

Models of differentiated practice and specialization in community nursing: a review of the literature

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In most agencies for community nursing at least two types of nurse are employed. To ensure efficient use of personnel and high quality of nursing care, the principles of differentiated practice and specialization are used. It is suggested that these types of work redesign will have consequences for nurses and their work. We made a review of the literature to see how these principles are used and their effects on job satisfaction, burnout and quality of care. This review provides several views and descriptions of nursing activities, but it also shows that there is a paucity of quantitative data about the effects of differentiated practice and specialization in community nursing. To study these effects more systematically, a research model is presented. This model makes it possible to describe the changes in job characteristics caused by differentiated practice and specialization. Secondly, it allows the effects on job satisfaction, burnout and quality of care to be studied.

INTRODUCTION

This article focuses on labour division in community nursing. Because there is a difference among countries in the

definition of 'community nursing', we begin by explaining what is meant by community nursing in this article. Community nursing is restricted to the care provided at home by professional home nursing organizations. It includes rehabilitative, supportive, promotive or preventive and technical nursing care. The emphasis is mainly on the nursing of sick people at home. Other possible

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community nursing activities are not included, e.g. preventive mother and child care, psychiatric care, midwifery, school health nursing and occupational nursing. This means that for instance in the United Kingdom only district nursing is considered.

In several industrial countries at least two types of nurse are employed by community nursing agencies: first level nurses and second level nurses. This differentiation is based on a distinction in educational preparation (Verhey & Kerkstra 1992). Although both types of nurse have had a different type of training, this is often not expressed in nursing practice. Due to uncertainty about demarcation, both types of nurse carry out largely identical duties. For example, research in the Netherlands showed role ambiguity between first level and second level community nurses: in 41% of the agencies for community nursing (Jansen & Kerkstra 1993) and Forsey *et al* (1993) state that there is perhaps as much as an 80% overlap between nursing roles in general. Agencies for home health care are now also faced with changes. The number of the elderly requiring home care is growing. Technological change makes it possible to provide more complex nursing care at home, but this does require special expertise from the nurses. At the same time, governments are also demanding a good price quality ratio in care (Turton 1984, Taylor 1985, Kenyon *et al* 1990, Gibbs *et al* 1991). Basic training is not always appropriate in meeting the increases and changes in demand on community nursing.

Under these circumstances, agencies delivering community nursing care are forced to redesign nursing roles. To ensure high quality of care and efficiency, two principles seem to be appropriate: differentiated practice and specialization. Differentiated practice is a personnel deployment model in which the roles of nurses are (re)defined based on education, experience and competence (Murphy & DeBack 1990). Specialization concerns the way in which specialized knowledge is available in the community in order to meet the changing and increasing complexity of home care.

THEORETICAL CONTEXT

Differentiated practice and specialization are not issues restricted to nursing alone. In order to understand these principles from an organizational perspective, we shall first describe a central aspect of the division of labour: job specialization. This description is based on Mintzberg's (1983) *Structure in Fives: Designing effective organizations*. Organizations divide their labour (i.e. specialize) to increase productivity. The reasons for increasing productivity are the improved dexterity of the worker from specialization in one job, the saving of time lost in switching jobs, and the development of new methods and machines that derive from specialization (Mintzberg 1983). These reasons are comparable with community

nursing, where labour is divided to ensure high quality of care and efficient use of personnel.

Jobs can be specialized in two dimensions. The first is 'breadth' or 'scope': how many different tasks are there in each job and how broad or narrow is each of these tasks (horizontal job specialization deals with parallel activities). The second dimension of specialization relates to 'depth', to the control over the work. This vertical specialization separates the performance of the work from its administration (Mintzberg 1983). By way of comparison, in community nursing roles are specialized vertically by 'differentiated practice' and horizontally by 'specialization'. In other words, with regard to differentiated practice, equivalent jobs are grouped at different levels based on the *cost of labour* criterion. This results in different job descriptions containing activities which are equally rewarded. The emphasis in specialization is on the *quality* of activities and the final result (Keuning & Eppink 1990).

Professional values

When nursing roles are redesigned it is very important not to lose sight of professional values. In line with this, Hackman & Oldham (1975, 1976, 1980) constructed the Job Characteristics Model, specifically meant for work redesign (Figure 1).

This model posits the achievement of positive personal and work outcomes when three critical psychological states are present for a given employee (experienced meaningfulness of the work, experienced responsibility for outcomes of the work, and knowledge of the actual results of the work activities). These critical psychological states are created by the presence of five core job characteristics: skill variety, task identity, task significance, autonomy and feedback (Hackman & Oldham 1975, 1976, 1980). However, as the model as a whole was not validated in research, an altered version was used to describe hospital nursing practice (Landeweerd & Boumans 1988, Boumans 1990). The intermediate role of the critical psychological states (Algera *et al* 1986), and the effects of the moderators (Roberts & Glick 1981, Boumans 1990) were not often validated. Instead Boumans (1990) found direct relations between job and individual characteristics and the outcome variables, e.g. job satisfaction, health complaints and quality of care. Effects on depression, and psychological and psychosomatic complaints were also found (Algera

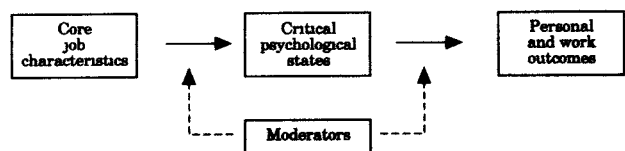


Figure 1 Job Characteristics Model
Source: Hackman & Oldham (1975, 1976, 1980)

1983, Broadbent 1985) These complaints can be grouped under the concept 'burnout', 'a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that can occur among individuals who do people work of some kind' (Maslach & Jackson 1986)

Job Characteristics Model

Because of the link with work redesign, the Job Characteristics Model and the alterations made in other studies will be used as frame of reference for a review of the literature concerning differentiated practice and specialization

In line with this model the review of the literature seeks to address the following questions

- 1 What models are used to differentiate between nursing roles?
- 2 What models are used to make specialized knowledge available in community nursing?
- 3 What are the effects of differentiated practice and specialization on job characteristics, job satisfaction, burnout and quality of care?
- 4 What aspects should be encompassed in a research model to evaluate the effects of differentiated practice and specialization in community nursing?

THE STUDY

In order to obtain the international literature, searches were carried out in three computer databases MEDLINE (1986–94), Nursing and Allied Health Literature (only between 1992 and 1994, because of overlap with MEDLINE) and the Catalogue of the Netherlands Institute of Primary Health Care (NIVEL) (up to and including 1995) The key-words used in these searches were (in alphabetical order) burnout, clinical ladder, clinical nurse specialist, differentiated practice, job satisfaction, level of expertise, nursing roles, quality of care, skill mix and specialization Because the literature found applied mainly to nursing in the USA, the United Kingdom and the Netherlands, the review was restricted to these countries Information about both hospital nursing and community nursing was reviewed to enable us to describe differentiated practice Hospital nursing was included because in the USA important examples were found in this area With respect to specialization, the review concentrates on community nursing alone as enough relevant examples were found The review does not claim to be exhaustive but representative

RESULTS

Differentiated practice: the concept and models

To differentiate between nursing roles, different models are used in the USA, the Netherlands and the United

Kingdom. Table 1 shows an overview of the models used, the types of nurse concerned and the means used for differentiating nursing roles This figure will be illustrated by means of a description of the literature reviewed

In 1965, the American Nurses' Association proposed two levels of education, a baccalaureate degree for the professional nurse and an associate degree for the technical nurse (Hickey *et al* 1991) This proposal was the foundation for the model of *differentiated practice* used to differentiate between two nursing roles in hospitals based on education, experience and competence (Primm 1986, 1987, 1988, 1990, Koerner *et al* 1989, American Organization of Nurse Executives 1990, Koerner 1990, Malloch *et al* 1990, McClure 1991, Hickey *et al* 1991, Forsey *et al* 1993) In the USA all registered nurses hold the same license to practice nursing regardless of their educational or experiential background (Murphy & DeBack 1990) To utilize available nursing personnel more effectively, differentiated practice is applied Based on the premise that individual practitioners with different types of education, competence, and experience should not be used interchangeably, differentiated practice seeks to ensure that the work of nurses is carried out by the most appropriate nurse in the most appropriate way (Boston 1990)

The Sioux Valley Hospital/South Dakota Experience (Primm 1987, Koerner *et al* 1989, American Organization of Nurse Executives 1990) has been an important example for implementation of differentiated practice in nursing This project (1982–87) used a group process approach to achieve representative regional consensus on competency-based statements of practice expectation for diploma/associate- and baccalaureate-prepared nurses The term 'competency-based' referred to identification of role behaviours by observation of the practice of 'experts' in the role In other words, the descriptions of practice are descriptions of 'competent' practitioners Based on these competencies two nursing roles were defined (Table 2)

The basic distinctions between the two roles with respect to differentiated practice centre on complexity of decision-making, timeline of care and structure of situation and/or setting The baccalaureate nurse provides direct care to patients and their families with complex interactions of nursing diagnoses from pre-admission to post-discharge in structured and unstructured settings and situations The associate nurse provides direct care to patients and members of the family with common, well-defined nursing diagnoses for a specified work period in structured settings and situations (Primm 1986, Malloch *et al* 1990)

Although 'complexity' is mentioned specifically in the job descriptions this dimension has not generally been included in American patient classification systems except to the degree that more complex care is often positively related to time However, findings from the use of the

Table 1 Models for differentiating nursing roles

Models	Types of nurse concerned	Years of education	Means for differentiating
United States of America			
Differentiated practice	Baccalaureate nurse	4	Job descriptions
Clinical ladders	Diploma nurse	3	Factoring
	Associate degree nurse	2	
	Auxiliary	0	
The Netherlands			
Differentiation based on complexity of care	Registered nurse	4–5½	Job descriptions
	Nurse auxiliary	2½–3	Measures for complexity of care
The United Kingdom			
Skill mix	Registered nurse	3	Patient-dependency measures
	Enrolled nurse	2	
	Auxiliary	0	

Table 2 Roles of the Associate Degree Nurse and the Baccalaureate Degree Nurse

Role of the Associate Degree Nurse (ADN)	Role of the Baccalaureate Degree Nurse (BSN)
<p>The ADN is a licensed registered nurse who provides direct care that is based on the nursing process and focused on individual clients who have common, well-defined nursing diagnoses. Consideration is given to the client's relationship within the family. The ADN functions in a structured health care setting that is a geographical or situational environment where the policies, procedures, and protocols for provision of health care are established. In the structured setting there is recourse to assistance and support from the full range of nursing expertise.</p> <p>The ADN uses basic communication skills with focal clients and co-ordinates with other health team members to meet focal clients' needs. The ADN recognizes the individual's need for information and modifies a standard teaching plan. The ADN recognizes that nursing research influences nursing practice and assists in standardized data collection.</p> <p>The ADN organizes for focal clients those aspects of care for which s/he is responsible. The ADN maintains accountability for own practice and for aspects of nursing care s/he delegates to peers, licensed practical nurses, and ancillary nursing personnel. Within a specified work period, the ADN plans and implements nursing care that is consistent with the overall admission to post-discharge plan. The ADN practises within accepted ethical and legal parameters of nursing.</p>	<p>The BSN is a licensed registered nurse who provides direct care that is based on the nursing process and focused on clients with complex interaction of nursing diagnoses. Clients include individuals, families, groups, aggregates, and communities in structured and unstructured health care settings. The unstructured setting is a geographical or a situational environment that may not have established policies, procedures, and protocols and has the potential for variations requiring independent nursing decisions.</p> <p>The BSN uses complex communication skills with focal clients. The BSN collaborates with other health team members and assumes an accountable role in change. The BSN assesses the need for information and designs comprehensive teaching plans individualized for the focal client. The BSN collaborates with nurse researchers and incorporates research findings into nursing practice.</p> <p>The BSN manages comprehensive nursing care for focal clients. The BSN maintains accountability for own practice and for aspects of nursing care delegated to other nursing personnel consistent with their levels of education and expertise. The BSN plans for nursing care based on identified needs of the focal client from admission to post-discharge. The BSN practises within accepted ethical and legal parameters of nursing.</p>

Source: Primm (1987), American Organization of Nurse Executives (1990)

Patient Intensity for Nursing Index (PINI) suggest that complexity of patient care needs are as, or more, important to the consumption of nursing resources than are patients' dependency needs (Soeken & Prescott 1991). In only a few articles was attention paid to the operationalization of the

concept of 'complexity'. According to Corcoran (1986), complexity is determined by the number of problems presented by the patient, the interrelation of the problems, and the extent to which protocols could be applied. Verran & Reid (1987) found that complexity was affected by the

number of analyses that had to be performed, the variability of clients presenting to a clinic and the knowledge of a client (i.e. nurse's understanding). Nursing care is considered complex when the degree of routineness, uniformity and predictability is low and special knowledge is necessary to deliver care. The critical determinant of complexity is the extent to which knowledge is required to effectively apply interventions in the delivery of nursing service. In addition, complexity involves not only the frequency of task performance but also knowing whether the procedures for its accomplishment are well-known and understood (Verran & Reid 1987).

In an effort to recognize and use the abilities of each nurse, the Sioux Valley Hospital chose 'factoring' as the mechanism to place nurses into their respective role categories. Factoring involved self-assessment carried out by each nurse using a factoring tool. The head nurse also completed an assessment of each individual. During a 1-hour interview, the staff nurse and head nurse shared their assessments, observations, and goals for the project. Registered nurses on each unit were factored into the ADN (Case Associate) or BSN (Case Manager) job description in collaboration with their head nurse. A mutual decision for placement was reached (Koerner 1988).

Another model enabling differentiation between nursing roles is a *clinical ladder* programme. In contrast with differentiated practice, 'experience' is the only differentiating factor here. Clinical ladders were developed in the early 1980s to cope with nurse recruitment and retention problems. Current interest in these programmes is driven to retain experienced nurses who can improve quality. Retaining clinically competent nurses requires an appropriate salary and a work environment to support nurse autonomy. A clinical ladder is one means of increasing availability of these factors (Corley *et al* 1994). The conceptual basis for many clinical ladder programmes is Benner's (1984) work *From novice to expert*. In it she describes five levels of practitioner, namely, novice, advanced beginner, competent, proficient and expert. A clinical ladder based on this can be constructed identifying five levels of clinical nursing. Subsequently, a review board determines the promotion of nurses on the clinical ladder based on a portfolio of their professional abilities and accomplishments. On advancement to a new level, the nurses meet with the nurse manager to negotiate a new role (Corley *et al* 1994). Martin & McGuire (1990) described a three-level system used for the community health care setting. The job descriptions within this system included behavioural descriptors of group process skills, communication skills, job skill knowledge, professional development expectations, meeting requirements, record keeping, and co-ordination skill expectations (Martin & McGuire 1990).

Unlicensed personnel

In principle, differentiated practice and clinical ladders in American nursing concern licensed personnel only. However, because of a shortage of nurses and increased emphasis on cost containment, registered nurses must adjust to the reintroduction of *unlicensed assistive personnel*, also called nurse extenders or nurse assistants, into patient care areas (Barter & Furnidge 1994). The use of unlicensed personnel leads to a major change in registered nurse focus from working primarily as sole practitioner to functioning as managers of patient care, responsible for the direction and supervision of assistant staff (Jung *et al* 1994).

The Netherlands community nursing agencies

In the Netherlands community nursing agencies use a model that is to a large extent comparable with the American model of differentiated practice used in hospitals (Table 2). Because this model is described extensively above, only specific differences will be described here. In the Netherlands differentiation is made between community nurses (first level, comparable with the BSN) and community nurse auxiliaries (second level, comparable with the ADN). This differentiation is in line with the Dutch 'Nursing Profile' and based on education, responsibility and complexity of care (National Council for Health Care 1988). In several agencies these general job descriptions are made applicable to community nursing in which distinction is made between junior and senior professionals (Vrieling 1990). The distinction between junior and senior can be interpreted as deriving from Benner's previously mentioned model to enable differentiation between nurses based on experience. In addition to the agencies for community nursing, differentiated practice is also implemented in hospitals. In most hospitals a distinction is made by emphasizing supervision and co-ordination of care in the role of the first level nurse (Nationaal Ziekenhuisinstituut — AortA 1994).

Within the Dutch job descriptions, special attention is paid to responsibility and complexity of care. The complexity concept is more extensively used here than it is in the USA. To decide whether or not nursing care is complex different measures have been developed in the Netherlands and are used in community nursing (Wijdeven 1989, Nollen 1990, Vrieling 1990, Lapré & Rutten 1989, Hanrahan & Lapré 1990, Derckx *et al* 1993, van Amelsvoort *et al* 1993, Jansen & Kerkstra 1993, Mostert 1993, van Til *et al* 1994). Based on an analysis of several nursing models by Fawcett (1989), Jansen & Kerkstra (1993) constructed a measure in which criteria for complexity were divided into four categories: person (recipient of nursing actions), environment (recipient's significant others and the setting), health status (well and/or ill) and nursing activities. Examples of criteria that determine the complexity are the patient's willingness to

co-operate (person), the number of disciplines involved in the care-situation (environment), the presence of informal carers able to cope with the situation (environment), the existence of well-defined nursing diagnoses (health), the number of changes in the patient's health-status and the requirement for specific technological activities (nursing activities) If a patient needs complex nursing care a community nurse has to be assigned

United Kingdom

In the United Kingdom three types of nurse are employed in district nursing registered nurses, enrolled nurses and auxiliaries Compared with the American situation in the United Kingdom the registered nurse fulfils the BSN-role and the enrolled nurse the ADN-role However, training for enrolled nurses is being phased out in favour of a new single nursing qualification In the United Kingdom differentiated practice is related to the 'skill mix issue' To describe skill mix, Gibbs *et al* (1991) made a distinction between 'grade mix' and 'skill mix' *Grade mix* refers to the number of sisters, staff nurses, enrolled nurses and auxiliaries required, that is, the number of staff of each grade *Skill mix* on the other hand refers to the skills and experience of staff within these grades, for example, how many years of experience does a staff nurse have in her present specialty and does she have a post basic qualification in that specialty (Gibbs *et al* 1991) The grade mix concerns a 'top-down' approach and is more likely to lead to rigid, inappropriate delivery of services The professionally led 'bottom-up' approach to skill mix has the potential to help cultivate and develop the new skills that are needed to cope with rapid and multiple changes (Cowley 1993) However, in 1992 the National Health Service (NHS) Value for Money Unit's report *Skill Mix in District Nursing* (National Health Service Management Executive Value for Money Team 1992) was published The report recommended halving the numbers of qualified staff because, it was suggested, certain aspects of the nurses' traditional role can be carried out cost-effectively by less well-qualified staff (Griffiths & Luker 1994) According to Heath (1994) this report reduces nursing to a series of mechanistic tasks that could be counted and reallocated In this model of skill mix highly qualified, skilled clinical professionals are asked to delegate the core of their work to unskilled workers and find themselves undertaking a supervisory or management role or even being made redundant (Heath 1994)

Patient dependency measures Measures used in the United Kingdom to determine the number, but rarely the mix, of nurses required to provide the necessary care for patients are often based on patient dependency Patient dependency on the nurse has been defined as 'the extent to which the patient's level of functional capacity dictates the time required for personal, technical, supportive and

educative nursing care' (Durand 1989) This type of measurement is not seen as appropriate to determine skill mix in nursing Therefore, at a very basic level, improved measures of skill mix are required in order to avoid the limitations of indicators which reflect little more than grade and qualification mix Given that nurses are an expensive commodity, the issue at the heart of skill mix from a managerial or pragmatic point of view is the need to identify those nursing tasks which require a professional qualification (usually the more technical aspects of nursing) and to allow less or unqualified people to undertake other more basic tasks (Gibbs *et al* 1991)

Skill mix is concerned with ensuring that appropriate skills are available to identify and meet needs, in the most cost-effective way Three factors may be used to guide implementation of skill mix First, decisions about delegation to less qualified staff should relate to the predictability of the particular practice situation, rather than to the nature of the task or the label or category attached to the client or patient Second, priorities should be set and changes in practice evaluated using community nursing profiles of health needs Finally, but most importantly, client participation should be explicitly included and encouraged in the skill mix process (Cowley 1993)

In summary, the literature reviewed shows that in the USA, the Netherlands and the United Kingdom differentiation is made between at least two types of nurse based on their level of education Furthermore, in some organizations 'experience' is used to make an (extra) distinction between nurses Because of the cessation of enrolled nurse training in the United Kingdom, it seems that more attention is paid there to cost effectivity instead of professional recognition Finally, both the American and British literature showed that there are possibilities for using assistive personnel in (community) nursing

Differentiated practice: the effects on job satisfaction

As many articles on differentiated practice only contain points of view (Primm 1988, McClure 1991, Gibbs *et al* 1991, Cowley 1993, Barter & Furnidge 1994, Heath 1994) whereas others are restricted to job descriptions (Primm 1986, 1987, Johnson 1988, Koerner 1988, Kenyon *et al* 1990, Hickey *et al* 1991, Forsey *et al* 1993, Wiles & Robison 1994) only a few describe the outcomes of differentiated practice (Hersterly & Sebilha 1986, Koerner *et al* 1989, American Organization of Nurse Executives 1990, Malloch *et al* 1990, Martin & McGuire 1990, Jung *et al* 1994, Corley *et al* 1994, Hutchens 1994) The Dutch and British literature did not yield any information at all about the effects of differentiated practice Consequently the effects presented here only concern the American situation

The review of the literature did not yield extensively described methods used to measure the outcomes of

differentiated practice systematically. In two articles, only surveys measuring job satisfaction were described. These instruments paid attention to pay, autonomy, task requirements, organizational policies, interaction, professional status (Koerner *et al* 1989, Malloch *et al* 1990), quality of care, enjoyment and time to do one's job (Malloch *et al* 1990). In addition to these quantitative outcomes, qualitative and anecdotal data were collected during the implementation of differentiated practice. The outcomes reported in nursing literature were summarized by Hutchens (1994) (Table 3). This summary is to a great extent based on the results of the Sioux Valley Hospital Experience.

In addition to these positive effects, the Sioux Valley Hospital Experience also showed that nursing staff expressed mixed feelings about the project and the presence of two distinctly different practice roles. While the

Table 3 Improved job satisfaction as a result of differentiated nursing practice reported in nursing literature

Improved job satisfaction

Higher scores on nursing satisfaction surveys

Positive anecdotal comments from nurses

Improved staff perceptions about components of work: degree of challenge, task requirements, variety, opportunity to use judgement, opportunity to develop competencies

Improved commitment to work

Enhanced ability to accomplish work

Improved accountability

Stabilization of nursing positions (less turnover and less difficulty filling positions)

Managerial perceptions that practitioners' professional behaviours were enhanced, including, collaboration, accountability (for clients and unit) and professional self-development

Managerial role change: shift from problem solver to mentor

Source: Hutchens (1994)

Table 4 Improved quality of care as a result of differentiated nursing practice reported in nursing literature

Improved quality of care

Higher scores on client satisfaction surveys

Positive anecdotal comments from clients and families

Client requests to be readmitted to units that use differentiated nursing practice models

Improved continuity in care

Improved quality assurance ratings and trending in incident reports

Positive comments and ratings from the surveyors of the Joint Commission of Accreditation of Healthcare Organizations

Source: Hutchens (1994)

case associate nurses continue to enjoy nursing practice, some felt they had lost something because someone with another job status was practising beside them. Conversely, several BSN nurses expressed a great deal of job satisfaction because they could now practice 'what they were taught in school' (Koerner *et al* 1989).

The clinical ladder programmes showed that the candidates received professional recognition from the organization and their peers as they proceeded through the program. The participants individually demonstrated self-growth in the areas of leadership, teaching, and role-modelling (Hesterley & Sebilia 1986, Martin & McGuire 1990). Other results showed that, according to the staff, clinical ladders had little effect on their recruitment and retention decisions (Martin & McGuire 1990, Corley *et al* 1994). A programme to establish better use of assistive personnel enabled registered nurses to delegate more patient care activities to nursing assistants. After implementation registered nurses noticed a decreased workload, and increased ability to supervise assistants. With respect to job satisfaction and co-ordination of care, no differences were found (Jung *et al* 1994).

Differentiated practice: the effects on quality of care

To describe the effects of differentiated practice the overview of Hutchens (1994) will be presented again (Table 4).

From a patient care perspective, the participants in the clinical ladder system contributed a great deal through the continuing education programme, unit-based, in-service patient-care conferences, formalized care plans, protocol development, and quality assurance activities (Hesterley & Sebilia 1986). After implementation of the programme with assistive personnel, registered nurses and patients noticed an improved quality of nursing care. More time and effort was being devoted to the delivery of basic physical and nutritional care. This increased availability and productivity of nursing assistant care givers may be perceived by patients as better care. In addition, registered nurses had more time to devote to the planning, co-ordination, and evaluation of patient care, which should further improve quality (Jung *et al* 1994).

In summary, the results described in the literature reviewed show that positive effects on job satisfaction can be expected, especially for the first level nurses. As regards the quality of care, positive effects were also described. However, the literature mainly contained job descriptions and considerations, whereas only a few projects studied the outcomes of differentiated practice systematically and consistently. A reliable approach is needed particularly for measuring the quality of care from a client perspective, as it is possible that many patients are satisfied just because they are cared for and not because of the organizational principles used.

Specialization: the concept and models

Several areas of specialization are possible because the populations served by community health nurses are so diverse. The study of Riportella-Muller *et al* (1991) identified population groups and health conditions considered appropriate for graduate-level community health nursing (CHN) practice and employment in the USA. According to 588 leaders in CHN service and education, the population groups most in need of graduate-prepared CHNs are the elderly, persons of low socio-economic status, the homeless, adolescents, and the unemployed. The health conditions most in need of CHN services are AIDS, pregnancy and prenatal problems, low birth weight and infant mortality, stress-related illness, and Alzheimer's and other chronic diseases of elderly people. The findings provide the direction and justification for developing specialty options within CHN that correspond to these identified and changing needs (Riportella-Muller *et al* 1991).

The population groups and health conditions mentioned by Riportella-Muller *et al* (1991) are developed in the USA and United Kingdom mainly by the employment of clinical nurse specialists (CNS). The literature reviewed showed different specialties for example patients who are HIV infected (Bond *et al* 1990a, 1990b, Bond *et al* 1991, Haste & MacDonald 1992, Layzell & McCarthy 1993), patients who need critical care by means of advanced technological equipment such as pumps for tube feeding and intravenous therapy, ventilators, suctioning machines, cardiac and respiratory monitors (Bowyer 1986, Roe-Prior 1994), terminally ill (e.g. the Macmillan nurse) (Bergen 1991, Haste & MacDonald 1992, Nash 1993, Griffiths & Luker 1994), elderly people (Haste & MacDonald 1992), diabetics (Kyne 1986, Moyer 1989, Griffiths & Luker 1994), patients needing continence care or stoma care (Griffiths & Luker 1994), patients with lung cancer (McCorkle *et al* 1989), and patients who need coronary care (Duddy & Parahoo 1992).

The Netherlands

In the Netherlands specialized knowledge and skills are available by both the employment of CNSs (e.g. Wiegers 1992, Kiers 1993, Moons *et al* 1994) and by means of the construction of 'areas-of-special-expertise' for community nurses and community nurse auxiliaries. Areas-of-special-expertise are constructed mainly based on patient categories. These areas are constructed where specific knowledge is needed for the caring of a particular patient category, where a lot of treatment is possible or where many changes occur in a specific category. Examples of these areas are patients with AIDS, diabetics, patients with chronic non-specific lung disease (CNSLD), patients with dementia, patients with rheumatism or patients who are incontinent. Within one (or more) of these areas a community nurse (auxiliary) keeps up to date with all the new develop-

ments, and attends educational programmes to stay abreast of trends and innovations on these issues.

Subsequently, in her team and agency she can be consulted by her peers for knowledge or skills. In addition to this special expertise, the nurse performs the general tasks within community nursing (Ketelaars 1992, Wiegers 1992, Jansen & Kerkstra 1993, van Haaren 1994). In 1992, almost half the Dutch agencies for community nursing had areas-of-special-expertise in use, and about one third intended to construct these areas for community nurses and community nurse auxiliaries (Jansen & Kerkstra 1993).

Specialization: the effects on job satisfaction

Because nurses who deliver direct nursing care are the subject of this paper, we pay attention to their job satisfaction in respect of specialization in community nursing. According to the review of the literature by Bergen (1991) the role of the community nurse does not seem to have diminished since the advent of specialist nurses. Community nurses (and other health professionals) generally valued the specialist service, despite the potential conflicts over responsibility for care. However, two articles paid specific attention to the community nurse's attitude to the CNS (Haste & MacDonald 1992, Griffiths & Luker 1994). The results of these two studies are presented in the next paragraph.

Community nurse specialists in the community

Although the work of CNSs is seen to be worthwhile, integration of specialists into the community service is not as good as it might have been. Depending on the speciality, 20–50% felt that specialist nurses routinely or sometimes did work that district nurses should be doing. District nurses expressed significantly more dissatisfaction than specialists, with higher dissatisfaction scores on the factors of emotional climate, professional considerations, social significance, pay and professional preparation. They also tended to be more dissatisfied with working conditions. Nurses reported that they would have preferred to carry out the work of the CNSs themselves, but were prevented from doing so by heavy caseloads and lack of time.

The majority of managers and nurses appeared to agree with recommendations made in the Cumberlege Report (1986) and in the review of community nursing in Wales (Welsh Office, Department of Health 1987), that district nurses should develop special responsibilities for particular patient groups to combine with district nursing duties. Many aspects of district nursing work are also being progressively deskilled and handed over to less qualified nursing staff and social services. In theory, the community nurse is left with more time to develop the specialized parts of her work, provided that work-load pressure does not increase as a consequence of NHS reorganization. The desire of community nurses to become more

knowledgeable in specialist areas is clear (Haste & MacDonald 1992, Griffiths & Luker 1994)

Because the areas-of-special-expertise in the Netherlands are a relatively new concept, the effects on job satisfaction have not yet been extensively studied. In line with the United Kingdom literature presented above, it is expected and hoped that job satisfaction among nurses will remain or improve when they have an area-of-special-expertise. The results of the study from van Bragt (1993) only partly support this expectation. In this study community nurses with an area-of-special-expertise gained more expertise in that area but a heavier workload as well. The nurses did not have enough time to carry out the tasks in their area.

Specialization: the effects on quality of care

Extensive research into the contribution of specialist nurses to quality of care is largely absent. However, in almost all the studies reviewed it is suggested that the quality of care is improved by specialist nurses working in community health care. Some of these studies will be presented here. The role of CNSs for the terminally ill was generally highly valued by patients and particularly by carers. It has probably enabled patients to spend a larger portion of their illness at home and/or die there (Bergen 1991). Research of a complex care team showed that it had helped the patient to shorten or avoid hospitalization. Furthermore, patients and their families expressed complete satisfaction and gratitude for the care and service offered them (Bowyer 1986). Evaluation of a 'coronary specialist nursing service' showed that most respondents found that information from nurses was always forthcoming, that the information received was well explained and that the amount of information was more than expected (Duddy & Parahoo 1992).

According to several CNSs, the majority of community nurse managers felt that the introduction of specialist nurses had resulted in better patient care, improvement in district nurses' knowledge and better communication between hospital and community (Haste & MacDonald 1992). Finally, specialized AIDS home care has proved to be desirable from the perspective of the patients and their informal and professional caregivers (Layzell & McCarthy 1993, Moons *et al* 1994).

Apart from all this positive information about the CNS role, the study of Griffiths & Luker (1994) showed that there was little consensus among the community nurses as to whether CNSs contributed to high-quality care in the community. In line with this, the studies of Christiaans *et al* (1993) and Wieggers (1992) showed that the use of areas-of-special-expertise also can guarantee quality of care. Christiaans *et al* (1993) showed that community nurses with an area-of-special-expertise took better care of their relationship with the client and that the situation was better analysed when compared with community

nurses without an area-of-special-expertise. Wieggers (1992) showed that there were no differences with the nursing of children with chronic non-specific lung disease (CNSLD) in quality of care between CNSs and community nurses with an area-of-special-expertise. This study showed that specific experience in this area (CNSLD) affects the quality of care.

In summary, it seems that there is a need for specialized expertise in community nursing. In a lot of situations this is delivered by clinical nurse specialists. However, community nurses are not always satisfied with a specialist working beside them and believe that they can deliver specialist care to a certain extent when they get the opportunity (e.g. time and training). The construction of areas-of-special-expertise may be an answer to this problem. With regard to the effects on the quality of care, extensive research is again largely absent.

TOWARDS A MODEL FOR EVALUATION OF DIFFERENTIATED PRACTICE AND SPECIALIZATION IN COMMUNITY NURSING

The literature reviewed above showed that job characteristics in nursing roles will be changed in consequence of differentiated practice and specialization and can therefore affect job satisfaction and quality of care. The review of the literature also showed that little quantitative information is available about the outcomes of differentiated practice and specialization in community nursing practice. Nothing at all was found on burnout in the literature reviewed. In order to study the effects of differentiated practice and specialization systematically, a research model was developed based on the previously presented Job Characteristics Model and the experience with this model in other studies. Because the review of the literature presented above did not yield enough information about the specific effects of job and individual characteristics, research on job satisfaction and burnout was studied to find additional factors.

The meta-analytic study (Blegen 1991) identified 13 variables that are often linked with nurses' job satisfaction. In this study hospitals were the most common work sites. The results of this meta-analysis indicated that job satisfaction is most strongly and negatively related with stress and positively related to commitment. Autonomy, communication with supervisors, communication with peers, and recognition were moderately and positively related to job satisfaction. Low negative correlations were found between job satisfaction and locus of control, whereas fairness in reward distribution was positively related. Analysis of the demographic variables provided evidence for small but stable relationships between age, education and job satisfaction. Nurses who were older were more satisfied and those with more educational qualifications

were less satisfied with their work (Blegen 1991) The study of Boumans (1990) showed that individual characteristics were related to job satisfaction as well as job characteristics She found that nurses who had a lot of social support at work were more satisfied, whereas nurses who preferred autonomy in their work and sought distraction when they were faced with problems were less satisfied with their jobs

Burnout-dimensions

In respect of the three burnout-dimensions (emotional exhaustion, depersonalization and personal accomplishment), research among health care social workers showed that role conflict, role ambiguity, and lack of physical comfort were significantly related to emotional exhaustion Depersonalization was related to high role conflict, low challenge, and low satisfaction with financial rewards Significant job characteristics for the sense of personal accomplishment were high challenge, high workload, greater satisfaction with financial rewards, low levels of role conflict, and low levels of conflict with professional values (Siefert *et al* 1991) Among nurses, feelings of emotional exhaustion increased when the amount of workload increased This relation was reduced when nurses had more autonomy in their work A negative relation was found between the amount of challenge in the job and social support experienced with feelings of emotional exhaustion (de Jonge *et al* 1994) Individual characteristics are also related to burnout in addition to job characteristics

The study of Boyle *et al* (1991) showed that hardness of personality, social support and ways of coping are related to burnout Hardy persons have a higher sense of commitment to work and self and feel a greater sense of control over their lives, viewing stressors as potential opportunities for change Social support had a negative relationship to burnout too Both work-related and non-work-related sources of social support were significantly related to burnout With respect to coping this study showed that problem-focused coping was not related to burnout, whereas use of emotion-focused coping was positively related to burnout Peer-support and support from supervisors were the two most commonly reported factors that assisted nurses in coping with job-related stressful events (Boyle *et al* 1991)

Last but not least it is important to study whether the effects of differentiated practice and/or specialization are the same for first level and second level nurses For example, it is conceivable that the role of a second level nurse is less attractive when differentiated practice is used Consequently the variable 'nursing role' has to be included in the research model Figure 2 presents the final model for the study of the effects of differentiated practice and specialization in community nursing

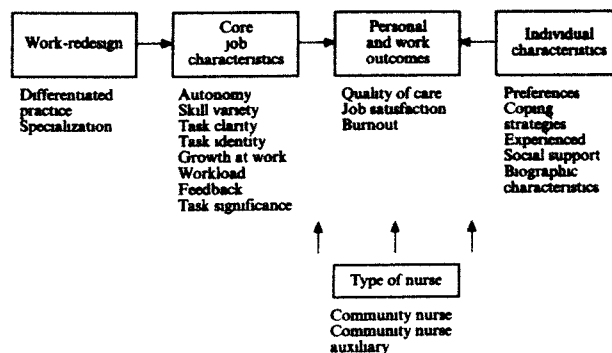


Figure 2 Model to evaluate the effects of differentiated practice and specialization in community nursing

The research model suggests that several job characteristics will change when differentiated practice and specialization are used As a result the quality of care, job satisfaction and burnout will change Because the outcomes are also influenced by individual characteristics, these have to be taken into account as well Finally, the outcomes will be directly influenced by the nursing role, and indirectly by moderating the relations with job and individual characteristics

CONCLUSION

In this review we have organized the literature around differentiated practice and specialization in community nursing (i.e. district nursing) As regards differentiated practice, differentiation is made between at least two types of nurse based on education, complexity of care and experience mainly Regarding specialization the review shows that specialized expertise in a lot of situations is delivered by clinical nurse specialists (CNSs) Besides, in the Netherlands areas-of-special-expertise are constructed to give community nurses and nurse auxiliaries the opportunity to improve their specialized knowledge

Although it can be expected that both differentiated practice and specialization have consequences for job characteristics, and therefore affect job satisfaction, quality of care and burnout, the review did not extensively yield information about this relationship In a lot of studies only parts of the model presented in Figure 2 were studied Because another study of the authors showed that both job and individual characteristics (including the type of nurse) affect job satisfaction and burnout (Jansen & Kerkstra 1995), it is worthwhile to study the effects of work-re-design by means of the model presented Research based on this model will result in an overall impression of the effects of differentiated practice and specialization in (community) nursing

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