltså dietistens mångfacetterade roll i kombination med den utveckling inom dietistyrket och hälso- och sjukvården som lett till ett ökat fokus på dokumentationskvalitet samt standardiserade arbetsprocesser och terminologier. Syftet med avhandlingen har varit att undersöka innehåll och språk samt betydelsen av standardisering i dietistan-teckningar i svenska patientjournaler.

I studie I utvecklades ett journalgranskningsinstrument, Diet-NCP-Audit. Även en manual till instrumentet togs fram. Därefter testades instrumentet och manualen avseende validitet och reliabilitet. Diet-NCP-Audit bygger på 14 punkter som ska poängsättas och där den totala poängen maximalt kan bli 26. Beroende av slutpoängen placeras den granskade journalanteckningen i någon av kvalitetsgrupperna A (20-26 poäng), B (13,5-19,5 poäng) och C (0-13 poäng). Instrumentets innehållsvaliditet och tydlighet bedömdes av fem dietister med erfarenhet och kunskap om NCP och utveckling av journal-dokumentation. De fick rangordna på en skala mellan 1-4 hur relevanta de olika punkterna i instrumentet ansågs vara för att mäta kvaliteten på dietist-anteckningar, och hur tydliga de ansåg formuleringarna vara. Detta test gjordes två gånger, och efter den andra gången ansågs instrumentet ha både en hög validitet och tydlighet. För att testa instrumentets reliabilitet gjordes ett inter-granskarreliabilitetstest där fyra olika dietister granskade samma 20

journalanteckningar, varpå deras resultat jämfördes. Dessutom gjordes ett intra-granskarreliabilitetstest där en och samma dietist med nio veckors mellanrum granskade samma 20 journalanteckningar varpå de två granskningarna jämfördes. Både inter- och intragranskarreliabilitetstesten visade en medelhög till hög reliabilitet. För varje enskild punkt i instrumentet varierade dock reliabiliteten och var betydligt lägre för vissa punkter. Den lägsta reliabiliteten sågs för de punkter som fokuserade på andra kvalitetsaspekter än de olika stegen i NCP, som exempelvis språklig tydlighet och relevans på den dokumenterade informationen.

I studie II användes journalgranskningsinstrumentet för att granska 150 dietistanteckningar från patientjournaler. Anteckningarna hämtades från fyra sjukhus och sex vårdcentraler i östra Svealand. De avsåg förstabesök i poliklinisk vård och var skrivna av dietister med minst ett års erfarenhet av arbete i hälso- och sjukvården. Var och en av de 14 punkterna i Diet-NCP-Audit undersöktes, och även placeringen av anteckningarna i kvalitetsgrupp A, B eller C. Jämförelser gjordes även mellan anteckningar skrivna på sjukhus och anteckningar från vårdcentraler. I den slutliga granskningen inkluderades totalt 147 journalanteckningar. Deras poäng varierade mellan 8 och 21, med en median på 14.5. De flesta anteckningar (61 %) placerades i kvalitetsnivå B, därefter i nivå C (37 %). Endast 3 % placerades i nivå A. Jämförelsen mellan anteckningar från sjukhus respektive vårdcentraler visade att något fler av sjukhusens anteckningar placerades i kvalitetsnivå C. De punkter som i störst utsträckning fanns dokumenterade i anteckningarna var nutritionsintervention, utvärdering och nutritionsproblem. De minst dokumenterade punkterna var mål för nutritionsbehandlingen, kopplingen mellan problem-etologi och symtom/tecken, nutritionsordination samt indikatorer för uppföljning.

I studie III gjordes en analys av språkliga mönster i 30 av anteckningarna från studie II. Analysen fokuserades på vilka tekniker och grammatiska konstruktioner som användes för att referera till patienten och dietisten i journalanteckningarna. Denna analysmetod har bland annat använts inom kritisk lingvistik och diskursanalys. Vid analysen undersöktes också hur man i journalanteckningarna markerade tillförlitligheten hos olika informationskällor. Exempelvis signalerar orden ”visar att” och ”påstår att” olika värderingar av tillförlitligheten i informationskällor. Dessa ord kallas för evidentiella markörer. Även denna metod används ofta inom kritisk lingvistik och diskursanalys. Den lingvistiska analysen visade att anteckningarna innehöll flera språkliga mönster som utelämnade både patienten och dietisten som personer ur anteckningarna. Patienten refererades oftast till som ”pat” eller ”patienten” och subjekt uteslöts ur meningarna med hjälp av olika tekniker som passivisering och nominalisering, vilket innebär omvandling av ett verb till ett substantiv. På så vis framträdde i stort sett aldrig patienten som person i

anteckningarna. Evidentiella markörer användes ibland för att visa att information kom från patienten, men aldrig för att visa på att dietisten observerat eller tolkat något. Dietisten som person osynliggjordes på så vis i ännu högre utsträckning i anteckningarna.

I studie IV deltog totalt 37 dietister i fokusgruppsdiskussioner, där deras erfarenheter och tankar kring NCP(T) diskuterades. Totalt sju fokusgruppsdiskussioner genomfördes i olika delar av Sverige och med 3-8 dietister i varje grupp. Dietisterna rekryterades via e-post till olika större dietistkliniker och i utskick via Dietisternas riksförbund. Ljudinspelningar gjordes under diskussionstillfällena och transkriberades därefter. De transkriberade diskussionerna analyserades sedan tematiskt. I analysen användes Habermas begrepp *system* och *livsvärld* för att förstå och tolka de mönster som fanns i dietisternas diskussioner. Analysen av fokusgruppsdiskussionerna ledde fram till tre huvudsakliga teman: systemperspektiv, livsvärldsperspektiv och ihopvävning av de båda perspektiven. I systemperspektivet lyfte dietisterna vikten av struktur och mätbarhet och kopplade ihop dessa aspekter med en kvalitativ och patientsäker vård. Även vikten av att synliggöra dietistens kompetens med hjälp av ett medicinskt och professionellt språk och strukturerade anteckningar lyftes här. I livsvärldsperspektivet betonades istället vikten av en helhetssyn på patienten, ett flexibelt förhållningssätt och en meningsfull relation mellan dietist och patient. Flera dietister tog upp att formuleringen av vissa termer i NCPT kan ses som hårda och förolämpande för patienten, och man ifrågasatte också huruvida hela patientens problem-bild verkligen kan rymmas i en standardiserad terminologi. I det tredje temat kombinerades de olika perspektiven och dietisterna tog upp olika strategier och förhållningssätt för att kunna ha ett flexibelt och patientcentrerat arbets-sätt samtidigt som de använde den standardiserade terminologin och arbets-modellen.

I denna avhandling argumenterar jag för att det behövs strategier för att förbättra kvaliteten på de anteckningar som skrivs av dietister i patientjournaler. Implementeringen av NCP(T) är en sådan strategi som under de senaste åren börjat tillämpas av dietister i många delar av världen. Det är tydligt att denna implementering är en del av dietistkårens professionalisering och att den av många också ses som en väg till ökad synlighet och status i hälso- och sjukvården. Samtidigt finns det dock en risk att denna standardisering leder till ett reduktionistiskt synsätt på patienten och dennes relation till mat och måltider. Standardisering, patientsäkerhet, helhetssyn och patientcentrering är olika ideal som finns i sjukvården och som ibland kan vara svåra för dietisten att förena. En slutsats i denna avhandling är därför att det finns ett behov av att fortsätta att diskutera hur NCP(T) bör användas och utvecklas för att patienten i slutänden ska kunna få den bästa möjliga nutritionsvården.

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# Appendix 1. Diet-NCP-Audit

Journal nr \_\_\_\_\_

**Fråga 1-12:**

Ja = 2 p  
Delvis = 1 p  
Nej = 0 p

**Fråga 13a-b**

Ja = 1 p  
Delvis = 0,5 p  
Nej = 0 p

Stämmer följande påståenden med den journal som granskas? Svara i enlighet med poängskalan, och med stöd av tillhörande manual. I manualen finns utförligare beskrivningar av de olika begrepp som används och hur dessa ska tolkas vid poängsättningen.

		<b>Poäng</b>		
<b>1.</b>	Ett eller flera nutritionsproblem har identifierats och prioriterats.	0	1	2
<b>2.</b>	Tänkbar orsak/etiologi till ett eller flera nutritionsproblem finns dokumenterad.	0	1	2
<b>3.</b>	Journaltexten innehåller hänvisning till tecken (objektiva) och/eller symptom (subjektiva) på ett eller flera nutritionsproblem.	0	1	2
<b>4.</b>	Journaltexten innehåller någon koppling mellan problem, etiologi och symptom/tecken.	0	1	2
<b>5.</b>	Nutritionsordination/rekommendation finns dokumenterad.	0	1	2
<b>6.</b>	Vidtagen eller planerad nutritionsåtgärd finns dokumenterad, eller så finns kommentar om varför nutritionsåtgärder inte varit aktuella.	0	1	2
<b>7.</b>	Journaltexten innehåller uppgifter som stöder valet av nutritionsåtgärder, alternativt beslut att inte vidta nutritionsåtgärder.	0	1	2
<b>8.</b>	Det finns ett eller flera mål för nutritionsbehandling angivna.	0	1	2
<b>9.</b>	Journaltexten innehåller uppgift om huruvida uppföljning planerats, alternativt om patienten avslutats och/eller överrapporterats.	0	1	2
<b>10.</b>	Journaltexten innehåller uppgift om vad man planerar att följa upp och utvärdera, eller förklaring till att ingen uppföljning och utvärdering planeras.	0	1	2
<b>11.</b>	Journaltextens struktur följer den ordning som anges i nutritionsbehandlingsprocessen (utredning, diagnos, åtgärd och uppföljning och utvärdering).	0	1	2
<b>12.</b>	Journaltexten är skriven med ett tydligt språk som inte kan leda till missförstånd.	0	1	2
<b>13.</b>	<b>a)</b> All information i journaltexten är relevant för helhetsbild och förståelse av patientens nutritionsstatus, -problem och -situation.	0	0,5	1
	<b>b)</b> Alla relevanta uppgifter i nutritionsutredningen får återkoppling i bedömningen av nutritionsproblem och/eller nutritionsåtgärderna.	0	0,5	1

Sammanlagd poäng (max26) \_\_\_\_\_



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