

Burnout & work in long-stay psychiatric nursing

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BURNOUT & WORK
IN
LONG-STAY PSYCHIATRIC NURSING

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PROEFSCHRIFT

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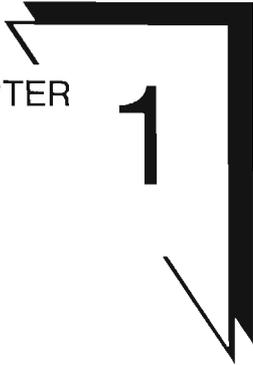
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CHAPTER

1

GENERAL INTRODUCTION

"I was in a position that scared me and which I could not explain. I had become another person; my vision of how a good psychiatric nurse should be, did not match with my behaviour at all. I was agitated and hurried between patients and colleagues, I was not open to new ideas and was sceptical and pessimistic. I experienced my work as being useless, because the patients were readmitted all the time, despite our interventions and we could not treat these patients against their will. The conviction that what I was doing was right had disappeared along with my idealism and motivation. I distanced myself from patients, I wanted nothing to do with them, always the same improvements, always the same moaning - that's the way I experienced it at that time - grated on my nerves. At the same time I knew and felt that my behaviour was unfair and that I could not justify myself to others."

*Marianne Lerch, psychiatric nurse
(Krankenplege, 1991; translated from German)*

The feelings of this psychiatric nurse are a typical example of burnout. Burnout can be seen as a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment (Maslach & Jackson, 1982). Emotional exhaustion refers to a depletion of one's emotional resources and the feeling that one has nothing left to give to others on a psychological level. The depersonalization phase of burnout is the development of negative and callous attitudes towards the people one works with. This depersonalized perception of others can lead one to judge them as somehow deserving their troubles. Reduced personal accomplishment is the perception that one's accomplishments on the job fall short of personal expectations, and thus it involves a negative self-evaluation.

Burnout is a serious problem for several reasons. In addition to its consequences for the health and well being of the psychiatric nurse, burnout can have consequences for patients and the organization. Patients dealing with nurses with a high level of burnout often experience negative effects through a decrease in the quality of care (Maslach, 1982; Schaufeli, 1990). For example, these nurses show less empathy for the patient and try to avoid the patient and as such seek escape in procedures and staff meetings. With respect to the organization, burnout can lead to increased absenteeism and to a reduction in productivity (Golembiewski et al., 1986; Schaufeli, 1990). Owing to these negative effects, it is necessary to reduce burnout or, more preferably, prevent it.

Burnout can be understood as representing a negative assessment of one's work experience (Gillespie & Numerof, 1984). Therefore, in order to understand the experience of nurses suffering from burnout, a close examination of the environments in which they function is required. Nursing in long-stay psychiatric care settings, which cater for mentally ill patients hospitalized for a period of two or more years, is invariably assumed to be a stressful area of nursing practice. Nurses in these settings spend a great deal of time in intense interaction with severely disabled patients such as schizophrenics. Stress can arise from this

intense involvement, and chronic stress can lead to burnout (Caton et al., 1988). Moreover, psychiatric nurses working in long-stay settings generally receive less support from other health care providers than nurses in acute psychiatric settings (Dassen, 1989). Several researchers found high burnout levels among nurses who receive little support (Pines & Maslach, 1978; Savicky & Cooley, 1987; Penn et al., 1988). Furthermore, the work of nurses in long-stay psychiatric care settings has changed and will change extensively due to several developments, among which the shift from institutional to community oriented care. The major developments in psychiatry and the impact of these on the work of psychiatric nurses are described later in this chapter. These changes can, on the one hand, be a challenge for psychiatric nurses because they can get more variety in their work and more promotion possibilities. On the other hand, as a result of these extensive changes in their work, nurses can be confused about their roles and their workload may increase. As a consequence of role confusion and a high workload, burnout can arise (Place, 1992).

Nurses in long-stay psychiatric settings in the Netherlands exhibited moderate levels of burnout (using the predefined cut-off points assigned by Maslach and Jackson (1986) for mental health workers) and the levels of burnout are comparable with the scores of a large sample (n=1337) of nurses working in several settings in the Netherlands (Van Dierendonck & Schaufeli, 1992). Besides, Dassen (1989) found more burnout among short-stay psychiatric nurses than among long-stay nurses. Nevertheless, owing to the afore mentioned risk-factors, nurses in long-stay psychiatry, administrators of hospitals and government officials are seriously concerned about burnout in long-stay settings. Therefore, reducing and preventing burnout among nurses working in long-stay psychiatric care settings through improving their work environment became the major goal of a research project¹ (Gassman et al., 1994) initiated by the Inspectorate for (Mental) Health Care in the Netherlands. The study, reported here, is based on this project. The aim of the study was:

to determine which work-related factors reduce or prevent burnout among nurses working in long-stay psychiatric care settings.

Information is presented next on the association between burnout and work-related factors (work environment) and on nursing care in long-stay psychiatry. Special attention is paid to the major developments in (long-stay) psychiatry and to some consequences of these developments for psychiatric nurses. Finally, the design of the study and the research questions are presented.

¹The project "innovation project nursing practice in long-stay psychiatry" (Gassman et al., 1994) took place between 1990 and 1994. The project was carried out by the University of Limburg, Maastricht, The Netherlands, in cooperation with the Inspectorate for Health Care. The ministry for Welfare, Health and Cultural affairs was the funding agency of the project. The aim of the project was to reduce burnout among psychiatric nurses and to reduce hospitalization effects among psychiatric patients. In another dissertation (Gassman, in preparation) the hospitalization effects will be investigated.

Burnout and work-related factors

Although, in recent years much progress has been made on the theoretical front, many correlational and longitudinal studies on burnout have not been grounded in a theoretical framework. This may have been due to the fact that burnout first emerged as a social problem and not a scholarly construct (Maslach & Schaufeli, 1993). Some of the models which have been used to describe the relationship between burnout and work-related factors are current reformulations of earlier conceptual frameworks of, for instance, Hall (1971), Hackman and Oldham (1975, 1976), Karasek (1979) and Cox (1978, 1985, 1990) while other models are developed exclusively for the explanation of burnout (Cherniss, 1980; Golembiewski et al., 1986). The theoretical models describe burnout in relation to work-related factors such as support, autonomy, work load and involvement. Some describe the inter relationship between work-related factors (e.g. Cherniss, 1980; Karasek, 1979) while others emphasize the role of moderators such as coping (Hackman & Oldham, 1975, 1976; Cox, 1978, 1985, 1990).

Since the term burnout was introduced by Freudenberger in 1974, research on burnout has increased enormously. Kleiber and Enzmann (1990) found almost 3000 publications on burnout. They noted that since 1980, publications on this issue have increased yearly by at least 200 articles. The work of Maslach and Jackson has helped, undoubtedly, to facilitate this progress. They developed the Maslach Burnout Inventory (Maslach & Jackson, 1986), a questionnaire which has been frequently used to determine burnout and which has proved to be reliable and reasonably valid by several researchers (e.g. Powers & Gose, 1986; Schaufeli & Van Dierendonck, 1994).

Although burnout has been investigated in relation to personal (e.g. coping and hardiness) and work-related factors, the predominant focus in the literature has been on the work-related nature of burnout. A great part of the articles are descriptions of correlational studies in which burnout has been investigated in relation to, for instance, absenteeism, autonomy, involvement, job satisfaction, job turnover, role conflict, support and work load. Schaufeli (1990) analyzed about 200 correlational studies which investigated the relationship between burnout and other variables. The following work-related factors were found to have a strong positive relationship with burnout: work load, role confusion, work stress, job dissatisfaction and a lack of social support. Duquette et al. (1994) conducted a literature review regarding factors related to burnout in nursing. Based on 36 studies it was found that the best positive correlates of burnout in nursing were role ambiguity, work load and a lack of social support. Little research has been conducted on the relationship between burnout and work-related factors among nurses in long-stay psychiatric care settings. Several researchers (e.g. Firth et al., 1986; Spaans, 1991) included nurses in long-stay psychiatric care settings in their research population, however, they did not investigate this group separately but together with other mental health care workers. An exception is a study performed by Dassen (1989) who investigated the relationship between burnout and the task performance among nurses in long-stay psychiatric care settings. The tasks were distinguished into three clusters: patient care activities which include guidance in daily personal care, patient teaching tasks such as providing instructions in the psychosocial area, and coordinating and consulting activities such as staff meetings. Low correlations

between the three task dimensions and burnout were found. Only performing patient teaching and coordinating tasks were found to have a significant positive association with personal accomplishment.

In the last decade, several longitudinal studies on burnout have been conducted (e.g. Wade et al., 1986; Golembiewski & Munzenrider, 1988; Firth & Britton, 1989; Nagy & Nagy, 1992). The use of these more methodologically advanced studies has made it possible to study the development of burnout in time. These studies have led to three major conclusions (Maslach & Schaufeli, 1993): the level of burnout seems fairly stable over time; burnout leads to physical symptoms, to absenteeism and to job turnover; and role conflict and lack of social support are antecedents of burnout. On the contrary, Kirk et al. (1993) found over time an increase in burnout among case managers providing intensive services to severely mentally ill clients.

Overall it can be seen that the association between burnout and work-related factors has been investigated by several researchers. The majority of work conducted in this area has focused on correlational and cross-sectional studies. These studies have usually investigated the same factors and found the same results. These correlational studies have several limitations. Maslach and Schaufeli (1993) described them as follows: some of the correlations may be an artifact of the reliance on a single method (common method variance) or the use of a specialized group (selection effects); response rates tend to be rather low, which could indicate that in particular burnt out respondents do not fill in the questionnaire; correlational studies do not permit a test of causal hypotheses; the subjective assessments of certain variables may not accord with their objective status (e.g. it may be that people who are experiencing burnout begin to see everything in a negative light and report that the job conditions are poor, whether they are or not). Although, these limitations are not specific to correlational research, longitudinal and (quasi)-experimental research are more appropriate and as such are advocated by many researchers (e.g. Schaufeli et al., 1993).

Nursing in long-stay psychiatry

An important development in psychiatry is the shift from institutional care to community-oriented care (Betrus & Hoffman, 1992; Ministerie W.V.C., 1993) due to changing views on the care of psychiatric patients and due to cost effectiveness. Therefore, patients are being admitted less frequently to psychiatric hospitals but are being treated by a community mental health institution, while patients already admitted to the hospitals are being moved to half-way houses social homes or could move to these houses in the future (Haveman, 1987; Gassman et al., 1994). At the same time, a patient-oriented way of working has been promoted in psychiatry and the emphasis of care has been placed increasingly on helping patients to function in an independent way. These two developments have become apparent in the vision of rehabilitation which is held in several psychiatric hospitals. The overall aim of psychiatric rehabilitation is to help persons with psychiatric disabilities increase their ability to function, so that they are more successful and satisfied in their environment of choice, with the least amount of ongoing professional intervention (Farkas & Anthony, 1989).

In addition to the aforementioned developments, the organization and financing of psychiatric care have changed in the last decade. Collaborative care pro-

grammes have been set up between residential institutions and community services so these mental health care organizations can offer their patients a complete care programme. Furthermore, several psychiatric hospitals have developed a variety of new care services such as short-stay crisis intervention, day activity programmes and care provided only at night. The financing will change from institute financing to patient-oriented financing, patients will get their own personal budgets so they can purchase their care from several different organizations. The a fore mentioned changes are not unique to the Netherlands; similar developments have occurred and are occurring in other countries in the world.

These developments have changed and will change the work of psychiatric nurses in long-stay care settings. Currently, these nurses work on wards situated in or near a psychiatric hospital. The emphasis of their work lies on performing personal care tasks such as "guiding patients with bathing and showering" and "supervision and guiding in housekeeping" (Dassen, 1989). They do most of their tasks in and around their own ward, they rarely perform outreach tasks such as "visiting the home of the patients' family" (Melchior et al., 1995). It is questionable if the present way of working of these nurses corresponds completely with the afore mentioned developments. During the last decade, a patient-oriented way of working has been promoted in psychiatry. As a result, nurses have become individually responsible for the total care provided to a patient which should guarantee an individualized approach to care. Although a patient-oriented way of working has been stimulated, in practice the care is often group-oriented. Many patients still get group-oriented therapies or participate in group activities without the individual wishes and possibilities of the patient being ascertained. Besides, the rules on a ward are usually operative for all patients on that ward. As a result of this group-oriented way of working, care is often not adapted to patients' individual wishes and possibilities. Furthermore, psychiatric nurses have to work according to the rehabilitation vision. Together with their patients and other health care providers such as psychiatrists and social workers, they have to set up rehabilitation programmes to support patients in order to increase their ability to function. In order to enable those patients who have the potential to move to the community, psychiatric nurses have to support their patients not only on their wards but also in the community. Thus, instead of an institution-oriented view, they must direct their vision outwards. Moreover, several residential organizations and community services have been fused. These new organizations require nurses who are flexible and who can work in different health care settings.

Design and research questions

Five of the 43 psychiatric hospitals in the Netherlands, distributed across the country, participated in the study. In these five hospitals 35 wards could be seen as long-stay wards. The 4-year study involved a diagnostic and an intervention phase (figure 1.). The aim of the diagnostic phase was to explore the relationship between burnout among (long-stay) psychiatric nurses and a number of work-related factors. Based on the findings of the diagnostic study potential risk-factors to reduce or prevent burnout were determined. Next, an intervention was developed with the aim to change these potential risk factors in such a way that

the burnout would be decreased. In the intervention phase of the study the effects of the intervention on work-related factors and burnout were investigated. The next sections describe both phases in more detail.

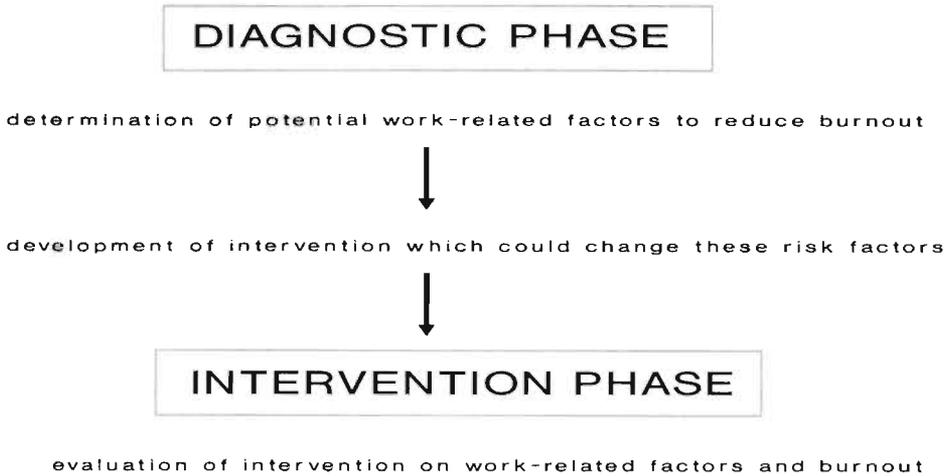


Figure 1. General overview of the study

Diagnostic phase

The following principal research question was formulated in the diagnostic study:

1. *Which work-related factors are associated with burnout among (long-stay) psychiatric nurses?*

Because the tasks which nurses perform constitute their work, the diagnostic study also aimed to describe the tasks of psychiatric nurses working in long-stay settings. Therefore, the following additional question was formulated:

2. *What are the tasks of long-stay psychiatric nurses?*

To answer the first question a meta-analysis was conducted (chapter 2) and a correlational study was performed (chapter 3). The purpose of the meta-analysis, a statistical analysis of a large collection of results from individual studies for the purpose of integrating the findings into a single, generalized finding, was to describe the relative strengths of a number of variables on burnout among psychiatric nurses. In this analysis burnout was treated as a uni-dimensional construct because otherwise too many articles would not have met the criteria for inclusion. Although this uni-dimensional approach is disputable (e.g. Maslach, 1993), emotional exhaustion is usually seen as a key construct of burnout (Maslach & Jackson, 1986) and is therefore often studied separately from other burnout dimensions (cf. De Jonge, 1996).

The correlational study investigated the relationship between burnout among

psychiatric long-stay nurses and a number of work-related factors such as the tasks which the nurses perform, job characteristics, leadership style of the nurse manager, the nursing care model of the ward and the level of performance of the patient group. In this study a questionnaire was completed by 361 psychiatric nurses working in long-stay psychiatric settings.

To answer the second research question a questionnaire was constructed to describe the concrete tasks of the nurse working in long-stay psychiatric nursing (chapter 4). The results lead to a discussion as to whether the present tasks of the 'long-stay' nurse correspond with the developments and newer ways of working with long-stay patients.

The results of the diagnostic study showed that high levels of burnout were related to little support and feedback, lack of clarity and autonomy and low levels of social leadership style among managers. It was expected that our intervention, a nursing care delivery system with a special focus on primary nursing, could change these work-related factors in such a way that the burnout level would decrease.

The intervention, described in chapter 5, was based on the general principles of primary nursing: each patient is assigned to a nurse; the nurse takes responsibility for the individual patient's care; care is focused on the patient's needs rather than the needs of the ward and one nurse is responsible for planning the individual patient's care and the quality of that care. Because adequate feedback and support is very important in primary nursing (Zander, 1985; Mutcher, 1986) and important to reducing burnout, special attention was given to this aspect. Nurse managers or quality care coordinators provided the primary nurse with the required support. In addition they gave advice on skills needed and promoted communication between the primary nurses and other health care providers. Besides adequate feedback attention was given to the role of other health care specialists, to the nurse staff meetings and to a training programme which emphasized communication skills.

Intervention phase

The effects of the intervention on burnout and work-related factors were investigated using a pretest-posttest control group design. Three measurements were conducted: two pretests and one posttest. Burnout was measured three times, while the work-related factors were measured on the first pretest and the posttest. Therefore, a different number of cases were studied in both studies. The effects of the intervention on work-related factors are described in chapter 6 and the effects of the intervention on the burnout level are presented in chapter 7. The intervention was implemented on 11 wards while 21 wards were used as control wards. Figure 2 shows the theoretical model of the intervention phase. The following research questions were investigated in the intervention study:

3. *What are the effects of the introduction of a primary nursing care delivery system on work-related factors?*
4. *Does the introduction of a primary nursing care delivery system reduce burnout among nurses working in long-stay psychiatric care settings?*

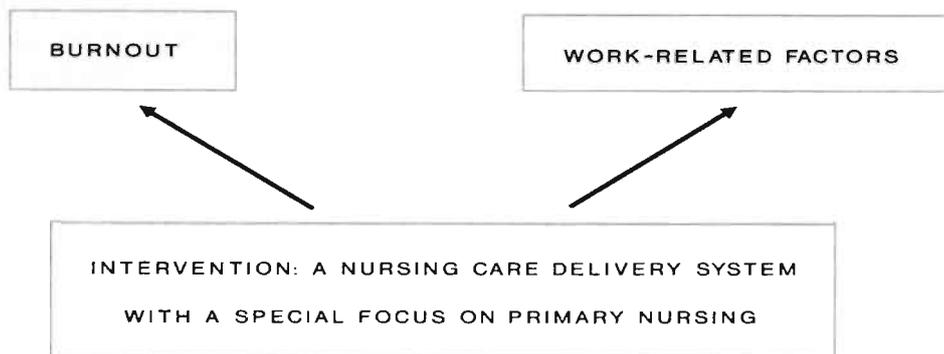


Figure 2. Theoretical model intervention phase

Chapter 8 discusses the findings of the study and highlights some methodological and theoretical issues. Finally implications and recommendations are given for future research and for nursing practice. The study ends with a summary in English and a comprehensive summary in Dutch.

The chapters of this dissertation have been published or submitted for publication separately. Although this will lead to a certain amount of overlap, it has the advantage that the chapters can be read separately.

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CHAPTER

2

**BURNOUT IN PSYCHIATRIC NURSING:
A META-ANALYSIS OF RELATED VARIABLES ¹**

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SUMMARY

The purpose of this study was to describe the relative strengths of a number of variables on burnout among psychiatric nurses. A meta-analysis of correlations revealed that burnout was negatively associated with job satisfaction, staff support and involvement with the organization and positively associated with role conflict. The results of the meta-analysis were in line with the results of other studies in which different populations were investigated. Therefore, the findings as such are not specific to psychiatric nurses. Based on the literature, three typical risk factors of burnout among psychiatric nurses were found: the patient group the nurse works with such as patients who are aggressive and suicidal; the inequity in the exchange process between nurses and patients; and the unrealistic expectations of nurses about patients' potential for rehabilitation.

INTRODUCTION

Burnout can be seen as a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that occurs among individuals who do people work of some kind (Maslach & Jackson, 1982). Because burnout is more predominant in caring professions, many investigators have observed that the nursing population is at a higher risk for burnout (Duquette et al., 1994). Psychiatric nursing is invariably assumed to be a stressful area of nursing practice because psychiatric nurses often have an intense interaction with their patients and have to deal with their challenging behaviours on a regular basis (Sullivan, 1993). In addition, since the focus of care in mental health is moving from institutional care to more community-based care (Betrus & Hoffman, 1992; Sullivan, 1993), these changes can be accompanied by several uncertainties, which can lead to burnout.

Numerous factors have been investigated with regard to burnout in nursing. However, the relative importance of many factors remains unclear within the area of psychiatric nursing. For this reason, it is important to gain insight into the relationship between burnout among psychiatric nurses and the factors related to it.

The purpose of the study was to describe the relative strengths of a number of variables on burnout among psychiatric nurses. Meta-analysis of correlations was the method of choice for this study.

Burnout

Burnout consists of three dimensions: emotional exhaustion, depersonalization and personal accomplishment. Emotional exhaustion assesses feelings of being emotionally overextended and exhausted by one's work, depersonalization measures an unfeeling and impersonal response towards patients, while personal accomplishment assesses feelings of competence and successful achievement in one's work with people.

Burnout can have serious consequences for the psychiatric nurse, the patient and the organization. Among nurses, burnout can be accompanied by many negative symptoms such as fear and headaches. Beemsterboer and Baum (1984) described 36 symptoms on the basis of a literature survey. They noted that the list, despite its length, was still not comprehensive. In this respect, Place (1992) noted that almost every symptom has been related to burnout. Kahill (1988) suggested that this was due, on the one hand, to the lack of clarity on what burnout is and on the other, to the fact that reactions to burnout can differ from person to person. Patients dealing with nurses with a high degree of burnout often experience negative effects through a decrease in the quality of care (Maslach, 1982; Schaufeli, 1990). These nurses show, for example, less empathy for the patient, try to avoid the patient and seek escape in procedures and staff meetings. With respect to the organization, burnout can lead to increased absenteeism and to a reduction in productivity (Golembiewski et al., 1986; Schaufeli, 1990).

Since the issue of burnout was introduced in 1974 by Freudenberger, many articles have been published on the topic. Most of the articles are descriptions of

correlation studies. Schaufeli (1990) analysed about 200 correlational studies which investigated the relationship between burnout and other variables. Based on three criteria, the number of studies, the quality of the studies, and the number and the quality of contrasting findings, Schaufeli (1990) scored the empirical evidence of the relationship between burnout and other factors. Table 1 gives the factors related to burnout. A plus sign indicates a relationship with burnout. The table shows that for six variables there is strong evidence for a relationship with burnout, eleven factors reveal moderate evidence and the rest weak evidence. The strongest evidence was found for young age, work pressure, role confusion, work stress, job dissatisfaction and little social support.

Duquette et al. (1994) conducted a literature review regarding factors related to nursing burnout. Six criteria were used to select pertinent literature: a correlational research design; a population composed mostly of nursing personnel; a participation rate above 35%; an instrument to measure burnout and variables related to burnout; sufficient information on the method as well as the reliability and the validity of instruments. Thirty-six studies were retained in the final analysis. Fifteen variables were selected from a total of 45. It was found that the best correlates of nursing burnout were role ambiguity, workload, age, hardiness, active coping and social support (table 1). Table 1 shows that the factors related to nursing burnout also correspond to those for other populations who do people work of some kind.

Meta-analysis

Lynn (1989) stated that meta-analysis is, literally, an analysis of analyses. It is the statistical analysis of a large collection of results from individual studies for the purpose of integrating the findings into a single, generalized finding. Meta-analysis offers an advantage over narrative research reviews as a means of systematically integrating descriptive research (Reynolds et al., 1992). Narrative research reviews are usually written by an expert in that particular research area. However, in this kind of research it is often unclear which research methods were used. Therefore, it is not possible to determine whether the study was performed accurately. Meta-analysis is appropriate in both experimental and descriptive research (Glass, 1976; Hunter & Schmidt, 1990; Reynolds et al., 1992). The goal of meta-analysis using a correlational index is to describe the distribution of actual correlations between two given variables (Hunter & Schmidt, 1990). Reynolds et al. (1992) reported that meta-analyses of descriptive correlational studies can be used to help determine when a particular phenomenon is ready for testing by intervention studies. Meta-analyses of experimental research can be used to determine when an intervention is ready for clinical trials or incorporation into practice. Furthermore, Reynolds et al. (1992) argued that for both experimental and descriptive studies, meta-analysis enables the researcher to draw conclusions about the body of literature, to advance knowledge development, and to facilitate the rapidity of practice innovations.

Reynolds et al. (1992) briefly described three techniques in which the correlational index is used: the Glassian technique (Glass et al., 1981), the Homogeneity test technique, and the Hunter and Schmidt technique (Hunter & Schmidt, 1990). The Glassian technique calculates the mean variance between the correlation of the separate studies. No methodological differences between

Table 1. Factors related to burnout (from Schaufeli, 1990 and Duquette et al., 1994)

Personal characteristics	
Young age	+++ (n)
Female	++
High training	++
Little work experience	++
Unmarried	+
Less hardiness	++ (n)
External control orientation	++
Passive coping style	++ (n)
Sensitive type	+
Type A behaviour	+
Neuroticism	+
Low extroversion	+
Little self-confidence	+
Internal attribution of own failure	+
Organizational characteristics	
Work pressure	+++ (n)
Role confusion	+++ (n)
Work stress	+++
Little autonomy	++
Intensive contact with patients	++
Bureaucracy	+
Number of working hours	+
Lack of time	+
High qualification level	+
Little participation	+
Little feedback	+
Instrumental leadership style	+
Much burnout in environment	+
Working attitudes	
Job dissatisfaction	+++
Strong personal involvement	++
Little involvement in organization	++
Desire to stop with the job	++
Unrealistic expectations	+
Negative perception of patients	+
Little social support	+++ (n)

+ = weak evidence for relationship with burnout

++ = moderate evidence for relationship with burnout

+++ = strong evidence for relationship with burnout

studies are taken into consideration. A multiple regression is then performed to find potential confounders. The homogeneity test technique was advanced as an improvement over the Glassian method. This technique considers sampling error as well as explained variability by examining data for confounding variables. The Hunter and Schmidt technique can be seen as an extension of the Glassian approach. This technique corrects not only for sampling error but also for other

artifacts. Hunter and Schmidt described 11 study design artifacts that can affect the size of the correlation coefficient: sampling error, error of measurement in the dependent and independent variable, dichotomization of continuous dependent and independent variables, range variation in independent and dependent variables, deviation from perfect construct validity in dependent and independent variables, reporting or transcription error and variance due to extraneous variables. At the level of meta-analysis, it is possible to correct for all except one of these artifacts: reporting or transcription error.

Although meta-analysis has several advantages compared with the classical narrative review, it also has some limitations. Glass et al. (1981), Lynn (1989) and Hunter and Schmidt (1990) summarized these criticisms and concerns of meta-analysis as follows:

Selection bias: In particular, it is often suspected that published studies will show results that are more often statistically significant and have larger effect sizes than unpublished studies. The unpublished studies or contradictory studies are less frequently available to be included in meta-analysis.

Methodological quality: Glass et al. (1981) argued that all studies should be included to avoid a systematic investigator bias while Mansfield and Busse (1977) and Slavin (1986), asserted the need for an a priori decision on a minimal level of acceptable quality for including studies in the meta-analysis in order to have substantially valid findings (reported in Lynn, 1989). Lynn (1989) stated, however, that the quality of the study must either be addressed as an a priori inclusion decision or must become a variable coded from each study and used in the analysis;

The apples and pears problem: Meta-analysis combines studies with different conceptualizations and samples. It is questionable whether the results of these studies can be compared with each other. Glass et al. (1981) argued, however, that implicit in this concern is the belief that only studies that are the same in certain respects can be aggregated. The claim that only studies which are the same in all respects can be compared is self-contradictory; there is no need to compare them since they would have the same findings within statistical error (Glass et al., 1981; Hunter & Schmidt, 1990).

METHOD

The following inclusion criteria were used in this study: a) the sample had to comprise for the greater part of registered nurses or practical nurses engaged in psychiatric patient care; b) Pearson's r correlations between burnout and the independent variables had to be reported; c) the reported results had to come from the original study; d) studies had to be published in English, Dutch or German.

The intention was to identify all relevant published and unpublished studies. Therefore, an extensive search strategy was used (the search ended in June 1994). To identify published studies several indexes such as Med-line and Psyclit were used. Furthermore, references of the articles traced were examined to find other relevant studies (snow-ball method). The key-words burnout, nursing and psychiatric nursing were used to detect the relevant studies. To find unpublished

studies a computer search of dissertation abstracts was performed and 16 experts were asked for information about unpublished studies.

The Hunter and Schmidt technique (Hunter & Schmidt, 1990) was used in this study, because it corrected best for artifacts. However, in most studies the only information available was about the sample size and the reliability of the dependent and the independent variables so only the method for correcting for these artifacts was used. The formulae used in the further analysis are presented in table 2.

Table 2. Formulae Hunter and Schmidt technique

\bar{a}	$= a_1 + a_2 + a_i/x$	(1)	V	$= sd_a/\bar{a} + sd_b/\bar{b}$	(5)
\bar{b}	$= b_1 + b_2 + b_i/y$	(2)	S^2_2	$= \rho^2 \bar{A}^2 V$	(6)
\bar{A}	$= \bar{a} \cdot \bar{b}$	(3)	$Var(\rho)$	$= [Var(\rho_0) - S^2_2] / \bar{A}^2$	(7)
ρ	$= \bar{r}_o / \bar{A}$	(4)	SD	$= \sqrt{Var(\rho)}$	(8)
\bar{a}	$=$ mean attenuation factor independent variables		V	$=$ sum of squared coefficients of variation	
\bar{b}	$=$ mean attenuation factor dependent variables		sd_a	$=$ standard deviation attenuation factor independent variable	
x	$=$ available α -values independent variables		sd_b	$=$ standard deviation attenuation factor dependent variable	
y	$=$ available α -values dependent variables		S^2_2	$=$ variance due to artifact variation	
A	$=$ mean attenuation factor		$Var(\rho)$	$=$ variance in true correlation	
\bar{r}_o	$=$ mean observed correlation		$Var(\rho_0)$	$=$ variance in uncorrected correlation	
ρ	$=$ corrected correlation		SD	$=$ standard deviation effect size correlation	

The procedure of data analysis was as follows:

First, the square roots of the available reliability coefficients (Cronbach's alpha) of the dependent and independent variables were computed. Then the means of these were calculated (formula 1 and 2). The mean attenuation factor was computed by formula 3. The corrected mean correlation was calculated by dividing the mean observed correlation by the mean attenuation factor (formula 4). Second, the variance due to artifact variation was calculated (formulae 5 and 6) and finally a confidence interval (95%) was constructed using the estimated population mean (formulae 7 and 8).

For the above analysis, the minimum number of required studies was set at three. Results from variables labelled differently were combined if, based on the judgement of the research team, the variables defined conceptually the same phenomena.

RESULTS

Initially, 33 articles were found. Of these articles, nine articles met the criteria for inclusion. Table 3 presents information about these articles. In only three studies did the sample consist totally of psychiatric nurses (i.e. Dassen, 1989; Spaans, 1991; Sullivan, 1993). In two studies a total burnout score was used (i.e. Stout & Posner, 1984; Savicki & Cooley, 1987) while three authors gave only information about significant correlations (i.e. Stout & Posner, 1984; Savicki & Cooley, 1987; Spaans, 1991).

The Maslach Burnout Inventory (Maslach & Jackson, 1981) was used to measure burnout, except for in the study of Stout and Posner (1984) in which the Tedium Measure was used (Pines et al., 1981). No unpublished articles which met the criteria for inclusion, were found. In the included studies 43 different variables were investigated to relation with burnout.

From the list of 43 different variables, 3 variables had the required three separate estimates: job satisfaction, staff support and role conflict, while involvement with the organization had 4 separate estimates.

In all the studies information was available about the sample size. In some studies, however, no information was given about the reliability of the dependent or the independent variables (i.e. Firth et al., 1986; Savicki & Cooley, 1987; Leiter, 1988). All the given reliabilities were Cronbach's alphas, except in the study of Stout and Posner (1984), in which for the independent variables (i.e. Job satisfaction and Role conflict) the Odd-even split-half reliability was given.

Table 3. Correlational research on burnout and other variables in psychiatric nursing

Author(s)	Sample and response (res.)	Variables	Pearson's r correlations ¹ Burnout dimensions		
			Emotional exhaustion	Depersonalization	Personal accomplishment
				Total burnout score ³	
Stout and Posner (1984)	direct service workers in mental health, mental retardation and physical restoration (n = 138) (res. = ?)	Role ambiguity Role conflict ² Job Satisfaction ²		.42* .21* -.50*	
Firth et al. (1986)	qualified psychiatric and mental handicap nurses (n = 185) (res. = 38%)	Support from supervisor ² : overall quality	-.29***	-.15*	.17**
				Total burnout score ³	
Savicki and Cooley (1987)	mental health workers (n = 94) (res. = 75%)	Involvement ² Peer Cohesion Staff support ² Autonomy Task orientation Clarity ² Control Innovation		-.37** -.38** -.32** -.31** -.28** -.32** .30** -.25**	
Leiter (1988)	staff of mental health organizations (n = 34) (res. = ?)	Job satisfaction ² Work contacts Informal contacts	-.42* .44* -.32*	-.38* -.05 -.25	.45* .33* .38*
Miller et al. (1988)	staff of psychiatric hospitals direct and indirect caregivers (n = 417) (res. = 57%)	Empathic concern Emotional contagion Communication Responsiveness Occupational Commitment ²	-.18* .28* -.12* -.26*	-.24* .10* -.19* -.17*	.30* -.39* .62* .16*
Dassen (1989)	nurses in psychiatry (n = 898) (res. = 78%)	Views on chronicity: decrease hospitalization Professional identity: nurse therapist Task perceptions ⁴ : care patient teaching coordinating	.05 .0 -.03 .05 .07 .04 .02	-.04 .06 -.14** -.05 -.03 -.09 .03	-.02 -.05 .08 .10* .09 .14* .14*

Table 3. continued

Author(s)	Sample and response (res.)	Variables	Pearson's r correlations ¹ Burnout dimensions		
			Emotional exhaustion	Depersonalization	Personal accomplishment
Spaans (1991) ⁵	psychiatric nurses working in different settings (n = 87) (res. = 90%)	Neg. feedback from other health care specialists	.37	.20	-.23
		Negative feedback from supervisor		.23	
		Negative feedback from colleagues		.21	
		Lack of feedback from supervisor		.18	
		Lack of feedback from colleagues		.24	
		Social support from other health care disciplines			.25
		Social support from supervisor ²		-.22	.20
		Social support from colleagues	-.21	-.26	.24
		Good relationship with other health care disciplines			.27
		Good relationship with supervisor		-.21	
		Good relationship with colleagues	-.24	-.20	.29
		Role conflict ²	.31		-.26
		Job satisfaction ²	-.27	-.40	
		Uncertainty about the future	.24	.37	-.23
		Work pressure	.23		
		Lack of participation ²	.17		
		Use of knowledge and skills		-.29	.34
Coping (active)	-.19*	-.23*	.43***		
Gorp van et al. (1993)	psychiatric nursing students (n = 142) (res. = 85%)	Inequity in exchange process with the organization	.41**	.31**	-.26*
		Inequity in exchange process with patients	.40**	.25*	-.28**
		Feelings of resentment towards patients	.28**	.29**	-.10
		Cognitive withdrawal: tendency to absenteeism	.21*	.09	-.28**
		tendency to leave job	.29**	.08	-.22*
		Involvement ²	-.20	-.21*	.22*
Sullivan (1993)	psychiatric nurses (n = 78) (res. = ?)	Psychiatric Nursing Stress Inventory: Patient care subscale	.53*		

¹ * p ≤ .05, ** p ≤ .01, *** p ≤ .001; ² variables included in meta-analysis; ³ only the significant correlations were given; ⁴ results of psychiatric nurses working in long-stay wards; ⁵ The author gives only significant correlations without indicating the p-value (except coping).

Table 4 shows the variable names which were combined in the analysis, a burnout dimension, the mean observed correlation, the corrected correlation and the confidence interval. It must be pointed out that the burnout dimension was emotional exhaustion or depersonalization and a total burnout score. None of the confidence intervals contained zero. Furthermore, the table indicates that job satisfaction had the highest corrected correlation with burnout, while the other three variables had nearly the same corrected correlations with burnout.

Table 4. Variable name, burnout dimensions, the mean observed correlation, the corrected correlation and the confidence interval

Variable and (number of reports)	Burnout dimensions	Mean observed correlation	Mean corrected correlation	Confidence interval
- Job satisfaction (3)	tot. and EE	-.40	-.50	$-.73 \leq \rho \leq -.27$
- Staff support (2) - Social support from supervisor (1)	tot. and D	-.23	-.31	$-.45 \leq \rho \leq -.17$
- Role conflict (2) - Clarity ¹ (1)	tot. and EE	.28	.33	$.30 \leq \rho \leq .35$
- Involvement with the organization (2) - Occupational commitment (1) - Lack of participation ¹ (1)	tot. and EE	-.25	-.32	$-.41 \leq \rho \leq -.24$

¹ = correlation in opposite direction

tot. = total burnout score

EE = emotional exhaustion

D = depersonalization

DISCUSSION

The purpose of this study was to describe the relative strengths of a number of variables on burnout among psychiatric nurses. It was found that job satisfaction, staff support and involvement with the organization showed a negative correlation with burnout while role conflict showed a positive correlation. None of the confidence intervals contained zero, so all the correlations were significant. However, a confidence interval does much more than assess the extent to which the null hypothesis is compatible with the data. It provides simultaneously an idea of the magnitude of the effect and the inherent variability of an estimate (Rothman, 1986). Job satisfaction was found to have the strongest relationship with burnout but the confidence interval was larger than the other intervals. That suggests that job satisfaction had the strongest effect while the precision of the estimation was lower than the other estimations. This finding is not surprising because burnout can be understood as representing a negative assessment of one's work experience (Gillespie & Numerof, 1984). The question is how burnout can be distinguished from other constructs such as job dissatisfaction and stress. Maslach and Schaufeli (1993) stated that burnout can only be distinguished in a relative way from these related concepts and that the distinctiveness of the

burnout concept pertains to both its process and to its multidimensionality. Job dissatisfaction is, for example, negatively related to emotional exhaustion and depersonalization but only weakly correlated with personal accomplishment (Maslach & Schaufeli, 1993). With respect to the differences between burnout and stress, Schaufeli (1990) argued that the depersonalization component is a typical factor of burnout. Brill (1984) noted that a person suffering from burnout, as differentiated from stress, would be a worsening or failing person that is unable to adapt without outside help or environmental change whereas a person suffering from stress refers to an organism that is able to return to adaptation.

The results of the meta-analysis are in line with the results of other studies. Blegen (1993) found in a meta-analysis that the best correlate of job satisfaction in nurses is stress or burnout while support and role conflict have been determined as important in nursing burnout by Duquette et al. (1994). Furthermore, the results are consistent with the findings of Schaufeli (1990) who studied burnout among different populations. Overall it can be concluded that these results are, as such, not specific to psychiatric nurses.

Examining other factors impacting on burnout among psychiatric nurses is essential. Because of the nature of the work of psychiatric nurses, it is legitimate to consider the usually intense interaction psychiatric nurses have with severely disabled patients such as schizophrenics and depressive patients. Several researchers have argued that nursing complex and severely ill patients increases the burnout level (Maslach & Jackson, 1982; Savicki & Cooley, 1987). Schaufeli (1990) reported that working with difficult patients can lead to feelings of helplessness and frustration which can initiate the burnout process. Maslach and Jackson (1982) noted that the key aspect of the work situation, in terms of the development of burnout, is the amount and degree of contact with the patients. They argued that nurses may develop burnout if patients do not respond to them and if patients give negative feedback such as aggression. Furthermore, they argued that nurses who work with patients with poor prognoses have a greater likelihood of depersonalized perceptions. It is possible that nurses who continuously focus on the negative aspects of patients develop a cynical view of human nature.

It is noteworthy that many researchers did not explicitly investigate the relationship between burnout among psychiatric nurses and working with certain groups of patients. In this meta-analysis two articles were found which specifically investigated this relationship.

Van Gorp et al. (1993) found that burnout among psychiatric nurses is related to inequity in the exchange process with psychiatric patients. Inequity stands for the effort which the nurse invests in the relationship with the patient and what he or she gets back from the patient.

Sullivan (1993) found a positive correlation between high scores on the patient care subscale of the psychiatric nursing stress inventory and emotional exhaustion. This subscale assesses the amount of work with potentially violent patients, dealing with patients who become physically violent and require restraint, dealing with suicidal patients and continuous observation of patients on a one-to-one basis.

Other factors, not yet discussed in this study, may also be relevant correlates with psychiatric nurse burnout. Lamb (1979) argued that in psychiatry, nurses can have unrealistic expectations about the patients' potential for rehabilitation.

This situation may lead to frustration for staff, which can often lead to burnout. It must be mentioned that during the last ten years the use of rehabilitation programmes has increased strongly in psychiatry, so the number of unrealistic expectations may have increased accordingly.

Before some general conclusions are drawn, some methodological remarks about this study must be mentioned. Firstly, several artifacts were not reported in the studies so it was only possible to adjust for sampling error and error in the measurement of the dependent and in the independent variable. Thus, the residual variation attributed to the actual correlations contains variation due to uncorrected artifacts such as imperfect construct validity. Therefore, the true standard deviations may be less than estimated in this study (cf. Hunter & Schmidt, 1990). Hunter and Schmidt (1990) have discussed the problem of unreported artifacts in published articles. It is important that researchers provide as much information as possible about artifacts. Information about the reliability of the dependent and independent variables is in this matter indispensable.

Secondly, only published studies were included in the meta-analysis. Therefore, a limitation of this study may be publication bias, which occurs if the results of studies that have not been published are different from those that have been published, and if favourable results are published more often (Dickerson, 1990). This effect can arise even in published studies because some authors in this study only provided information about significant variables, so information about some non-significant variables could not be used in the study.

Finally, several variables were combined if, based on the judgement of the research team, the variables defined conceptually the same phenomena. However, some combinations or possible combinations were debatable, especially if authors did not give a clear definition of the concept studied.

Although meta-analysis has some limitations, it is argued that it offers an advantage over narrative research reviews as a means of systematically integrating descriptive research, by which reproducibility is possible. The studies mentioned in the introduction are kinds of meta-analysis. However, in those studies the methodological information was too small to reproduce them accurately. The Hunter and Schmidt method (1990) described the different steps in the meta-analysis more accurately; therefore reproducibility is possible.

To sum up, it can be concluded that burnout in psychiatric nursing is correlated with job satisfaction, involvement with the organization, supervisor support and role conflict. Although the analyses did not investigate causal relationships, these factors can be seen as potential risk factors for burnout. However, these factors seem not to be typical for the psychiatric nurse. A typical risk factor for burnout among psychiatric nurses is probably the kind of patient group the nurse works with, for instance, patients who are aggressive and suicidal and the inequity in the exchange process between nurses and patients. Furthermore, a probable risk factor is having unrealistic expectations about patients' potential for rehabilitation. It must be mentioned, however, that these factors have only been investigated in individual studies.

To prevent or reduce burnout in psychiatric nursing, interventions described to reduce burnout in caring professions are generally also appropriate for the psychiatric nurse. Several books and articles have been written in which a number of interventions for reducing burnout are described (Cherniss, 1980; McConnell, 1982; Maslach, 1982; Paine, 1982; Farber, 1983). Nevertheless, it is

important to adapt these interventions to typical risk factors for psychiatric nurses. For instance, supervisor support and support from colleagues is very important in reducing or preventing burnout. In psychiatric nursing this support can be directed at the inequity in the exchange process between nurses and patients while in a rehabilitation ward it can focus on expectations the rehabilitation nurse has about the patients' potential for rehabilitation.

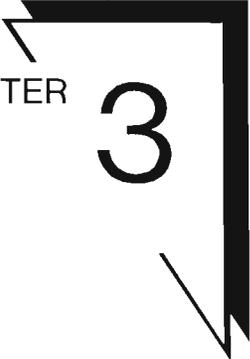
A large number of correlational studies about burnout, including burnout in nursing, have been conducted. Many studies investigated the same factors and found the same results. Therefore, studies concerning the relationship of burnout among psychiatric nurses to other factors should focus on factors typically valid for psychiatric nurses such as the inequity in the exchange process between nurses and patients and the patient group nurses have to deal with. Besides, there are probably other factors not mentioned so far which could be related to burnout, such as the tasks of the psychiatric nurse, the nursing process and the organization of nursing care.

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CHAPTER

3

**BURNOUT AND WORK-RELATED FACTORS
AMONG NURSES IN LONG-STAY PSYCHIATRY ¹**

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SUMMARY

The aim of this study was to investigate the relationship between burnout and a number of work-related factors among nurses working in long-stay psychiatric care settings. Another aim was to investigate the differences between these associations at individual and at group level. Differences were found in the correlations as well as in the regression analyses at individual and group level. The correlations between burnout and the independent variables were more often significant at individual level and the explained variances of the regression analyses were much higher at ward than at individual level. Results showed that work environments associated with low levels of burnout are those in which workers have good support and feedback, job clarity, autonomy and low levels of complexity in their work and have managers with a social leadership style and realistic expectations about the potential of rehabilitation. Furthermore, it was found that it is not the individual work experience of the nurse that is important in determining burnout, but the mean work experience of the nursing staff.

INTRODUCTION

Burnout can be seen as a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that occurs among individuals who do people work of some kind (Maslach & Jackson, 1982). Since burnout is more predominant in the caring professions, many investigators have observed that the nursing population is at a higher risk for burnout (Duquette et al., 1994).

Nursing in long-stay psychiatric care settings, which cater to mentally ill patients hospitalized for a period of two or more years, is invariably assumed to be a stressful area of nursing practice. Nurses working in these settings spend a great deal of time in intense interaction with severely disabled patients such as schizophrenics. They usually work in isolation and as such receive less support from other health care providers than nurses in acute psychiatric settings (Dassen, 1989). The work of nurses in long-stay psychiatric settings has changed and will change extensively. The focus of care in mental health is moving to the community (Betrus & Hoffman, 1992; Ministerie WVC, 1993). Several patients of long-stay wards have been moved to half-way houses or have potentials to move to the community in the future (Haveman, 1987; Gassman et al., 1994). As a result, more emphasis is placed on helping the patient to function independently (Dassen, 1989). In this respect, several psychiatric hospitals have been working according to the rehabilitation vision. The overall aim of psychiatric rehabilitation is to help persons with psychiatric disabilities increase their ability to function, so that they are more successful and satisfied in their environment of choice, with the least amount of ongoing professional intervention (Farkas & Anthony, 1989). The afore mentioned changes are not unique to the Netherlands, similar developments have occurred and are occurring in other countries. As a result of these extensive changes, nurses can be confused about their roles and their workload may increase. As a consequence of role confusion and a high workload burnout can arise (Place, 1992).

These and other factors may lead to burnout which can manifest itself in increased absenteeism, a reduction of productivity (Golembiewski et al., 1986; Schaufeli, 1990) and a decrease in the quality of care (Maslach, 1982; Schaufeli, 1990). Consequently, administrators of hospitals and government officials are seriously concerned about burnout in long-stay settings. In view of the above, reducing burnout among psychiatric nurses working in long-stay settings became the aim of a research project set up in the Netherlands in 1990 (Gassman et al., 1994). This chapter describes a study which aimed to investigate the level of burnout and the relationship between burnout and work-related factors among nurses working in long-stay psychiatric care settings.

Burnout and work-related factors

Research findings have linked several work-related factors to burnout among (psychiatric) nurses. Dassen (1989) investigated the concrete tasks of the psychiatric nurse in relation to burnout. The tasks were distinguished into three dimensions: patient care activities which include guidance in daily personal care, patient teaching tasks such as providing instructions in the psychosocial area, and coordinating and consulting activities such as staff meetings. Low correlations between the three task dimensions and burnout were found. Only performing patient teaching and

coordinating tasks were found to have a significant association with personal accomplishment.

Besides the concrete tasks of the nurse, several job characteristics such as work load, autonomy and role clarity have been investigated in relation to burnout. Many researchers reported a positive relationship between workload and burnout (Weinberg et al., 1983; Shinn et al., 1984; Constable & Russell, 1986; Savicky & Cooley, 1987; Sullivan, 1989). Furthermore, high burnout levels have been associated with a lack of autonomy (Reed, 1988; McGrath et al., 1989; Sullivan, 1989), a lack of clarity about work objectives and responsibilities (Stout & Posner, 1984; Savicky & Cooley, 1987; Sullivan 1989) and inadequate support (Pines & Maslach, 1978; Savicky & Cooley, 1987; Penn et al., 1988). Involvement, the extent to which workers are concerned about and committed to their jobs, correlated negatively with burnout (Savicky & Cooley, 1987).

The relationship between burnout and the behaviour of the manager has been investigated by many researchers. Several have emphasized the importance of the role of the manager in giving support to the nurse (Firth et al., 1987; Gillespie & Numerof, 1991). Schaufeli (1990) concluded, on the basis of a literature survey, that burnout seems positively related to the instrumental leadership style of management and negatively related to the social leadership style.

The way in which nursing care is organized on the ward has not so far been explicitly investigated in relation to burnout. There are, however, some contrasting indications that the use of a primary nursing model (in this model one nurse has 24-hour responsibility for the individual patient's care) may indirectly lead to an increase or a decrease in burnout. High burnout levels were found in nurses who had a lack of autonomy (Reed, 1988; McGrath et al., 1989; Sullivan, 1989) and lower job satisfaction (Schaufeli, 1990). As a result of primary nursing, autonomy increased (Boekholt, 1981; Bekkers et al., 1990; McGuire & Botting, 1990) as well as the nurses' job satisfaction (Marram et al, 1979; Metcalfe, 1983; Blenkarn et al., 1988). These results may lead to a belief that burnout decrease as a result of primary nursing. On the other hand, McClure (1984) and Pines and Aronson (1988) argued that one of the costs of primary nursing may well be stress and burnout because of too much emotional involvement with the patient and family while Akinlami and Blake (1990) noted that the extra responsibility, although in many ways more satisfying, does result in increased levels of stress.

The kind of patient group has also been investigated in relation to burnout. Difficult and severely ill patients increase the burnout level (Maslach, 1982; Savicky & Cooley, 1987). Schaufeli (1990) reported that working with difficult patients can lead to feelings of helplessness and frustration which can initiate the burnout process.

Research questions

Although the relationship between burnout and the work environment has been investigated by several researchers, little research has been conducted on burnout in long-stay psychiatric care settings. Furthermore, it can be concluded that, based on the afore mentioned studies, burnout in general has been researched at individual level. However, analysis at group level seems to be more appropriate, because the work environment can be seen as an aspect of a ward and not in the first instance as a characteristic of an individual. Therefore, in this study two aggregation levels

were used: individual level (the psychiatric nurse) and group level (the ward where the nurse works). The research questions were formulated as follows:

- *What is the association between burnout and work-related factors among nurses in long-stay psychiatry?*
- *Are there differences between these associations at individual level and at group level?*

METHOD

Sample

Five of the forty-three psychiatric hospitals in the Netherlands, distributed across the country, participated in the study. Thirty-five wards in these five hospitals can be classified as long-stay wards. In these wards 725 people were working in direct patient care. Random sampling was used to select 492 nurses to complete the questionnaire. Non-responders received a reminder. Nursing students and temporary employees were excluded from the study. Of the questionnaires distributed, 361 were returned (73.4%). This group consisted of unit leaders (20), psychiatric nurses (258), practical nurses (59) and nurses' aids (23). The personal data of one respondent was not available. Seventy-two percent of the respondents were women. The mean age was 35 years ($sd=8.3$, range 20-58). The respondents had been working in psychiatry for an average of 13.5 years ($sd=7.4$) with 4.5 years ($sd=4.2$) on the ward. They worked on average 31.3 hours a week ($sd=9.7$).

Instruments

The questionnaire consisted of six different dimensions concerning burnout and work-related factors. Table 1 shows the internal consistency (Cronbach's alpha), the number of items, the theoretical score, the mean score and the standard deviation of each subscale. Furthermore, information on four nurse characteristics was gathered: gender, age, work experience and professional position (unit leader, psychiatric nurse, practical nurse or nurses' aid)

Burnout

The three burnout dimensions, emotional exhaustion, depersonalization and lack of personal accomplishment were measured by a version translated by Schaufeli (1990) of the Maslach Burnout Inventory (Maslach & Jackson, 1981). The questionnaire consisted of 22 items scored on a seven-point Likert-scale. Schaufeli and Van Dierendonck (1993) found the Dutch MBI valid and reliable for assessing burnout in human service professions.

Tasks of the nurse

Based on a task inventory by Dassen (1989), Borgesius et al. (1988) and a number of interviews with nurses working in long-stay settings conducted by the

researchers, a questionnaire was constructed to describe the concrete tasks of the nurse working in long-stay psychiatric care settings (Melchior et al., 1995). The questionnaire consisted of 77 tasks such as "guidance of patients with bathing or showering" and "talking with patients about their feelings and emotions". The nurses were asked to respond "never"(0), "yearly" (1), "monthly" (2), "weekly"(3) and "daily"(4) to how often they performed a certain task. The higher the score, the more a task was performed daily. The questionnaire did not measure the amount of time the nurse needed to perform a task. Principal components analysis yielded a classification into four task dimensions: personal care tasks, psycho-social tasks, household tasks and organizational tasks.

Job characteristics

The job characteristics were measured by a questionnaire developed by Boumans (1990). The questionnaire was based largely on the Job Diagnostic Survey (Hackman & Oldham, 1975, 1976). Some items were adapted by the researchers to nursing practice in long-stay psychiatric care settings. The scale which was used in this study consisted of 48 items using a seven-point semantic differential scoring system. In this study it was found that three factors could be distinguished by a principal components analysis: complexity, feedback/clarity and autonomy. Together they explained 30.6% of the variance. The subscale "complexity" measured the complexity or the difficulty of the work; for instance, the time and training needed to do the job well. This scale also consisted of items that related to work pressure. The autonomy subscale assessed the opportunities the nurse had to make her own decisions; for instance, which intervention had to be used to solve a problem. The feedback/clarity scale measured the clarity of the work and the degree to which the nurse was supported by colleagues, nurse managers and other health care specialists.

Leadership style

The leadership style of the manager was assessed using a translated version (De Sitter, 1970) of the "Leadership Behaviour Questionnaire" (Stogdill, 1963). The questionnaire consisted of 21 items. The respondent had to indicate on a five-point scale which description was appropriate for the manager's behaviour. Leadership style is divided into two independent factors: social and instrumental (House & Baetz, 1979; Boumans, 1990). Social leadership style covers relational aspects of work, such as, the leader pays attention to the comfort, well-being and job satisfaction of her or his staff. Instrumental leadership style has to do with the organization of the work. For example, the leader gives clear definitions and explains her or his role and lets the staff know what they are expected to do.

Nursing care model

The nursing care model of the ward was measured by a questionnaire developed by Boumans (1990). The respondent had to indicate on a five-point scale which model was comparable with the model on his/her ward. A high score on this scale indicated a high level of patient-oriented nursing, a low score a high level of task-oriented nursing. In a patient-oriented care model one nurse performs all nursing activities for

a number of patients. In a task-oriented care model certain activities are performed by the nurse for all the patients on the unit. Boumans reported an internal consistency of .59. No information was given on the validity.

Level of performance patient group

This scale measured the amount of care chronic psychiatric patients needed to perform activities. The questionnaire was constructed by the researchers. The questionnaire consisted of a list of 28 activities. For each activity the nurse was asked if the patient needed "no care" (score 3), "some care" (score 2) or "a lot of care" (score 1). A fourth category related to non-occurrence of an activity (score 0). A high score meant that the patient group needed little care from the nurse. A unit leader and a nurse with at least two years of experience in nursing had to complete the questionnaire. They had to score the level of performance of the total patient group of their unit. For each answer category the nurse had to give the number of patients who belonged to the answer category. The scores of all different units of a ward were summed to yield one total ward score. The internal consistency of the scale was high (.95). In a pilot study the questionnaire was correlated with several other scales (e.g. Haveman, 1987; Van Wel, 1990) which measure the level of performance of the patient. The correlation scores were between .71 and .90. So the criterion related validity seems to be good.

Analyses

Product-moment correlations were computed and multiple regression analyses were performed. At individual level all work-related factors studied were included in the multiple regression analyses. At ward level, not all independent variables were included in the analyses because of the small sample size ($n=35$). Therefore, only the independent variables were selected which had a significant correlation with one of the burnout dimensions. At group level the mean scores of the nurses who worked on the same ward were used.

RESULTS

The internal consistency of all scales and subscales was moderate to high with the exception of the nursing care model (table 1). The sample exhibited moderate levels of burnout (using the predefined cut-off points assigned by Maslach and Jackson (1981) for mental health workers). The results are comparable with the scores of a large sample ($n=1337$) of nurses working in several settings in the Netherlands (Van Dierendonck & Schaufeli, 1992). Furthermore, table 1 shows that personal care tasks were performed most frequently when compared to psycho-social tasks, household tasks and organizational tasks. The nurse manager usually had a social leadership style and the respondents experienced a patient-oriented care model on their ward.

Table 2 (page 43) presents Pearson correlations at individual ($n=361$) and group ($n=35$) level. Differences between two nurse characteristics, gender and professional position were investigated using t-tests and ANOVA. Men scored higher

Table 1. Internal consistency (Cronbach's alpha), number of items, theoretical score, mean score and the standard deviation of burnout and work related factors

	Alpha	Number items	Theoretical score	Mean score (standard deviation)
BURNOUT VARIABLES				
Burnout - emotional exhaustion	.86	9	min=0, max=54	17.22 (7.67)
- depersonalization	.69	5	min=0, max=30	6.51 (4.02)
- personal accomplishment	.78	8	min=0, max=48	31.97 (4.14)
WORK-RELATED VARIABLES				
Tasks of the nurse - personal care tasks	.89	18	min=0, max=4	2.95 (.74)
- psycho-social tasks	.89	11	min=0, max=4	2.81 (.69)
- household tasks	.86	13	min=0, max=4	2.06 (.85)
- organizational tasks	.83	13	min=0, max=4	1.47 (.60)
Job characteristics - complexity	.82	12	min=1, max=7	4.23 (.85)
- autonomy	.73	9	min=1, max=7	4.17 (.83)
- feedback/clarity	.84	13	min=1, max=7	4.39 (.83)
Leadership style - social	.92	11	min=0, max=4	2.90 (.71)
- instrumental	.79	10	min=0, max=4	1.75 (.56)
Nursing care model	.54	4	min=1, max=5	3.01 (.89)
Level of performance of the patient group	.95	28	min=0, max=3	1.54 (.49)

on all three burnout variables than women (emotional exhaustion 18.89 versus 16.63, $p \leq .05$; depersonalization 7.96 versus 5.98 $p \leq .001$ and personal accomplishment 31.14 versus 32.23, $p \leq .05$). No differences were found between unit leaders, psychiatric nurses, practical nurses and nurses' aids. Table 2 shows that the three burnout dimensions correlated with each other. The correlation was higher at ward level than at individual level. Emotional exhaustion was correlated with work experience, household tasks, organizational tasks, complexity, feedback/clarity, social leadership style and level of performance of the patient group. Depersonalization was associated with age, work experience, psycho-social tasks, household tasks, complexity, feedback/clarity and social leadership style. Personal accomplishment was correlated with age, work experience, complexity, autonomy, feedback/clarity, social and instrumental leadership style and level of performance of the patient group. It is noteworthy that at ward level the work experience in nursing of the respondents correlated highly with all burnout dimensions. At individual level, however, only personal accomplishment correlated positively with work experience.

In the second step of the analysis, the overlap between the work-related factors was controlled by using stepwise multiple regression (table 3, page 44). The results at group level are given between brackets. First a stepwise multiple regression was performed to investigate burnout in relation to nurse characteristics. It was found that age accounted for 2% of the variance of emotional exhaustion and age and

Table 2. Pearson correlations at individual level (n=361) and, between brackets, at ward level (n=35)

	Emotional exhaustion	Depersonalization	Personal accomplishment
Emotional exhaustion	-- (-)	.58*** (.69***)	-.47*** (-.73***)
Depersonalization	.58*** (.69***)	-- (-)	-.45*** (-.75***)
Personal accomplishment	-.47*** (-.73***)	-.45*** (-.75***)	-- (-)
Age	-.03 (-.24)	-.10 (-.37*)	.15** (.37*)
Work experience in nursing (years)	-.04 (-.39*)	-.06 (-.46**)	.15** (.48*)
Tasks of the nurse			
- personal care tasks	.05 (-.17)	.07 (-.13)	-.01 (.04)
- psycho-social tasks	.07 (.01)	.13* (.29)	.02 (-.11)
- household tasks	.11* (.18)	.15** (.25)	-.03 (-.18)
- organizational tasks	.15** (.02)	.09 (.02)	.09 (.08)
Job characteristics			
- complexity	.28*** (.38*)	.23*** (.45**)	-.13* (-.22)
- autonomy	-.10 (-.23)	-.07 (-.17)	.18*** (.39*)
- feedback/clarity	-.18*** (-.25)	-.19*** (-.19)	.34*** (.39*)
Leadership style			
- social	-.22*** (-.05)	-.19*** (-.22)	.16** (.09)
- instrumental	-.02 (-.29)	-.05 (-.26)	.13* (.23)
Nursing care model (1 = task-oriented, 5 = patient-oriented)	-.01 (.19)	.07 (.27)	.08 (.01)
Level of performance of the patient group	.14** (.45**)	.10 (.19)	-.11* (-.31)

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$ (two-sided)

gender determined 6% of depersonalization and 4% of personal accomplishment. As a consequence, age and gender were used as control variables in the regression analyses at individual level.

At individual level, 16% (adjusted R-square) of the variance in emotional exhaustion was explained (in the order in which the variable was included in the stepwise regression analyses) by complexity, feedback/clarity, the level of performance of the patient group and social leadership style. Complexity, feedback/clarity and social leadership style determined 12% of the variance of depersonalization. Finally, 11% of the variance of personal accomplishment was explained by feedback/clarity and complexity.

At group level, the level of performance of the patient group, work experience, autonomy, complexity, and feedback/clarity explained 59% of the emotional

Table 3. Results of stepwise regression analyses at individual level (n = 361) and, between brackets, at group level (n = 35) predicting burnout

	Emotional exhaustion		Depersonalization		Personal accomplishment	
	individual ¹	(group)	individual ¹	(group)	individual ¹	(group)
Work experience (group)		(-.25)		(-.49)		(.44)
Complexity (group)	.29	(.36)	.25		-.14	
Autonomy (group)		(-.35)				(.39)
Feedback/clarity (group)	-.19	(-.24)	-.22		.34	(.37)
Social leadership style	-.14		-.12			
Level of performance patient group	.15	(.67)				(-.53)
R-square	.17	(.65)	.13	(.24)	.12	(.63)
adjusted R-square	.16	(.59)	.12	(.21)	.11	(.57)

¹ = controlled for age and gender

exhaustion on a ward. Twenty-one percent of depersonalization on a ward was determined by the average work experience. The average work experience, feedback/clarity, the level of performance of the patient group and autonomy accounted for 57% of the variance of personal accomplishment.

DISCUSSION

Work environments associated with low levels of burnout are those in which workers have good support and feedback, job clarity and autonomy, low levels of complexity in their work and have managers with a social leadership style. These results are consistent with our literature review. However, two surprising associations were found: high levels of burnout were found in workers who worked with a patient group with a high level of performance and the work experience at group level had a much higher association with burnout than that at individual level.

The first result seems contrary to other research findings. Several researchers (Maslach & Jackson, 1982; Savicki & Cooley, 1987; Schaufeli, 1990) have suggested that working with difficult and severely ill patients with a bad prognosis can lead to feelings of helplessness and frustration which can initiate the burnout process. Nursing care for patients with a high level of performance is, however, likely to be more difficult and stressful than nursing care for patients with a low level of performance. It is possible, for example, that the former patient group is more assertive with the psychiatric nurse, leading to a higher stress level. Furthermore, patients with a high level of performance are more often diagnosed as "schizophrenic" than patients with a low level of performance (Gassman et al., 1994). Pines and Maslach (1978) reported that working with this kind of patient group can increase the burnout level.

It is questionable, however, whether the kind of patient group is really a risk factor for burnout. Borgesius et al. (1988) found that psychiatric nurses working on long-stay wards did not report negative aspects of working with their patients. They suggested that these nurses did not expect much from their patients and took their patients' limited possibilities into account. Lamb (1979) argued, however, that staff burnout is initiated when mental health professionals who work with long-term patients do not recognize that such patients vary greatly in their potential for rehabilitation. This situation leads to unrealistic expectations and frustrations for staff, which often lead to burnout. In another part of this research project (Gassman et al., 1994) Lamb's proposals were supported. It was found that nurses who rated their group of patients as having a high level of performance were also found to record many potential abilities in their patients. In other words, these nurses had higher expectations of their patients' potential for rehabilitation. As a consequence, if these expectations are not realistic, the nurse may become frustrated and, therefore, the burnout can increase.

Remarkable differences were found between the results at individual and ward level. In the correlations as well as in the regression analysis differences were found at individual and group level. The correlations between burnout and the independent variables were more often significant at individual level; because the number of cases was low at group level, the significant levels were less easily reached. Furthermore, it was found that the explained variances of the regression analyses were much higher at ward level than at individual level. A possible explanation could be that individual differences at group level average out over the wards. For example, a person with an inadequate coping style may have a high level of burnout although she or he experiences the work environment as positive. This finding indicates that the differences between wards with respect to burnout can mainly be attributed to the work environment, while individual differences may be attributed to personal characteristics, for instance, the coping style or support of a partner.

Especially the variable "work experience" reveals interesting differences between individual and group level. At individual level, a significant relationship was only found between work experience and personal accomplishment. At group level, however, there were high negative correlations between all burnout dimensions and work experience. In other words, on wards where the work experience was higher, burnout in nurses was lower. This suggests that it is not the individual work experience of the nurse that is important in determining burnout, but the mean work experience of the nursing staff. Therefore, the more work experience the staff of a certain unit has, the lower the risk for burnout.

Although the analyses did not investigate causal relationships, some indications can be given based on the data on how to handle the risks of burnout. Risk factors of burnout for the individual nurse seem to be related to a high complexity of the work, a lack of feedback and clarity, low social leadership style of the manager and unrealistic expectations about the patient's potential for rehabilitation. In order to reduce burnout among individual nurses, it is important to remember that work environmental factors determine only a small part of the burnout at individual level. As a result, nurse managers who ascertain burnout among nurses may have to focus not only on the work environment but also on the more personal nurse characteristics, such as the coping style and the inequity in the exchange process with patients, in their attempt to reduce burnout.

The work environment, however, determines a major part of the burnout at ward

level. In order to prevent the occurrence of burnout on a ward, it is recommended that nurse managers provide their staff with adequate feedback and support and a certain level of autonomy. Since the work experience of nurses plays an important role in burnout, it is recommended that nurse managers pay close attention to this characteristic when dealing with questions regarding staffing policy.

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CHAPTER

4

**THE TASKS OF PSYCHIATRIC NURSES
IN LONG-STAY CARE SETTINGS ¹**

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This chapter is an elaborated version of the article "The tasks of psychiatric nurses in long-term residential settings in the Netherlands" published in the *International Journal of Nursing Studies*, 32, 398-412, 1995.

SUMMARY

The tasks of nurses working in long-stay psychiatric care settings are described and analyzed in this study. A questionnaire was completed by 361 nurses in five different psychiatric hospitals in the Netherlands. Based on a principal components analysis it was found that the tasks of nurses can be distinguished into four groups: personal care tasks, psycho-social tasks, household tasks and organizational tasks. Furthermore, it was found that nurses especially perform personal care tasks in and around their own ward. Based on the tasks inventory it was concluded that the work of nurses in long-stay psychiatric care settings does not fit in adequately with the changes in psychiatric practice. By means of an externally oriented hospital policy, cooperation with other care agencies, and the realization of a more patient-oriented care model, the nurse is better prepared for the move to the community and more able to work according to the rehabilitation vision.

INTRODUCTION

Long-stay psychiatry, which caters for mentally ill patients hospitalized for a period of two or more years, is in great flux. Due to changing views on the care of psychiatric patients but also due to cost effectiveness there is a shift from institutional care to community-oriented care (Betrus & Hoffman, 1992; Ministerie W.V.C., 1993). As a result, patients are being admitted less frequently to a psychiatric hospital but are being treated at a community mental health institution while patients already admitted in the hospitals are being moved to half-way houses or could move to these houses in the future (Haveman, 1987; Gassman et al., 1994). At the same time, a patient-oriented way of working is being promoted in psychiatry and the emphasis of care is increasingly being placed on helping the patients to function in an independent way.

These developments have changed and will change the work of nurses in long-stay psychiatric care settings. Several authors (e.g. Borgesius et al., 1988; Yurkovich, 1989) stated that the work of the psychiatric nurse is many faceted, dynamic and complex and that it is often unclear for others but also for psychiatric nurses which tasks they actually perform. Because the tasks which nurses perform constitute their work, this chapter aims to describe the present tasks of nurses in long-stay psychiatric care settings and the factors which explain the differences between the task performance of psychiatric nurses.

The tasks of the psychiatric nurse

The tasks of the psychiatric nurse have been investigated by various researchers in different ways. Whitfield and Gibson (1990) distinguished three kinds of skills of the psychiatric nurse in rehabilitation psychiatry: procedural, custodial and therapeutic. Yurkovich (1989) described 5 nursing roles in a therapeutic community: change agent of human behaviour, manipulator of dynamic environment, confronter of discrepancies, role model of expected behaviour, and demonstrator of leadership functions.

Other researchers emphasized the time nurses spent on certain tasks. Hurst and Howard (1988) found that psychiatric nurses spent 50% of their time on direct care tasks and 50% on indirect conditional tasks while Daniels (1987) found that registered nurses (R.N) spent only 14% of their working time on direct care tasks and nursing aids 51%.

Borgesius et al. (1988) investigated which tasks psychiatric nurses performed and how they were executed. Based on interviews and participant observation they concluded that the tasks could be classified into direct care activities such as personal care tasks, therapeutic tasks, custodial tasks, and conditional tasks such as administration of information, coordination and working in a multi disciplinary team.

Dassen (1989) investigated the task perception of 898 psychiatric nurses using a postal survey. Principal components analysis yielded a classification into three task dimensions: patient care which includes guidance in daily personal care and supervision and guidance in housekeeping; patient teaching activities which consist of providing instructions in the psychosocial area; and coordinating and consulting activities such as staff meetings.

Factors determining the tasks of the nurse

The characteristics of the patient group, the aims of the ward and the organization of the hospital provide the boundaries within which the psychiatric nurse has to work (Borgesius et al., 1988). Within this boundary, however, nurses have the chance to mould their tasks. Which tasks nurses actually perform depend on the creativity, ideas and exertion of the individual nurse (Borgesius et al., 1988). First, three factors are discussed which give the boundaries within which psychiatric nurses work. Then, some individual factors are addressed which determine the tasks of the psychiatric nurse.

In long-stay psychiatric settings nurses have to work with patients with different psychiatric diagnoses such as schizophrenia and depression. De Jong (1984) stated that the psychiatric diagnosis of the patient gives little information about the care nurses have to provide. The secondary social and personal consequences of the primary psychiatric disorder of the chronic psychiatric patient are what determines their demands for care. Sheperd (1984) noted that instead of using a psychiatric diagnosis, patients can be better characterized by their requirements of prolonged care dependence. Nursing practice usually deals with this care dependence. However, nurses have to focus their care not only on the present care dependency but also on the potential ability, or growing ability, of the patient. Gassman et al. (1994) found that patients in psychiatric long-stay care settings have a lot of potential ability, especially in household and social skills.

Many psychiatric hospitals distinguish their wards into short-stay wards and long-stay wards. Short-stay wards, which cater for patients for a period of less than two years, consist of intensive care units and short care units. The emphasis of these wards lies on treatment. Long-stay wards on the other hand cater for patients hospitalized for a period of two or more years and place emphasis on housing and rehabilitation. Dassen (1989) found that nurses in short-stay wards performed more psychosocial and patient teaching tasks than nurses on long-stay wards. On long-stay wards more personal care tasks were executed.

Task perceptions of nurses differ among the psychiatric hospitals (Dassen, 1989). Some hospitals are more care-oriented while others are more oriented towards patient teaching (Dassen, 1989). Dassen suggested that differences in policy and/or organizational culture between the hospitals may offer an explanation. Furthermore, the organization of care may determine the tasks of the nurse. Nurses working according to a patient-oriented model (for example primary nursing) are responsible for the care of one or more patients. Probably, they perform more organizational tasks than nurses who work in a more task-oriented way because in a task-oriented model the nurse manager or the unit leader generally performs the organizational tasks. Moreover, working according to the nursing process can probably determine the tasks of the nurse. When nurses work according to the nursing process they perform tasks related to making nursing diagnoses or making a care plan. Finally, the leadership style of the nurse manager may determine the tasks of the nurses. Managers with an instrumental leadership style give clear definitions and explain their role and let the staff know what they are expected to do while managers with a social leadership style pay attention to the comfort, well-being and job satisfaction of their staff. It is possible that the leadership style of the manager is related to the tasks of the

nurse because managers with a certain kind of leadership style delegate their tasks in a different way.

In addition to the afore mentioned factors determining the tasks and the boundaries within which psychiatric nurses work, individual factors may also influence nurses tasks within long-stay psychiatric settings.

Male nurses usually avoid "touching specialities". They are more oriented towards specialities such as administration or psychiatric nursing (Mericle, 1983). Dassen (1989) also encountered this phenomena in psychiatry: female nurses are more oriented to personal care tasks than male nurses. This is also due to the fact that men often occupy higher organizational positions.

Dassen (1989) found that nurses with a lot of work experience gave least time to patient care tasks. Dassen (1989) gave as a possible explanation that beside a formal hierarchy there is also an informal hierarchy. Therefore nurses with more experience have to do fewer tasks concerning the personal care of patients.

Finally, Dassen(1989) reported that nurses who identified themselves with the therapeutic role performed more psycho-social tasks while nurses who identified themselves with the nursing role devoted more time to consultative and coordinative tasks.

Research questions

Most of the studies cited thus far address the tasks of the nurse in general psychiatric care settings. Due to the lack of research in long-stay psychiatric nursing which addresses the tasks of nurses and the factors influencing task performance, this study attempts to answer the following research questions:

- *What are the tasks of long-stay psychiatric nurses?*
- *Which factors determine the tasks of long-stay psychiatric nurses?*

In addition, it will be discussed whether the present tasks of the nurse working in long-stay psychiatric care settings correspond with the developments and newer ways of working with chronic psychiatric patients.

METHOD

Sample

Of the 43 psychiatric hospitals in the Netherlands, five, distributed across the country, participated in the study. Thirty-five wards in these hospitals can be classified as long-stay wards. In these wards 725 persons were working in the direct patient care. Through a random sampling technique, 492 nurses were selected to complete the questionnaire. Only nurses with a contract of employment participated; nursing students and temporary employees were excluded from the study. Of the questionnaires 361 were returned (73.4%). This group consisted of: unit leaders (20), psychiatric nurses (258), practical nurses (59) and nurses aids (23). The personal data of one respondent was not available. Seventy-two percent of the respondents were women. The mean age was 35

years ($sd = 8.3$). The youngest was 20 years old, the oldest 58. The respondents had been working in psychiatry for an average of 13.5 years ($sd = 7.4$) with 4.5 years ($sd = 4.2$) on the ward. They worked on average 31.3 hours a week ($sd = 9.7$).

Instruments

The questionnaire consisted of five different measurement scales; tasks of the nurse, leadership style, nursing care model, nursing process, and level of performance (care dependency). Furthermore information on six characteristics were gathered: gender, age, professional position, work experience, the number of working hours, and the hospital where the nurse worked. Table 1 shows the internal reliability (Cronbach's alpha), the number of items, the theoretical score, the mean score and the standard deviation of the five measurement scales.

Tasks of the nurse

Based on a task inventory by Dassen (1989), Borgesius et al. (1988) and a number of interviews conducted by the researchers, a questionnaire was constructed to describe the concrete tasks of the nurse working in long-stay nursing. If all the different tasks of the nurse had been described exactly, this method would have been very labour intensive. A task such as "washing the patient" consists of many sub-tasks, such as taking the washing glove in your hand, taking the soap, etc. In line with Dassen (1989) the tasks were described more briefly. The questionnaire consisted of 77 tasks such as "guidance of patients with bathing or showering" and "talking with patients about their feelings and emotions". Respondents were asked to respond "never"(0), "yearly" (1), "monthly" (2), "weekly"(3) or "daily"(4) to how often they performed a certain task. The higher the score, the more a task was performed daily. The questionnaire did not measure the amount of time the nurse needed to perform a task. The answer categories were chosen following Dassen's (1989) experience, who found response tendencies confusing when the categories irrelevant, never, seldom, sometimes, often, very often were used. Some of the respondents said that they performed all the tasks often or not often. By making the answer possibilities more concrete it was hoped this problem would be overcome.

Leadership style

The leadership style of the manager was assessed using a translated version (De Sitter, 1970) of the "Leadership Behaviour Questionnaire" (Stogdill, 1963). The questionnaire consisted of 21 items. The respondent had to indicate on a five-point scale which description was appropriate for the manager's behaviour. Leadership style is divided into two independent factors: social and instrumental (House & Baetz, 1979; Boumans, 1990). Social leadership style covers relational aspects of work, such as, the leader pays attention to the comfort, well-being and job satisfaction of her or his staff. Instrumental leadership style has to do with the organization of the work. For example, the leader gives clear definitions and explains her or his role and lets the staff know what they are expected to do.

Nursing care model

The nursing care model of the ward was measured by a questionnaire developed by Boumans (1990). The respondent had to indicate on a five-point scale which model was comparable with the model on his/her ward. A high score on this scale indicated a high level of patient-oriented nursing, a low score a high level of task-oriented nursing. In a patient-oriented care model one nurse performs all nursing activities for a number of patients. In a task-oriented care model certain activities are performed by the nurse for all the patients on the unit. Boumans (1990) reported an internal consistency of .59. No information was given on the validity.

Nursing process

The extent to which the nursing process was used on a ward was measured by 19 Likert-scale items. The items were part of a questionnaire developed by Van der Schaft (1987). The respondents had to indicate to what extent (frequency and intensity) an aspect of the nursing process was in use on their ward. Van der Schaft (1987) found an internal consistency of .88.

Level of performance patient group

The scale "level of performance patient group" measured the amount of care chronic psychiatric patients needed to perform activities. The questionnaire was constructed by the researchers. The questionnaire consisted of a list of 28 activities. For each activity the nurse was asked if the patient needed "no care" (score 3), "some care" (score 2) or "a lot of care" (score 1). A fourth category related to non-occurrence of an activity (score 0). A high score meant that the patient group needed little care from the nurse. A unit leader and a nurse with at least two years of experience in nursing had to complete the questionnaire. They had to score the level of performance of the total patient group of their unit. For each answer category the nurse had to give the number of patients who belonged to the answer category. The scores of all different units of a ward were summed to yield one total ward score. The internal consistency of the scale was high (.95). In a pilot study the questionnaire was correlated with several other scales (Haveman, 1987; Van Wel, 1990) which measure the level of performance of the patient. The correlation scores were between .71 and .90. So the criterion related validity seems to be good.

RESULTS

Table 1 shows the internal reliability (Cronbach's alpha), the number of items, the theoretical score, the empirical score and the standard deviation of all variables. The internal reliability of all scales and subscales was moderate to high with the exception of the scale "nursing care model." Though tasks may be missing, the questionnaire "tasks of the nurse" seems to describe accurately the main tasks of the psychiatric nurse working in long-stay residential settings. Further research should improve the validity and the reliability. The internal consistency of the

Table 1. The internal consistency (Cronbach's alpha), number of items, theoretical score, mean score and the standard deviation of the tasks of the nurse and other work-related factors

	Alpha	Number of items	Theoretical score	Mean score (standard deviation)
Tasks of the nurse				
- personal care tasks	.89	18	min = 0, max = 4	2.95 (.74)
- psycho-social tasks	.89	11	min = 0, max = 4	2.81 (.67)
- household tasks	.86	13	min = 0, max = 4	2.06 (.85)
- organizational tasks	.83	13	min = 0, max = 4	1.47 (.60)
Leadership style				
- social	.92	11	min = 0, max = 4	2.90 (.71)
- instrumental	.80	10	min = 0, max = 4	1.75 (.56)
Nursing care model	.54	4	min = 1, max = 5	3.01 (.89)
Nursing process	.80	19	min = 1, max = 5	3.51 (.55)
Level of performance patient group	.95	28	min = 0, max = 3	1.54 (.49)

questionnaire was good (table 1).

To answer the first research question: "*What are the tasks of long-stay psychiatric nurses?*", the frequency of how often a task was performed was calculated. In the first column of table 2 (page 58) the mean score and the standard deviation of 77 tasks are presented. Observing patients was the task performed most frequently. The psychiatric nurse not only performed patient care tasks, such as, washing and dressing the patient but also talked regularly with patients about their wishes, emotions and daily activities. A task, such as administering medicine was also done frequently. Tasks outside the ward such as "visiting the home of the patient, making a working visit to other wards or institutions" were rarely done.

A principal components analysis was performed to interpret data more accurately. Four factors could be clearly identified. In table 2 the factor loading of all the items are given. Only the loadings above 0.3 are presented. The underlined factor loadings are included in the factor mentioned above. Factor 1 clustered the tasks which have to do with personal care. Factor 2 refers to psycho-social tasks, factor 3 to household tasks and factor 4 to organizational tasks. The eigenvalues are, respectively 16.72, 5.94, 4.05 and 3.02. The total explained variance is 38.6%.

To answer the research question: "*Which factors determine the tasks of long-stay psychiatric nurses?*", in the first instance Pearson correlations were calculated between the independent variables (nurse characteristics and work related factors) and the four task dimensions (table 3, page 60). In table 3 it can be seen that all the four task dimensions were positively correlated with each other. Therefore, when a certain task dimension was performed frequently, so were the other three. Organizational tasks were performed more frequently by men than by

women. The younger the nurse was the more frequently all the task dimensions were performed. Nurses with a higher organizational position performed more household tasks and organizational tasks. Nurses with a lot of work experience performed personal care tasks less frequently. The variable "working hours" of the nurse was positively correlated with all the task dimensions. There were no significant correlations between the leadership style and any of the task dimensions. Working according to a patient-oriented care model was positively correlated with household tasks and organizational tasks, whereas using the nursing process was positively correlated with psychosocial tasks, household tasks and organizational tasks. Finally, table 3 shows that nurses who worked with a patient group with a low level of performance performed personal care tasks more often, while nurses who worked with a patient group with a high level of performance usually performed more psycho-social tasks and household tasks.

Because the variable "hospital" is a nominal variable, an ANOVA was conducted between the five participating psychiatric hospitals. The tasks of the nurse were found to differ between the five hospitals. In some of the hospitals more household tasks and organizational tasks were performed ($F = 6.9$, $p \leq .001$ and $F = 5.8$, $p \leq .001$).

In the second step of the analysis, the overlap between the independent variables was controlled by using a stepwise multiple regression analysis (table 4, page 61). The analyses were performed with the four task dimensions as dependent variables and the nurse characteristics and the work-related factors as independent variables. The amount of working hours of the nurse determined an important part of the frequency with which a task dimension was performed. Because the variable "working hours" was not a primary variable of interest in this study, it was seen as a confounding variable. Therefore, this variable was entered first into the regression equation. The variable "hospital" was transformed by using a so-called dummy variable. These dummy variables indicated in which hospital the respondent was working.

Eighteen percent of the variance of performing personal care tasks was explained by the level of performance of the patient group and the work experience of the nurse (in the order in which the variable was included in the stepwise regression analyses). The working hours of the nurse explained 8% of the variance. Both the level of performance of the patient group and the working hours determined 2% of the frequency of performing psycho-social tasks. Performing household tasks was determined for 18% by the level of performance of the patient group, the age of the nurse and the nursing care model. Three percent was explained by working hours. Working hours explained 30% of the variance of organizational tasks. The other 8% was explained by the function of the nurse and the hospital where the nurse worked.

As table 4 shows, some independent variables did not have a direct relationship with one of the tasks dimensions. When the regression analyses were considered more closely, the correlations of table 3 could be interpreted more adequately. The fact that male nurses performed organizational tasks more frequently had to do with their higher organizational position. Fifty percent of the unit leaders were men while they constituted only about 30% of the total sample. More than 90% of the group of nursing assistants, who performed organizational tasks less frequently, were women.

Table 2. Mean score, standard deviation and factor loading on the tasks of the nurse scale

		mean score (sd)	Factor 1	Factor 2	Factor 3	Factor 4
1.	Ensuring that patients go to work or undertake activities on time.	3.16 (1.43)	<u>.57</u>		.31	
2.	Guiding of patients to arranged activities.	2.75 (1.39)	<u>.64</u>			
3.	Guiding of patients with getting out of the bed.	3.32 (1.31)	<u>.68</u>			
4.	Ensuring that patients go to bed on time.	2.97 (1.45)	<u>.54</u>			
5.	Guiding of patients with preparing breakfast.	3.04 (1.50)	<u>.53</u>			
6.	Guiding of patients with preparing supper.	1.39 (1.74)			<u>.43</u>	
7.	Guiding of patients with setting and clearing the table before and after the meals.	3.01 (1.52)	<u>.55</u>			
8.	Guiding of patients with washing the dishes.	2.58 (1.68)			<u>.42</u>	
9.	Guiding of patients with washing and putting on clothes.	3.25 (1.25)	<u>.77</u>			
10.	Guiding of patients with bathing and showering.	3.40 (1.03)	<u>.75</u>			
11.	Guiding of patients with making beds.	2.75 (1.35)	.42		<u>.48</u>	
12.	Guiding of patients with their financial management.	2.08 (1.64)			<u>.58</u>	
13.	Guiding of patients with using the phone.	2.19 (1.33)	<u>.53</u>			
14.	Guiding of patients with using the toilet.	2.30 (1.72)	<u>.54</u>		-.49	
15.	Accomplishing a nursing anamnesis.	0.86 (0.96)				.35
16.	Determining a nursing diagnoses.	2.05 (0.98)		.36		<u>.47</u>
17.	Planning the nursing care for patients.	2.76 (1.11)	.38	.30		<u>.47</u>
18.	Evaluating the nursing care.	2.70 (1.05)		.36		<u>.43</u>
19.	Transmitting the nursing care.	3.73 (0.74)	.35			
20.	Reporting the daily care.	3.79 (0.61)	<u>.58</u>			
21.	Getting the medication ready for the patients.	3.00 (1.35)	<u>.39</u>			.31
22.	Providing medication per os.	3.72 (0.79)	<u>.56</u>			
23.	Providing medication intramuscularly or in another way.	2.56 (1.02)		.31		
24.	Ensuring that the patients are taking their medication.	3.72 (0.77)	<u>.63</u>			
25.	Carrying out other medical-technical actions (e.g. catheter, infusion)	1.60 (1.49)	.45		-.51	
26.	Guiding of patients with using incontinency material.	2.49 (1.61)	<u>.53</u>		-.44	
27.	Ensuring that patients do not fall and/or injure themselves.	2.85 (1.48)	<u>.58</u>		-.43	
28.	Guiding of patients in the isolation unit.	1.40 (1.35)		.30		
29.	Walking with patients.	2.74 (1.09)	.44	.37	.46	
30.	Playing party games with patients.	2.53 (1.18)	.31	.39	<u>.49</u>	
31.	Going with patients to city/village.	1.98 (1.00)			<u>.55</u>	
32.	Guiding the patients with shopping.	1.99 (1.18)		.32	<u>.57</u>	
33.	Guiding of patients with the preparation of their holiday.	0.88 (0.58)				.30
34.	Going on holiday with patient.:	0.67 (0.60)			.34	
35.	Drinking coffee with patients.	3.68 (0.86)	.39	.46	.31	
36.	Guiding of the patients to the church.	1.03 (1.23)	<u>.47</u>			
37.	Watching television with patients.	3.34 (1.02)	.49	.45		
38.	Organizing and doing recreative activities (e.g. cycling tours, barbecues)	1.48 (1.04)			<u>.43</u>	.35
39.	Talking with patients about their wishes.	3.44 (0.74)		<u>.69</u>		
40.	Explaining the importance of daily activities of patients.	3.18 (0.99)		<u>.68</u>		
41.	Talking with patients about their feelings and emotions.	3.56 (0.69)		<u>.56</u>		
42.	Talking with patients about their activities.	3.36 (0.92)		<u>.61</u>		

Table 2. Tasks of the nurse (continued)

	mean score (sd)	Factor 1	Factor 2	Factor 3	Factor 4
43. Talking with patients about stress and difficulties due to the patient group on the ward.	3.19 (0.98)		<u>.67</u>		
44. Talking with patients about their disease.	2.91 (1.02)		<u>.74</u>		
45. Stimulating patients to talk about personal things.	3.05 (1.02)		<u>.65</u>		
46. Asking to patients what they think about certain daily activities.	2.82 (1.05)		<u>.69</u>		
47. Talking with patients about their limitations on freedom of movement, sanctioned by the nurse.	1.94 (1.26)		<u>.61</u>		
48. Talking with patients about the goals of the nursing plan or treatment plan.	1.82 (1.06)		<u>.61</u>		
49. Talking with patients about the evaluation of the nursing plan and treatment plan.	1.59 (1.13)		<u>.55</u>		
50. Guiding of patients with the maintenance of the collective accommodation.	2.81 (1.51)			<u>.59</u>	
51. Guiding of patients with the maintenance of their rooms.	2.59 (1.47)			<u>.65</u>	
52. Guiding of patients with arranging their rooms.	1.40 (1.23)			<u>.44</u>	
53. Guiding of patients with caring for their clothes (washing, and suchlike).	2.47 (1.51)			<u>.59</u>	
54. Guiding of patients with buying food for the meals.	0.86 (1.36)			<u>.53</u>	
55. Observing the patients.	3.86 (0.47)	<u>.39</u>			
56. Contacting with other health care specialists for the patients in the hospital.	2.81 (1.20)	<u>.39</u>			.38
57. Giving and asking for information about patients from other health care specialists.	2.85 (1.17)	.36			.41
58. Coordinating the care of patients	2.93 (1.34)	.37			<u>.58</u>
59. Having contacts with partner/family/friends of patients.	2.42 (0.94)	<u>.50</u>	.32		<u>.39</u>
60. Visiting the partner/family/friends of patients.	0.41 (0.64)			.38	<u>.35</u>
61. Contacting institutions/health care specialists for patients outside the hospital.	0.76 (0.87)			.36	<u>.38</u>
62. Doing organizational work (duty roster, preparing staff meetings).	1.44 (1.32)				<u>.70</u>
63. Managing the budget of the patient group.	1.02 (1.45)			.32	<u>.34</u>
64. Giving information to patients who are soon to be hospitalized on the ward.	0.69 (0.85)			.36	<u>.40</u>
65. Supervising student nurses (from the nursing school of the hospital).	2.45 (1.66)				<u>.49</u>
66. Supervising trainee nurses (from nursing schools outside the hospital).	2.06 (1.67)	.32			.37
67. Giving training to nursing students.	0.34 (0.80)				<u>.57</u>
68. Assisting with (nursing)research.	0.25 (0.48)				<u>.48</u>
69. Talking with colleagues about each other's performance.	1.52 (1.15)				
70. Participating in or initiating new methods in caring.	1.75 (1.14)				<u>.56</u>
71. Following a training course or attending a symposium.	0.86 (0.77)				<u>.38</u>
72. Reading nursing literature.	1.88 (0.95)				<u>.36</u>
73. Giving general nursing advice to other wards or persons.	0.94 (1.14)				<u>.49</u>
74. Getting information, during a visit, about the way of working in another hospital.	0.30 (0.48)				<u>.51</u>
75. Informing, by a visit, about the way of working in your own hospital.	0.45 (0.72)				<u>.44</u>
76. Doing practice on other wards inside or outside your hospital.	0.07 (0.26)				<u>.35</u>
77. Organising symposia, workshops, conferences.	0.05 (0.23)				<u>.30</u>
EIGENVALUE		16.72	5.94	4.05	3.02
PERCENTAGE EXPLAINED VARIANCE		21.7%	7.7%	5.3%	3.9%
CUMULATIVE EXPLAINED VARIANCE		21.7%	29.4%	34.7%	38.6%

Table 3. Pearson correlations between the task dimensions and between task dimensions, nurse characteristics and work-related factors (n = 361)

	Personal care tasks	Psychosocial tasks	Household tasks	Organizational tasks
Personal care tasks	--	.35***	.33***	.36***
Psycho-social tasks	.35***	--	.54***	.48***
Household tasks	.33***	.54***	--	.47***
Organizational tasks	.36***	.48***	.47***	--
Gender (1 = man, 2 = woman)	-.06	-.09	-.10	-.28***
Age	-.12*	-.08*	-.16**	-.14*
Professional position (1 = low, 4 = high)	-.05	.07	.16**	.34***
Work experience (years)	-.19**	-.06	-.11	-.05
Working hours	.30***	.18***	.25***	.55***
Social leadership style	-.07	.06	.08	-.01
Instrumental leadership style	.03	.04	-.02	.08
Nursing care model (1 = task-oriented, 5 = patient-oriented)	-.09	.08	.22***	.16**
Nursing process	.04	.22***	.21***	.16**
Level of performance patient group	-.41***	.12*	.34***	.05

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$ (two-tailed)

Several relationships could be interpreted more adequately when working hours were controlled for. Because younger nurses worked more hours than older nurses, younger nurses more frequently performed personal care tasks, psychosocial and organizational tasks than older nurses. It is noteworthy that nurses with a higher organizational position more frequently performed household tasks and organizational tasks while they did not seem to perform other tasks less frequently. When the correlations were controlled for the amount of working hours, this group performed personal care tasks less frequently. Nurses working according to a patient-oriented care model performed more organizational tasks because they worked more hours than nurses who worked according to a task-oriented care model. Working according to the nursing process had a positive relationship with performing psycho-social tasks, household tasks and organizational tasks. When the level of the patient group was included in the regression analysis, the correlations between performing psycho-social tasks and household tasks on the one hand and working according to the nursing process on the other were no longer significant. The correlation between organizational tasks and working according to the nursing process was not significant any more when

working hours of the nurse were included in the regression analysis. In some hospitals the nurse performed more household tasks. This had to do with the higher level of performance of the patient group in these hospitals.

Table 4. Stepwise regression analyses of the four task dimensions with all of the independent variables (n = 361) controlled for "working hours"

	Personal care tasks	Psychosocial tasks	Household tasks	Organizational tasks
Age			-.15	
Professional position (1 = low, 4 = high)				.28
Work experience (years)	-.12			
Nursing care model (1 = task-oriented, 5 = patient-oriented)			.13	
Hospital (4 dummies; highest beta =)				-.11
Level of performance patient group	-.41	.14	.34	
R ² after insert working hours	.08	.02	.03	.30
R ²	.26	.04	.21	.38
adj. R ²	.25	.03	.20	.37

DISCUSSION

The tasks of the psychiatric nurse in long-stay care settings, can be categorised into four groups: personal care tasks, psycho-social tasks, household tasks and organizational tasks. The four factors distinguished, correspond in greater part to classifications which were made in the Netherlands by Van Bergen and Hollands (1983) and Dassen (1989).

In order of frequency, personal care tasks were performed most frequently followed by psychosocial tasks, household tasks and finally organizational tasks. Dassen (1989) also found an emphasis on personal care tasks in psychiatric nurses working in long-stay residential settings. Furthermore, it was found that psychiatric nurses carry out most of their tasks in and around their own ward. They rarely perform outreaching tasks such as "visiting the home of the patient" or "having contacts with other health care specialists outside the institution".

Six factors explained the differences in tasks: level of performance of the patient group, the hospital where the nurse worked, the nursing care model, the work experience, the age and the professional position of the nurse. The level of performance of the patient group explained the prominent part of the variance of personal care, psychosocial and household tasks. Nurses who worked with a patient group with a low level of performance performed personal care tasks more

often, while nurses working with a patient group with a high level of performance usually performed more psycho-social tasks and household tasks. In some hospitals the nurses performed more organizational tasks. An explanation supported by the data cannot be given. Probably this has to do with the culture of the hospital (cf. Dassen, 1989). Nurses working according to a patient-oriented care model performed more household tasks than nurses working according to a task-oriented care model. Probably nurses who work according to a patient-oriented model can assess the potential abilities more accurately because the potential abilities of the patient group in the research population lies for the greater part in household and social skills (Gassman et al., 1994). Nurses with more work experience performed fewer personal care tasks. Dassen (1989) gave as a possible explanation that beside a formal hierarchy there is also an informal hierarchy. Therefore, nurses with more experience have to do fewer tasks concerning the personal care of patients. Another explanation is probably that nurses with more work experience have learned to assess the care required more adequately, so they only do those kinds of tasks which are necessary. It is also possible that this group, because of their experience, work more efficiently. Older psychiatric nurses performed household tasks less frequently than younger nurses. Because the age and the work experience correlate highly, the same explanation as given for the work experience is applicable. As expected, the professional position of the nurse explained a greater part of the organizational tasks. It is notable that nurses with a higher professional position work more hours. A substantial amount of variance of the variable "professional position" was already explained by working hours. In contrast to what was expected, no relationship was found to hold between the leadership style of the nurse manager and the tasks of the nurse.

The results show that an important part of the variance was explained by the factors discussed. We should note, however, that only 2% of the variance of performing psycho-social tasks was explained by the level of the patient group. Further research should find appropriate factors. In this regard Dassen (1989) found that nurses who identified themselves with a therapeutic role performed more psycho-social tasks than nurses who identified themselves with a more nursing role.

The question is whether the present tasks of the nurse working in long-stay psychiatric care settings correspond with the developments and newer ways of working with chronic psychiatric patients. A model of rehabilitation is used in many psychiatric hospitals. Farkas and Anthony (1989) described the overall aim of psychiatric rehabilitation as one which helps people with psychiatric disabilities increase their ability to function, so that they are more successful and satisfied in their environment of choice, with the least amount of ongoing professional intervention. When this model is used, psychiatric nurses have to focus on the present level of performance of the patients and on their potential ability. The potential ability of the patient group in the research population lies for the greater part in household and social skills. Furthermore, it was found that when nurses carried out more personal care tasks than were indicated for the patient group, this group also had a lot of potential ability for functioning more independently (Gassman et al., 1994). It seems to be important that psychiatric nurses assess the present level of performance and the potential ability of the patient with the aim of providing only the care which is strictly necessary for the patient, thereby

allowing them to develop more independently. The data suggest an explanation may lie in the nursing care model. Nurses working according to a patient-oriented care model performed more household tasks together with their patients.

One of the consequences of a consistent implementation of the model of rehabilitation is probably that patients must be prepared for living in a hostel home and working in day-activity centres outside the institution. An independent way of living and working is important in these hostels and day-activity centres. When the patient develops the ability to go outside the hospital more frequently, it is evident that nurses will have to support the patient both on the ward and in the community. Together with the patient they will have to develop activities outside the ward or hospital.

It is remarkable that the sub-scales of the questionnaire "tasks of the nurse" are mutually correlated. The relationships occur in all the four professional groups: unit leaders, psychiatric nurses, practical nurses and nurses' aids. When a task dimension is performed more frequently, another task dimension should be performed less frequently. Nurses cannot perform all the task dimensions at the same time. The reason for this might be owing to an unreliable and invalid questionnaire. However, the reliability of all the sub-scales is good. The content validity is strengthened because a principal components analysis showed four factors which are easy to interpret. Additionally, the factors which explain the variance of the tasks are theoretically logical. Besides, the results of both analyses are consistent with the literature. Dassen (1989) argued that in the practice of the nurse the task dimensions have to be seen as a whole. They cannot be isolated. Another explanation is probably the fact that the questionnaire did not measure the amount of time the nurse spent performing a task dimension, so a unit leader who takes 10 minutes to wash the patient scores as high on this item as a nurse who performs that task for several hours.

In summary it can be concluded that nurses working in long-stay psychiatric care settings concentrate highly on personal care tasks in and around the ward. When the patients' potential ability and their eventual move to the community are taken into account the work of the nurse has to change accordingly. Within long-stay settings these changes are not yet visible enough. By having a more externally oriented hospital policy, by cooperating with other health care agencies and using a more patient-oriented care model of rehabilitation, the nurse will help to prepare the patients for the community.

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CHAPTER

5

THE INTERVENTION:

A PRIMARY NURSING CARE DELIVERY SYSTEM

SUMMARY

This chapter presents a full description of the intervention and how it was implemented. The intervention was based on the general principles of primary nursing, on the recommendations of the diagnostic study and on an investigation of the present way of working. The intervention emphasized six elements: tasks and responsibilities of the primary nurse; tasks regarding quality, support and feedback; patient-oriented way of care; the role of other health care providers; meetings; and training. Furthermore, the major problems and solutions encountered during the implementation are addressed.

INTRODUCTION

This chapter presents information about the intervention phase. Based on the results of the diagnostic study described in chapters two and three, and based on a literature survey it was hypothesized that primary nursing could change the work of nurses working in long-stay psychiatric care settings in such a way that the burnout level would decrease. The effects of the intervention on the burnout level are presented in chapter 6 and the effects of the intervention on work-related factors are described in chapter 7. In addition to give a full description of the intervention and the implementation process, major problems encountered will be addressed and further elaborated in this chapter.

The organization of the intervention phase

The organization of the study was based on the assumption that a successful innovation would only be possible if a common basis for the innovation was created in the participating hospitals. To achieve this common basis, all the members, for instance the members of the intervention wards and the general managers of the hospitals, had to be involved in the study. This was in line with the recommendations of Marram et al. (1979) and Grypdonck (1988) who argued that a successful change requires employees to be informed about the way the change is being made and to be involved in the actual decision-making process.

Each hospital participating in the study was guided by a support group. This group ascertained and improved the conditions for successful implementation. Furthermore, they ascertained whether the interventions were implemented in an appropriate way. The support group consisted of the managers of the intervention wards, health care specialists such as psychiatrists, psychologists and personnel officers. A member of the research team acted as an advisor to the support group. The chairman of the support group kept the general management of the hospital regularly informed about the progress of the intervention. Because the nurse managers had an important role in the implementation of the interventions, much attention was given to this group.

In August 1991 the participants received a questionnaire and a brochure in which information was given about the project. In May 1992, the results and the recommendations of the diagnostic study were presented and discussed.

For a period of four months, a project group in each hospital developed the recommendations of the diagnostic study into a concrete intervention plan. The project groups described exactly the interventions and the major consequences of the interventions, such as the expert knowledge which the primary nurses must have to do their job well and some financial repercussions (for instance training costs). The project group consisted of nurses of the intervention groups, nurse managers, a psychiatrist, a social worker and a personnel officer. The members of the project group regularly reported the progress within their own discipline. Consequently, everybody in the organization was involved in the project at an early stage. The research team acted as advisors and liaisons between the different hospitals and gave advice and shared tips commonly encountered by other project teams. The intervention plans were discussed with the support group and were attuned to the hospital management plans. Finally the interven-

tion plans were submitted for approval to the general managers of the hospital. The management had to give permission for the implementation of the intervention.

Before the intervention was introduced on the wards, the members of the intervention group were informed about the intervention plan which was fully described in an intervention book.

The process of implementation was evaluated monthly by the chairman of the support group and a member of the research team with representatives of the intervention wards (the primary nurses or other nurses who were on duty and the head nurse). The evaluations were performed on the basis of a checklist. This was used to detect whether the components of the intervention as described in the intervention plan were implemented correctly and to detect the main problems concerning the implementation of the intervention. The checklist was filled in by the primary nurses of the intervention wards. It is described later in this chapter.

Table 1. Time table study

The management of the participating hospitals gave permission to perform the project	December 1990
Support groups installed in hospitals	January 1991
Pretest 1 questionnaire sent	August 1991
Results and recommendations of the pretest presented in the hospitals	May 1992
Project groups elaborated the recommendations into an intervention plan	September 1992 - December 1992
The management gave permission to implement the interventions	February 1993
Pretest 2 questionnaire sent (only burnout)	
Implementation of the intervention was started	February 1993
Interventions were evaluated monthly on intervention wards	February 1993 - April 1994
Posttest questionnaire sent	May 1994
The results of the intervention presented	December 1994

THE INTERVENTION

The intervention was based on the general principles of primary nursing, on the recommendations of the diagnostic study and on an investigation of the present way of working. Primary nursing has been developed and investigated by several researchers (Marram, 1973, 1976; Marram et al., 1979; Manthey, 1973, 1980; Ciske, 1974; Felton, 1975). In both the Netherlands and Belgium primary nursing has emerged as an important nursing care delivery system. It has been described

and studied by several researchers (Van Eindhoven, 1979; Boekhoit, 1981; Koene et al., 1982; Molleman, 1990; Heeremans et al., 1994). Although details may differ, the principles of primary nursing can be described as follows: each patient is assigned to a nurse; the nurse takes 24-hour responsibility for the individual patient's care; care is focused on the patient's needs rather than the needs of the ward and one nurse is responsible for planning the individual patient's care and the quality of that care.

In the diagnostic study, burnout was correlated with several work-related factors. Although the analyses did not investigate causal relations, the data suggested some points worthy of attention for dealing with the risks of burnout among psychiatric nurses and hospitalization effects among psychiatric patients. Some of the recommendations were: increase the autonomy, the feedback and the clarity of the work environment of the psychiatric nurse, to increase the social leadership style of the nurse manager, and discuss patient's wishes and potential for rehabilitation with the patient him/herself.

Our research group found several elements of primary nursing in the hospitals which participated. However, the elements of primary nursing were often partially implemented and usually not in a consistent way. A major problem was that the roles of the primary nurses were unclear. There was, for example, no clear task description of the primary nurse. Tasks to be performed and responsibilities were not described. In addition, the role of the nurse managers in a primary nursing care delivery system was not described clearly: there were uncertainties which tasks they had to perform to support the primary nurse. Furthermore, other health care specialists such as psychiatrists and social workers were not involved in the primary nursing care model; as a consequence they did not know what their role was in primary nursing. Another problem was that the staff meetings were not in line with primary nursing. For instance, all the members of the nursing staff participated in the multi-disciplinary meeting in which the total careplan of the patient was discussed. Additionally, the objectives of the meetings were unclear. Overall, the organization was not well developed for primary nursing and there was no integration of primary nursing in the organization.

The intervention emphasized six elements: tasks and responsibilities of the primary nurse; tasks regarding quality, support and feedback; patient-oriented way of care; the role of other health care providers; meetings; and training sessions. These elements will now be described in more detail.

Tasks and responsibilities of the primary nurse

Both psychiatric (registered nurses) and practical nurses were assigned to patients as primary nurses based on the complexity of care needed, the personal preference of the patient and the working hours of the nurse. The level of complexity was determined on the basis of the suggestions of the National Advisory Council for Public Health (N.R.V., 1988). Two aspects are important: the patient's needs and problems, and the environment in which the care is performed. The complexity of the patient is determined, for example, by the rapidity of changes in the situation of the patient and the predictability of these changes. An example of the complexity of the environment is the presence of other health care specialists and the level of intensity of the collaboration with these specialists.

The psychiatric nurses had all the responsibilities of primary nurses while practical nurses had to perform some tasks such as ascertaining the nursing diagnosis under supervision of the nurse manager or the quality care coordinator (see next section). The tasks of the primary nurse are described in table 2. The primary nurses were the coordinators of care. They coordinated the actions of colleagues and other health care specialists. Furthermore, the primary nurse performed all the normal tasks of a nurse.

Table 2. Major tasks of the primary nurse

Nurse tasks

- Performs all the tasks of a nurse

Primary nurse tasks

- Orients and introduces herself to the patients who are assigned to her
 - Makes a nursing care plan in consultation with the patient who is assigned to her
 - Evaluates regularly the nursing care plan with the patient and changes it if necessary
 - Is contact person for the patient's family and relations
 - Supports the patient if the patient changes wards
 - Participates in the meeting where the treatment of the patient is discussed with different health care specialists
 - Coordinates the actions of other health care specialists concerning the patients who are assigned to her
 - Coordinates the actions of colleagues concerning the patient who is assigned to her
 - Informs colleagues about the patient who is assigned to her
 - Discusses the nursing care plans with colleagues
 - Delegates tasks to colleagues concerning the patients who are assigned to her
-

Tasks regarding quality, support and feedback

Because adequate feedback and support is very important in primary nursing (Zander, 1985; Mutcher, 1986), special attention was paid to this aspect. Feedback and support were given by the manager, colleagues and other health care specialists. Colleagues and other health care specialists gave their support in meetings (see meeting section). The tasks of the nurse manager regarding quality control and support for the primary nurse are described in table 3. These tasks are generally a part of the tasks of the nurse manager. However, most of the managers had to support many primary nurses. Therefore, in this project these tasks could also form a component of the tasks of a special function called "quality care coordinator". A quality care coordinator is a nurse without a hierarchical responsibility for the primary nurse. The nurse manager or a quality care coordinator supported nurses in their role of primary nurses and gave advice about the skills they needed, ensured communication between the primary nurses and other primary nurses or other health care providers, etc. The nurse manager or a quality care coordinator can be seen as a coach who has a reflective attitude towards the primary nurse.

Table 3. Quality care and support tasks**Nurse or head nurse tasks**

- The quality care coordinator performs all the tasks of a head nurse or the tasks of a (primary) nurse

Quality care and support tasks

- Coaches the work of primary nurses
- Coaches and directs the work of primary nurses who are not registered
- Develops quality standards concerning the nursing care
- Assigns patients to primary nurses
- Ensures good communication and team work between primary nurses
- Organizes meetings where quality standards are discussed and formulated
- Organizes meetings where primary nurses strengthen their teamwork
- Organizes if necessary training for primary nurses

Patient-oriented way of care

The care in our model of primary nursing was for the greater part based on the rehabilitation method. In this model the starting-point for care is the wishes of the patient. Farkas and Anthony (1989) described the overall aim of psychiatric rehabilitation as one which helps people with psychiatric disabilities increase their ability to function, so that they are more successful and satisfied in their environment of choice, with the least amount of ongoing professional intervention. Table 4 shows the steps the primary nurse had to perform.

Table 4. Rehabilitation steps

- Determine the patients' wishes for the future
- Determine the skills the patient must have to attain her/his wishes
- Determine which skills the patient already has and which potential abilities the patient has concerning the skills required to attain her/his wishes
- Discuss which skills the patient wants to develop to achieve her/his wishes
- Devise, together with the patient, objectives to develop potential abilities and objectives to realise her/his wishes
- Determine if the hospital's programmes can support the patient in developing her/his wishes and potential abilities and develop new programmes if necessary

The role of other health care providers

Other health care specialists such as psychiatrists, psychologists and social workers were informed about their role in a primary nursing care delivery system. For instance, it had to be clear that the primary nurse was the coordinator of care and the contact person concerning nursing care. Moreover, the tasks of other health care specialists were specifically described. Responsibilities were discussed when the tasks had an overlap with the tasks of the primary nurse. For instance, a home visit may be a social worker's task or a primary nurse's task. It depends on the aim of the action. In the treatment plan meeting it was decided who would perform a certain task.

Meetings

The existing meetings on a ward were changed or streamlined into a coherent system of meetings (table 5). Objectives were defined for each meeting along with the participants. Furthermore, the duration and frequency of each meeting were established. This depended on the kind of patient group on the ward.

Table 5. Meetings

Name meeting	Aim	Participants
Nursing care plan meeting	ascertain the nursing care plan exchange of information feedback and support for primary nurse	nursing profession staff
Treatment plan meeting	ascertain total treatment plan	patient (family), primary nurse, psychiatrist, relevant other health care specialists (primary nurse and psychiatrist decide if necessary)
Colleague support meeting	support and feedback concerning the attitude of the primary nurse	nursing profession staff
Nurse policy meeting	information exchange about hospi- tal and ward policy	nursing profession staff

Training sessions

In preparation for the implementation of the intervention, all participants were informed about its most important elements and about the way the system differed from the ongoing way of working. Moreover, a meeting was held in which the primary nurses could discuss their new role. For instance, the consequences of having more autonomy and responsibilities could be discussed along with the strengths and weaknesses of the primary nurses. Based on the findings of this meeting, a two-day training session was given during the first months of implementation. The training session emphasized dealing with a greater amount of autonomy, coordination and planning skills and negotiation techniques. In some hospitals, the nurses asked for a training session about dealing with the nursing process. In addition, in these hospitals a short training session on this issue was held.

EVALUATION OF THE INTERVENTION

A checklist was used to detect whether the components of the intervention as described in the intervention plan were implemented correctly and to detect the main problems concerning the implementation of the intervention (table 6). The checklist was completed by the nurses of the intervention wards and was evaluated monthly by some members of the support group along with the nurses of the intervention wards.

Table 6. Questions in the checklist

Motivation and general problems

What are your experiences concerning the project on your ward? (what works?; what are the sticking points?; what is missing?)

What are the general problems/difficulties concerning the project?

conclusions:

actions:

Tasks of the primary nurse

Are all the tasks performed as described in the intervention plan? (what works?; what are the sticking points?; what is missing?)

Are the steps of the nursing process clearly described in the nursing care plan? (what works?; what are the sticking points?; what is missing?)

conclusions:

actions:

Tasks of the nurse manager or the quality care coordinator

Are all the tasks performed as described in the intervention plan? (what works?; what are the bottle necks?; what is missing?)

Is the nurse manager or the quality care coordinator well prepared to perform these tasks? (what works?; what are the sticking points?; what is missing?)

conclusions:

actions:

Cooperation with other health care providers

How do the communication and the agreements (about the tasks which have an overlap) function between the primary nurse and the other health care providers? (what works?; what are the sticking points?; what is missing?)

conclusions:

actions:

Patient-oriented way of care

Are all the tasks performed as described in the intervention plan? (what works?; what are the sticking points?; what is missing?)

conclusions:

actions:

Meetings

How do the meetings function? (are the objectives achieved? what works?; what are the sticking points?; what is missing?)

conclusions:

The checklist consisted of 34 open-ended questions divided into 6 main issues: motivation and general difficulties, the role and tasks of the primary nurse, the role and tasks of the nurse manager or the quality care coordinator, cooperation with other health care providers, patient-oriented way of care and the meetings. For each issue, conclusions were drawn, on the basis of which actions were formulated which were assessed at the next evaluation. This section presents

some of the problems encountered and discusses the way these problems were solved.

Motivation and general problems

Motivation on the intervention wards was generally high. However, at the beginning of the intervention nursing staff complained about the large amount of time they had to spend on the project: as a consequence their motivation decreased. Without wishing to diminish the problem of time scarcity, it was found that time was not always the obstacle. For instance, several primary nurses argued that they did not make a nursing care plan because of a lack of time. This problem was discussed with the nurse managers in the monthly evaluations. They argued, however, that the problem was usually not a lack of time but the difficulties for nurses to take the time. For example, several nurses found it difficult to say to a colleague: "I'll be absent for an hour to write a nursing care plan. Can you take care of the patients in the meantime?" Another explanation for this time phenomenon was perhaps that nurses experienced difficulties in writing a nursing care plan. As a consequence, they put off starting to make a care plan.

Furthermore, several changes, independent of the intervention, occurred during the intervention period, such as turnover of psychiatrists, managers and nurses and absenteeism due to illness. These changes increased the workload of the nursing staff on the intervention wards. The support group paid attention to these wards and tried to solve these problems. However, solutions in the short term were not always possible.

Tasks of the primary nurse

The description of the tasks and the responsibilities gave the primary nurses more clarity about their work. Generally they liked their new role with more autonomy and responsibilities. Primary nurses experienced their work as more challenging and were more able to use their capabilities. However, several primary nurses were not autonomous enough especially in the beginning of the intervention period. The opposite, primary nurses being too autonomous, seldom occurred. Primary nurses were not used to having responsibilities and taking action without consulting their colleagues or manager. Decisions were often taken by the nurse manager or by the whole nursing staff. Moreover, some primary nurses tended to shelter behind their nurse manager if they had to account for their responsibilities. The nurse manager or the quality care coordinator had to support and stimulate the primary nurses to work more autonomously.

It was not possible to determine the percentage of working hours the primary nurse must have to fulfil her primary nurse role in a correct way. Based on the evaluation it became apparent that this percentage was dependent on the intensity of patient care and on the flexibility of the primary nurse.

Tasks of the nurse manager or the quality care coordinator

The nurse managers of the intervention wards had an important role in the project. They had to pay attention to the implementation of the intervention in their wards. Therefore, much attention was given to this group by the members

of the support group. The role of most of the nurse managers changed as a result of the intervention. The emphasis of their work tended to be more supporting primary nurses or supporting the quality care coordinator than supporting patients. Generally, the managers had no problems with this changed role.

A quality care coordinator is a nurse without a hierarchical responsibility to the primary nurse. Some quality care coordinators had had a hierarchical position in the past (for instance manager assistant). In the beginning some of them had difficulty with their new role. Their attitudes were sometimes too instructive instead of being supportive.

Both psychiatric (registered nurses) and practical nurses were assigned to patients as primary nurses. Both these groups of primary nurses were able to fulfil their primary nursing roles; however, practical nurses generally needed more support from the nurse manager or the quality care coordinator especially in making a nursing care plan, determining the wishes of patients and preparing the treatment care meeting.

Cooperation with other health care providers

Some psychiatrists had to get used to the new way of working. Normally, they gathered information on their patients from the nurse manager; in this case they had to gather information from the primary nurse. They were afraid that it would take too much time to contact with several primary nurses. However, later they experienced the advantages of the new way of working. The communication lines were much shorter and primary nurses were able to give more detailed information about their patients than the nurse manager. Because the primary nurse instead of the psychiatrists was the coordinator of care, the psychiatrist had more time for developing the treatment policy of patients. It should be mentioned, however, that some psychiatrists used the primary nurses to arrange activities or to perform tasks which were not a part of the job of the primary nurse. Therefore, task allocations between nurse and psychiatrists needed to be clarified.

Patient-oriented way of care

It was difficult for several primary nurses to perform the rehabilitation steps, such as determining their patients' wishes about the future. They experienced difficulty in communicating with their patients because patients often had difficulty expressing themselves. Furthermore, the potential abilities of the patients had to be determined. Some patients were afraid that if they developed their potential, they would have to move to another ward. Most of the psychiatric hospitals in the study distinguished their long-stay patient groups on the basis of the amount of care dependency. So, as a consequence, if patients developed their potential, it is possible that they would indeed have to move to another ward. Chronic psychiatric patients often stayed for many years on the same ward. They usually feel at home, comfortable and safe on their ward. Therefore, a transfer to another ward is often a great burden for the patient. A solution is probably to distinguish patient groups not on the basis of care dependency, but on the basis of other criteria, such as the personality and interests of the patient.

Meetings

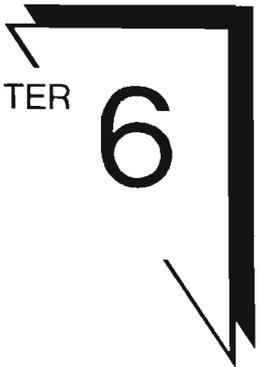
In the past all the members of the nursing staff participated in the multi-disciplinary treatment plan meeting. In the new way of working the primary nurse was essentially the only member of the nursing staff who participated. Therefore, much time was saved. However, in some hospitals the nurse managers still participated in this meeting, because they were afraid to have a lack of control. Furthermore, most of the meetings were planned in advance. Therefore, some nurse care plan meetings in which the primary nurses could have feedback and support about their plans, were planned at the wrong moment. A solution was for the primary nurses to plan these meeting themselves.

This chapter described the intervention and some major problems addressed during its implementation. It was found that the intervention was implemented on the intervention wards. Results regarding the effects of the intervention are presented in the next two chapters.

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CHAPTER

6

**THE EFFECTS OF PRIMARY NURSING
ON WORK-RELATED FACTORS ¹**

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SUMMARY

This study investigates the effects of a primary nursing care delivery system on some work-related factors of nurses in long-stay psychiatric care settings. In a quasi-experimental research design a cohort of 176 nurses was followed for 2.5 years. Results showed that as a result of primary nursing the primary nurses found more autonomy in their work and experienced it to be less complex. Furthermore, primary nurses performed personal care tasks less frequently and worked more according to a patient-oriented care model. Several additional analyses were performed owing to the two main problems encountered in this study, namely a high dropout due to job turnover among nurses and the imitation of the intervention by the control group.

INTRODUCTION

In the last two decades primary nursing has been regarded as an adequate nursing care delivery system. The benefits of primary nursing have been assessed in terms of advancing the profession, promoting the nursing process, increasing the quality of care, reducing hospital costs, and increasing the quality of nursing staff and patient satisfaction (Gardner, 1991).

Besides these outcomes, primary nursing has been investigated in relation to several work-related factors. An increase in the autonomy of primary nurses seems to be a major factor which changes as a result of primary nursing. Several researchers, using different study designs, reported higher autonomy in primary nursing as compared with team and task-oriented nursing (Molleman, 1990; McGuire & Botting, 1990; Thomas, 1992; Alock et al., 1993). Involvement and innovation are also factors which probably change due to primary nursing. Involvement refers to the extent to which workers are concerned about and committed to their jobs while innovation refers to the extent to which variety, change, and new approaches are emphasized in the work environment. Thomas (1992) compared nine wards, three using primary nursing, three team nursing and three functional nursing. Results showed that primary nurses perceived greater involvement and innovation in their work than nurses who worked in a more functionally oriented care delivery model. In a time-series design study Alock et al. (1993) also reported a significant change in involvement and innovation after the implementation of primary nursing.

Despite the afore mentioned positive changes in work environment, disadvantages of primary nursing were also reported. McPhail et al. (1990) found, in a randomized crossover trial, less clarity in a primary nursing care delivery system as compared with team nursing. Clarity refers to how explicitly rules and policies are communicated and the extent to which workers know what to expect in their daily routines. Alock et al. (1993) found, in a time-series design study, that primary nurses experienced the role of the supervisor as unclear after the introduction of primary nursing. Furthermore, several researchers noted a lack of support in primary nursing. Akinlami and Blake (1990) suggested in a narrative report that there may be a lack of support for the primary nurse because in their experience the staff support meetings mostly took the form of informational monologues from the Chief of Psychiatry. A lack of supervisor support for the primary nurse was also found in a case study by Emans and Den Boer (1988) and in the study of Alock et al. (1993). Thomas (1992), however, reported greater supervisor support in primary nursing compared with team and functional nursing. Another inconsistent finding concerns the time spent on direct or indirect care activities. Metcalfe (1983) found, in a quasi-experimental study, that primary nurses spent more time on communication because they spent more time on assessment and rounds on the ward, while Giovanetti (1980) found more direct care activities in team nursing as compared with primary nursing. However, Alock et al. (1993) did not detect a change in the amount of time that primary nurses spent on direct or indirect care activities.

From the afore mentioned studies it can be seen that several researchers have reported changes in the work environment due to primary nursing. It has to be mentioned, however, that the quasi-experimental study of Heeremans et al.

(1994) did not find changes in autonomy, feedback, complexity, responsibility or task requirements.

Due to the inconsistencies reported in the literature regarding the relationship between primary nursing and the work environment and due to a lack of quasi-experimental research in this area, this study was set up to investigate the effects of primary nursing on the work environment. Since the study was part of a larger study about the relationship between burnout and the work environment of nurses in long-stay psychiatric care settings, the study was placed in this setting. The research question was formulated as follows:

- *What are the effects of the introduction of a primary nursing care delivery system on work-related factors?*

METHOD

Design and procedure

In a quasi-experimental research design a cohort of 176 nurses was followed for 2.5 years. Two measures were performed: a pretest and a posttest. At each time point of the study, participants received a questionnaire and a return envelope, non-responders received a reminder. The intervention was implemented on 11 wards. A total of 21 control wards were used.

Sample

Five of the forty-three psychiatric hospitals in the Netherlands, distributed across the country, participated in the study. Thirty-five wards in these hospitals can be classified as long-stay wards. At the time of the study, 725 people were working in direct patient care on these wards. Random sampling was used to select 492 nurses to complete the questionnaires. Nursing students and temporary employees were excluded from the study. On the pretest, 361 questionnaires were returned (73.4%). However, 7 could not be correctly identified and had to be dropped and in the meantime 28 nurses changed units in long-stay psychiatry and had to be dropped. Data of 326 respondents were as a result available on the pretest. A total of 176 nurses completed the questionnaires twice (64 in the intervention group and 112 in the control group). The respondents on the pretest consisted of unit leaders (17), psychiatric nurses (221), practical nurses (65) and nurses' aids (22). The personal data of one respondent was not available. Seventy-two percent of the respondents were women. The mean age was 34.8 years ($sd=8.2$, range 20-58). The respondents had been working in nursing for an average of 13.4 years ($sd=7.4$) with 4.5 years ($sd=4.2$) on the ward.

Instruments

The questionnaire consisted of five different dimensions concerning the work environment, namely the tasks of the nurse, job characteristics, leadership style, nursing care model and the nursing process. Table 1 shows the internal reliability

(Cronbach's alpha), the number of items, the theoretical score, the mean score and the standard deviation of each subscale. In addition, information on four nurse characteristics was gathered: gender, age, work experience and professional position.

Tasks of the nurse

Based on a task inventory by Dassen (1989), Borgesius et al. (1988) and a number of interviews with nurses working in long-stay settings conducted by the researchers, a questionnaire was constructed to describe the concrete tasks of nurses working in long-stay nursing (Melchior et al., 1995). The questionnaire consisted of 77 tasks, such as "guidance of patients with bathing or showering" and "talking with patients about their feelings and emotions". The nurses were asked to respond "never", "yearly", "monthly", "weekly" and "daily" to how often they performed a certain task. The higher the score, the more a task was performed daily. So the questionnaire did not measure the amount of time the nurse performed a task, but the frequency with which the task was performed. Principal components analysis yielded a classification into four task dimensions: personal care tasks, psycho-social tasks, household tasks and organizational tasks (Melchior et al., 1995).

Job characteristics

The job characteristics were operationalized using a questionnaire developed by Boumans (1990). The questionnaire was based largely on the Job Diagnostic Survey (Hackman & Oldham, 1975, 1976). Some items were adapted by the researchers to nursing practice in psychiatric long-stay care settings. The scale which was used in this study consisted of 48 items using a seven-point semantic differential scoring system. Three factors could be distinguished by a principal components analysis: complexity, feedback/clarity and autonomy. Together they explained 30.6% of the variance. The subscale "complexity" measured the complexity or the difficulty of the work; for instance, the time and training needed to do the job well. This scale also consisted of items that related to work pressure. The autonomy subscale assessed the opportunities the nurse had to make her own decisions; for instance, which intervention had to be used to solve a problem. The feedback/clarity scale measured the clarity of the work and the degree to which the nurse was supported by colleagues, nurse managers and other health care specialists.

Leadership style

The leadership style of the manager was assessed using a translated version (De Sitter, 1970) of the "Leadership Behaviour Questionnaire" (Stogdill, 1963). The questionnaire consisted of 21 items. The respondent had to indicate on a five-point scale which description was appropriate for the manager's behaviour. Leadership style is divided into two independent factors: social and instrumental (House & Baetz, 1979; Boumans, 1990). Social leadership style involves relational aspects of work relations, such as whether the manager pays attention to the comfort, well being and job satisfaction of his staff. Instrumental leadership

style has to do with the organization of the work. For example, the manager gives clear definitions and explains her or his role and lets the staff know what they are expected to do. Boumans (1990) found an internal consistency of .90 for social leadership style and .82 for instrumental leadership style.

Nursing care model

The nursing care model of the ward was measured using a questionnaire developed by Boumans (1990). The respondent had to indicate on a five-point scale which model was comparable with the model on his/her ward. A high score on this scale stands for a high level of patient-oriented nursing, a low score for a high level of task-oriented nursing. In a patient-oriented care model one nurse performs all nursing activities for a number of patients (comparable to primary nursing). In a task-oriented care model certain activities are performed by the nurse for all the patients on the unit. Boumans (1990) reported an internal consistency of .59. No information was given about the validity.

Nursing process

The extent to which the nursing process was used on a ward was measured by 19 Likert-scale items. The items were part of a questionnaire developed by Van der Schaft (1987). The respondents had to indicate to what extent (frequency and intensity) an aspect of the nursing process was in use on their ward. Van der Schaft (1987) found an internal consistency of .88.

The intervention

The intervention involved the introduction of an innovation in nursing care delivery with a special focus on primary nursing. The intervention was based on the general principles of primary nursing. Both psychiatric and practical nurses were assigned to patients as primary nurses based on the complexity of care needed.

Because adequate feedback and support are very important in primary nursing, special attention was given to these aspects. Nurse managers or quality care coordinators provided the primary nurse with the support needed. In addition, they gave advice on skills needed and promoted the communication between the primary nurses and other health care providers. Furthermore, a special support meeting between primary nurses was planned. All the primary nurses followed a training programme with special focus on communication skills and how to deal with higher demands for autonomy.

The interventions were fully described in an intervention book. The process of implementing the intervention was guided by a support group and was evaluated monthly.

Analyses

First the assumptions for using MANCOVA and ANCOVA were examined. Then, the intention was to conduct a MANCOVA with the job characteristics (complexity, feedback/clarity and autonomy) and the tasks of the nurse (personal care

tasks, psycho-social tasks, household tasks and organizational tasks). Because there were major differences in the pretest scores between the intervention group and the control group, the pretest scores were used as covariates. Then ANCOVAs were performed to determine the changes within the single variables in the intervention group and the control group.

RESULTS

The internal consistency of all scales and subscales was moderate to high with the exception of the nursing care model (table 1).

Table 1. Work environment variables, internal consistency (Cronbach's alpha), number of items and theoretical score

		Number items	Theoretical score	Alpha
Tasks of the nurse	- personal care tasks	18	min = 0, max = 4	.89
	- psycho-social tasks	11	min = 0, max = 4	.89
	- household tasks	13	min = 0, max = 4	.86
	- organizational tasks	13	min = 0, max = 4	.83
Job characteristics	- complexity	12	min = 1, max = 7	.82
	- autonomy	9	min = 1, max = 7	.73
	- feedback/clarity	13	min = 1, max = 7	.84
Leadership style	- social	11	min = 0, max = 4	.92
	- instrumental	10	min = 0, max = 4	.79
Nursing care model		4	min = 1, max = 5	.54
Nursing process		19	min = 1, max = 5	.80

The assumptions of normality, homogeneity of variance and linearity were met. However, heterogeneity was found for complexity ($F=6.6, p \leq .05$), autonomy ($F=8.8, p \leq .01$) and personal care tasks ($F=8.98, p \leq .01$). Heterogeneity of regression implies that there is an interaction between the independent variable and the covariates. An unequal slope of the regression line implies heterogeneity. As a consequence, MANCOVA could not be performed with the job characteristics. A MANCOVA with the tasks of the nurse was performed without the variable personal care tasks. The overall effect of the tasks of the nurse was not statistically significant ($F=1.22, p = .31$).

When the assumption of homogeneity is not met, Tabachnick and Fidell (1989) suggest three alternatives for (M)ANCOVA which are: the difference between the pretest score and a posttest score is computed for each subject and used as a dependent variable in ANCOVA; pretest and posttest scores are converted into two levels of within-subjects (for example subjects are matched into blocks - equated- on the basis of scores on what would have been the covariates) and

blocking in which subjects are measured on potential covariate(s) and then grouped according to their scores. Blocking was found to be the most appropriate method for this study. The subjects were grouped according to their pretest scores (the covariates) into three group levels: low, medium and high. Percentiles of 33% and 67% were used to distinguish the three group levels. Table 2 shows three groups with three different levels of complexity on their pretest score. There is only a significant difference between the intervention group and the control group in the group with a high degree of complexity on the pretest. The complexity decreased in the intervention group, while it increased in the control group.

Table 2. Levels of complexity between intervention group and control group on pretest and posttest

Pretest level of complexity	Mean score pretest intervention group (n = 64)	Mean score pretest control group (n = 112)	Mean score posttest intervention group	Mean score posttest control group	F-values posttest scores
low	3.18 (n = 27)	3.16 (n = 31)	3.61	3.64	.09
medium	4.13 (n = 21)	4.18 (n = 38)	3.98	4.24	1.62
high	5.16 (n = 16)	5.13 (n = 43)	4.15	4.74	12.82***

*** $p \leq .001$

Table 3 shows three groups with three different levels of autonomy on their pretest score. The table shows that the autonomy increased significantly in the intervention group with a low level of autonomy on the pretest.

Table 3. Levels of autonomy between intervention group and control group on pretest and posttest

Pretest level of autonomy	Mean score pretest intervention group (n = 60)	Mean score pretest control group (n = 109)	Mean score posttest intervention group	Mean score posttest control group	F-values posttest scores
low	3.41 (n = 18)	3.21 (n = 36)	4.17	3.48	11.03**
medium	4.19 (n = 12)	4.18 (n = 46)	4.37	4.13	1.80
high	5.21 (n = 30)	5.12 (n = 27)	4.86	4.83	.01

** $p \leq .01$

In table 4 it can be seen that the frequency of performing personal care tasks decreased in the intervention group with a low level of personal care tasks on the pretest and decreased in the control group with a low level of personal care tasks in the pretest.

Table 5 shows the mean score, standard deviation and level of significance of the other work environment variables investigated in this study. Because the overall effect of the tasks of the nurse was not statistically significant, further analyses were not performed with these variables. Moreover, the posttest scores are given adjusted for the pretest score. The table shows that only the nursing

care model increased significantly in the intervention group.

Table 4. Levels of personal care tasks of intervention group and control group on pretest and posttest

Pretest level of personal care tasks	Mean score pretest intervention group (n = 57)	Mean score pretest control group (n = 103)	Mean score posttest intervention group	Mean score posttest control group	F-values posttest scores
low	2.26 (n = 20)	1.98 (n = 33)	2.16	2.21	4.69*
medium	3.16 (n = 14)	3.07 (n = 40)	3.16	3.02	.90
high	3.64 (n = 23)	3.63 (n = 30)	3.65	3.48	3.16

* $p \leq .05$

Table 5. Work-related variables. Mean score, standard deviation and level of significance for pretest, posttest and posttest adjusted for pretest

		Intervention group (n = 63)	Control group (n = 110)	t/F
Feedback/clarity	pretest	4.53 (.70)	4.38 (.91)	t = 1.23
	posttest	4.46 (.71)	4.49 (.77)	t = -.32
	posttest adjusted	4.41	4.52	F = 1.48
Social leadership style	pretest	2.97 (.64)	2.98 (.68)	t = -.09
	posttest	3.07 (.56)	3.13 (.47)	t = -.73
	posttest adjusted	3.06	3.12	F = .59
Instrumental leadership style	pretest	1.78 (.59)	1.75 (.50)	t = .27
	posttest	1.63 (.54)	1.69 (.56)	t = -.71
	posttest adjusted	1.61	1.69	F = .93
Nursing process	pretest	3.54 (.55)	3.50 (.57)	t = .50
	posttest	3.77 (.51)	3.72 (.48)	t = .66
	posttest adjusted	3.77	3.73	F = .28
Nursing care model	pretest	3.40 (.85)	2.90 (.96)	t = 3.47***
	posttest	3.53 (.79)	3.10 (.84)	t = 3.21**
	posttest adjusted	3.44	3.16	F = 4.74*

posttest adjusted = posttest adjusted for pretest

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

ADDITIONAL RESULTS

Two main problems were encountered in this study, namely a high drop-out rate mainly due to job turnover among nurses and imitation of the intervention by the control group. This necessitated the use of additional analyses which are described in this section.

During the 2.5-year period 77 nurses left the cohort, they stopped working in long-stay psychiatry. Eighteen nurses (17.1%) left the intervention group while 59 (26.7) left the control group. This difference was nearly significant ($\chi^2 = 3.60$, $p = .06$). It was found that the leavers in the intervention group experienced more social leadership style in their manager than leavers in the control group ($F = 4.34$, $p \leq .05$) which could lead to an under-estimation of an effect. To deal with this problem, a regression analysis was performed to calculate an equation with the posttest as dependent variable and the pretest as independent variable. With this equation ($y = .254x + 2.54$) it was possible to predict the missing posttest scores. These predicted posttest scores were used in the ANCOVA. However, ANCOVA revealed no differences between social leadership style in the intervention and in the control group ($F = .93$, $p = .34$). Other work environment variables showed no differences between the leavers of the intervention group and the control group.

Another serious problem in this study was that during the course of the study it became apparent that some parts of the intervention were introduced by some control wards through information exchange by nurses and through nursing students who switched wards. This led to the assumption that the control group could be seen as an intervention group, except that it did not receive support from the support group. A one-group pretest-posttest design would have been the design of choice in this case. Table 6 shows the work environment scores of the total group ($n = 178$) on the pretest and posttest. As can be seen from table 6, six variables changed during the project: nurses performed fewer psycho-social and organizational tasks, the social leadership style increased, while the instrumental leadership style decreased and nurses worked more according to the nursing process and in a more patient-oriented way.

Table 6. Work environment variables total group. Mean score, standard deviation and level of significance for pretest and posttest

	Pretest mean (sd)	Posttest mean (sd)	t-value
Complexity	4.16 (.89)	4.12 (.75)	.76
Autonomy	4.23 (.86)	4.25 (.78)	-.56
Feedback/clarity	4.43 (.84)	4.48 (.74)	-.83
Personal care tasks	2.94 (.75)	2.93 (.80)	.18
Psycho-social tasks	2.85 (.68)	2.76 (.67)	2.10*
Household tasks	2.09 (.85)	2.04 (.84)	1.07
Organizational tasks	1.47 (.58)	1.38 (.63)	2.54*
Social leadership style	2.96 (.67)	3.11 (.51)	-2.65**
Instrumental leadership style	1.75 (.53)	1.65 (.54)	2.22*
Nursing process	3.51 (.56)	3.74 (.49)	-4.99***
Nursing care model	3.09 (.95)	3.25 (.86)	-2.01*

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

DISCUSSION

The effects of a primary nursing care delivery system on the work environment among nurses working in long-stay psychiatric care settings were investigated in this study. Results showed that as a result of primary nursing the primary nurses found more autonomy in their work and experienced it to be less complex. Furthermore, primary nurses performed personal care tasks less frequently and worked more according to a patient-oriented care model. However, the internal consistency of the scale 'nursing care model' was found to be quite low (.53). As a consequence, the analyses with the nursing care model scale have to be interpreted with caution.

The introduction has already drawn attention to research reporting on an increase in autonomy and a more patient-oriented way of working due to primary nursing. The results of this study are in line with these findings. The finding that primary nurses felt a decrease in the complexity of their work as a result of primary nursing seems to be contradictory mainly because the nurses in this study received much more responsibility. As a consequence of more responsibilities it seems logical that the complexity level will increase. However, the higher level of autonomy in primary nursing enabled nurses to control and to manage their work and as a result it is possible that they experienced the work as less complex. An additional analysis confirmed this finding. It was found that autonomy had a negative correlation with complexity ($r = -.32$, $p \leq .001$).

Although much attention was given to an adequate feedback and support system, primary nurses did not find their feedback and support to have increased.

Probably this was due to the fact that the pretest score was already quite high. As a consequence, improvements in feedback and support may have had no effects due to what is known as "ceiling or bottom effects". Furthermore no changes were found between the intervention group and the control group concerning the leadership style of their manager and concerning the level at which the nursing process was used.

Before some general conclusion can be drawn, some problems encountered in this study are described and further elaborated.

Imitation of treatments

A problem encountered in this study was the suspicion that the control group copied some elements of the intervention. Several reasons can be given for this phenomenon. Firstly, the interventions became known in the control wards through information leakage, for instance through nursing students who switched wards. Secondly, in the Netherlands many hospitals and wards are to some extent working on the introduction of a nursing care delivery system with a focus on primary nursing. Hence, independently of the project, elements could have been introduced on long-stay psychiatric wards.

Cook and Campbell (1979) noted that in the case of imitation of treatments it is important first to analyze the data gained from a randomized experiment. They suggested detecting the reactions in the control group at an early date. In this study it was not possible to detect exactly the amount of intervention the control group had had. As a solution it was decided to perform an analysis in which the control group was used as an intervention group. Using control wards outside the hospital where the intervention took place would have probably prevented the problem of imitation; however, it would then be more difficult to compare the intervention group with the control group.

By using a one-group, pretest-posttest design it was found that the nurses performed fewer psycho-social and organizational tasks. The social leadership style of the managers increased, while the instrumental leadership style decreased. The nurses worked more according to the nursing process and worked more in a patient-oriented way. It is possible that these changes were a result of the introduction of primary nursing. It should be mentioned, however, that some findings are difficult to interpret while others are in line with the expectations. The fact that, probably as a result of the introduction of primary nursing, the total group of nurses performed psycho-social and organizational tasks less often is rather strange. In this study it was found that due to primary nursing, nurses tended to work in a more patient-oriented way. This would lead one to suspect that nurses would have performed psycho-social tasks more often. Furthermore, because the nursing process was found to have increased, it was also expected that the organizational tasks would have increased.

That the social leadership style increased, while the instrumental leadership style decreased was in line with our expectations. Because adequate feedback and support is very important in primary nursing, special attention was given to this aspect in this study. The nurse manager or a quality care coordinator performed tasks regarding quality control and support of the primary nurse. They supported the nurse in the role of primary nurse and gave advice about the skills she or he needed, ensured communication among primary nurses and between

primary nurses and other health care providers, etc. Compared with the staff nurses, the nurse managers of the intervention and control wards had formal contacts with each other more often. As a consequence, it is possible that certain elements of their management style were discussed and probably imitated.

An increase in the use of the nursing process is in line with other findings. Gardner (1991) noted that one of the benefits of primary nursing is a promotion of the nursing process.

Finally, by using a one-group pretest-posttest design it was found that the nurses worked more according to a patient-oriented care model. This result was also found in this study when a quasi-experimental design was used. Because a patient-oriented care model corresponds to primary nursing, this finding indicates that primary nursing or parts of it were introduced on the intervention and control wards.

Randomization

A limitation in this study was the lack of randomisation. The management of the hospitals generally chose the wards which were able and willing to innovate. These wards were in general those where the nurses experienced the work as less complex. Moreover, these nurses experienced more autonomy and already worked more according to a patient-oriented care system. So there was a biased selection of intervention wards. An advantage of this selection was that the intervention wards were motivated to introduce and to work according to the principles of primary nursing. On the other hand, a disadvantage was that due to this selection non-equivalent groups were formed; the intervention group and the control group had different scores on their pretest scores. To handle this problem the intervention group and the control group were made comparable "artificially" by the use of covariates, in this study the pretest scores. It is noteworthy that Tabachnick and Fidell (1989) stated that the mean score of the dependent variable after adjustment for covariates may not correspond to any situation in the real world. Adjusted means are the means that would have occurred if all subjects had the same scores on the covariates. In this study the adjusted pretest scores did not show unrealistic levels. However, this adjustment has to be taken into account when the results are interpreted. For example, the increase in the variable nursing care model is higher in the control group than the intervention group (.20 versus .13). Nevertheless, when the posttest was adjusted for the pretest, a significant difference was found between the intervention group and the control group, a higher adjusted posttest score in the intervention group was found! An explanation for this finding can be given. The intervention group already had high scores on the pretest, so this group had less possibilities of increasing due to a "ceiling" effect. By adjusting for the pretest, this "ceiling" effect was reduced.

In addition, in other variables "ceiling or bottom" effects occurred, which may be due to the selection effect. Results showed that autonomy was higher in the intervention group than the control group while the complexity was lower in the intervention group than the control group.

Attrition

A serious problem in this study was attrition, the loss of participants at different points of the study. Attrition is problematic because those who drop out of the study may differ in important respects from the individuals who continue to participate; hence the generalizability of the findings may be impaired (Polit & Hungler, 1987). The study started with a cohort of 326 nurses. A total of only 178 nurses, however, filled in the questionnaires on the pretest and the posttest. An important explanation for this was the job turnover (77). Additional analyses showed minor differences between the leavers of the intervention group and the control group. Only lower levels of social leadership style were found in the leavers in the control group as compared to the leavers in the intervention group. However, additional results showed no differences between the intervention and the control group. Thus, the missing values did not influence the results.

Duration of the intervention

A problem in this study was that the actual duration of the intervention, one year, was probably too short to find an effect. A period of two years would be more likely to yield more significant and clearer outcomes.

In short, the following conclusions can be drawn. Two effects were investigated in this study: an effect due to a deliberate introduction of primary nursing and an effect due to more autonomous changes during the intervention period. The former effect can be seen as an intervention effect. This effect was investigated by a quasi-experimental design. Although some limitations are discussed, the results of the analyses within this model are quite strong as compared to analyses with a one-group pretest-posttest design. As a result of the intervention effect autonomy increased, complexity and personal care tasks decreased and the nurses worked more according to a patient-oriented care model.

The latter effect can be probably seen as a project effect: the control wards which participated in the study took advantage of the intervention on the intervention wards. The project effect was investigated by a one-group pretest-posttest design. Because no control group was used in this analysis, the results were not as strong as in a quasi-experimental design. Therefore, the results from the one-group pretest-posttest design must be interpreted with great caution. There are, however, indications that due to the intervention the nurse manager used a social leadership style and nurses utilized the nursing process more.

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**THE EFFECTIVENESS OF PRIMARY NURSING ON
BURNOUT AMONG PSYCHIATRIC NURSES ¹**

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SUMMARY

This study was set up to test the effectiveness of primary nursing on the burnout level of psychiatric nurses. It was expected that, under certain conditions, such as a primary nursing care delivery with an adequate feedback system, the burnout level would decrease. In a quasi-experimental research design a cohort of 161 psychiatric nurses was followed for 2.5 years. Results showed that although the burnout level did not change as a result of primary nursing, psychiatric nurses and the practical nurses seemed able to work according to the principles of primary nursing. Another important result was that there were strong indications that job turnover decreased as a result of the introduction of primary nursing. Several additional analyses were performed owing to the two main problems encountered in this study, namely a high dropout due to job turnover among nurses and the imitation of the intervention by the control group.

INTRODUCTION

Psychiatric nurses working in long-stay care settings spend a great deal of time in intense interaction with severely disabled patients such as schizophrenics. Stress can arise from this intense involvement and chronic stress can lead to burnout (Caton et al., 1988). Moreover psychiatric nurses working in long-stay settings generally receive less support from other health care providers than nurses in acute psychiatric settings (Dassen, 1989). Several researchers found high burnout levels among nurses who had little support (Pines & Maslach, 1978; Savicky & Cooley, 1987; Penn et al., 1988).

Burnout may lead to increased absenteeism, a reduction of productivity (Golembiewski et al., 1986; Schaufeli, 1990) and to a decrease in the quality of care (Maslach, 1982; Schaufeli, 1990). Administrators of hospitals and government officials are, as a result, seriously concerned about burnout in long-stay settings. In view of the above, reducing burnout among nurses working in long-stay psychiatric care settings through improving their work environment became the major goal of a research project conducted in the Netherlands between 1990 and 1994 (Gassman et al., 1994). Based on a diagnostic study (chapter 2 and 3) and on a literature review conducted by the researchers it was concluded that primary nursing improved the work conditions and, as a result, could be instrumental in decreasing burnout among nurses.

In addition, primary nursing seems to be especially appropriate for the psychiatric nurse since psychiatric nurses play a major role in supporting their patients, not only in the hospital but also in the community (Melchior et al., 1995). As a result of primary nursing, the transfer to the community is easier for the patient, because the patient is already familiar with pursuing planned treatment goals with one nurse who act as therapist, counsellor, confidant(e) and friend (Green, 1983).

This chapter describes a study which investigated the effects of primary nursing on the burnout of psychiatric nurses.

Burnout

Burnout can be seen as a syndrome of emotional exhaustion, depersonalization and reduced personal accomplishment that occurs among individuals who do people work of some kind (Maslach & Jackson, 1982). Research findings have linked several work-related factors of (psychiatric) nurses to burnout. High burnout levels have been associated with: a lack of autonomy (Reed, 1988; McGrath et al., 1989; Sullivan, 1989), a lack of clarity about work objectives and responsibilities (Stout & Posner, 1984; Savicki & Cooley, 1987; Sullivan 1989) and inadequate support (Pines & Maslach, 1978; Savicky & Cooley, 1987; Penn et al., 1988). Several researchers reported a positive relation between workload and burnout (Weinberg et al., 1983; Shinn et al. 1984; Constable & Russell, 1986; Savicky & Cooley, 1987; Sullivan, 1989).

A diagnostic study conducted by the authors investigated the association between burnout and the work environment of psychiatric nurses working in long-stay psychiatric settings (chapter 3). The results showed that high levels of burnout were related to high levels of complexity, little support and feedback, lack of clarity and autonomy, low levels of social leadership style among man-

agers and a high level of performance of patients.

No (quasi)experimental studies were found in the literature which aimed at reducing burnout among (psychiatric) nurses. However, a number of longitudinal studies on burnout in nursing were found. Firth and Britton (1989) investigated to what extent burnout variables were significant predictors of sickness and job turnover. A cohort of 200 qualified nursing staff working in long-stay settings, such as medical wards, psychiatric wards and mental handicap wards was followed over a two-year period. Emotional exhaustion was found to predict the frequency of absences of more than seven days while feelings of depersonalization were found to correlate with job turnover. Kirk et al. (1993) followed a cohort of 82 case managers for a period of 18 months. The case managers provided intensive services to severely mentally ill clients. Results showed that case managers over time experienced increasing amounts of job stress and emotional exhaustion. Furthermore, they depersonalized their clients more over time while their sense of personal accomplishment remained stable. Fong (1993) examined the causal relationships between role overload, social support and burnout in 84 nurse educators over a period of two years. She reported that emotional exhaustion correlated positively with a demanding job, time pressure and feelings of job inadequacy. All three burnout variables correlated negatively with social support from one's supervisors and peers.

Primary nursing

In the past two decades, primary nursing has emerged as a major nursing care delivery system. Primary nursing has been developed and investigated by several researchers (Marram, 1973, 1976; Marram et al., 1979; Manthey, 1973, 1980; Ciske, 1974; Felton, 1975). Although details may differ, the principles of primary nursing can be described as follows: each patient is assigned to a nurse; the nurse takes 24-hour responsibility for the individual patient's care; care is focused on the patient's needs rather than the needs of the ward and one nurse is responsible for planning the individual patient's care and the quality of that care. The benefits of primary nursing have been assessed in terms of advancing the profession, promoting the nursing process, increasing of the quality of care, reducing hospital costs, and increasing the quality of nursing staffs and patients' satisfaction (Gardner, 1991).

Several researchers have investigated or described primary nursing in psychiatric settings. Green (1983) described his personal experiences regarding the introduction of primary nursing on a psychiatric ward. He argued that the benefits of primary nursing are that both patient and relatives know who should be giving them information and that the confidence in staff, which is a major factor in psychiatry, will be improved. Furthermore Green argued that the transfer to the community is easier for the patient.

Primary nursing on two psychiatric hospital wards was investigated by Blenkarn et al. (1988). A one-group pretest-posttest design was used. After three years, statistically significant improvements were found in professional status, administration, nurse-physician relationship and autonomy.

Armitage et al. (1991) implemented primary nursing in two long-term psychiatric rehabilitation/continuing wards. A time series design was used. The results showed that the implementation of primary nursing led to nurses being more

accountable for care, residents were seen to be more self-sufficient and independent, and wards had an improved environment for care and rehabilitation.

The relationship between burnout and primary nursing

No research was found which investigated explicitly the effects of primary nursing on the burnout level of (psychiatric) nurses. However, some indications to that effect were found. High burnout levels were found in nurses who had a lack of autonomy (Reed, 1988; McGrath et al., 1989; Sullivan, 1989) and lower work satisfaction (Schaufeli, 1990). As a result of primary nursing the autonomy of nurses increased (Boekholt, 1981; Bekkers et al., 1990; McGuire & Botting, 1990) as well their job satisfaction of nurses (Marram et al., 1979; Metcalfe, 1983; Blenkarn et al., 1988). These associations indicate that the burnout level may be decreased as a result of primary nursing. On the other hand, there are also some indications which reveal the opposite. McClure (1984) argued that one of the costs of primary nursing may well be stress and burnout due to of too much emotional involvement with the patient and family. Akinlami and Blake (1990) noted that the extra responsibility, although in many ways more satisfying, does result in increased levels of stress. They also suggested that there may be a lack of support for the primary nurse because in their experience the staff support meetings mostly took the form of informational monologues from the Chief of Psychiatry, thus leading to an increase in burnout.

Due to the absence of research investigating the relationship of primary nursing and burnout and due to the inconsistencies reported in the literature regarding this relationship, this study was set up to test the effectiveness of primary nursing on the burnout level of psychiatric nurses. It was expected that, under certain conditions, such as a primary nursing care delivery with an adequate feedback system, the burnout level would decrease. As a result, the following hypothesis was formulated:

- *Burnout among psychiatric nurses will decrease as a result of the introduction of primary nursing.*

METHOD

Design and procedure

In a quasi-experimental research design a cohort of 161 psychiatric nurses was followed for 2.5 years. Three measures were performed: two pretests and one posttest (scheme 1). At each time point of the study, participants received a questionnaire and a return envelope, non-responders received a reminder. Between pretests 1 and 2 (1.5 years) no intervention was introduced. Pretest 1 was used as a diagnostic study. The period between both pretests was used to examine burnout when no concrete intervention was introduced. During the last four months prior to pretest 2 the intervention was prepared in cooperation with the intervention wards (n=11). A total of 21 control wards were used. After

pretest 2 the intervention was implemented on the intervention wards. After one year the posttest was conducted.

Scheme 1. Research design

	pretest 1	pretest 2		posttest
Intervention group (n=60)	M	M	Intervention	M
Control group (n=101)	M	M		M

M: Measurement of burnout

Sample

Five of the forty-three psychiatric hospitals in the Netherlands, distributed across the country, participated in the study. Thirty-five wards in these hospitals can be classified as long-stay wards. At the time of the study, 725 persons were working in direct patient care on these wards. Random sampling was used to select 492 nurses to complete the questionnaires. Nursing students and temporary employees were excluded from the study. On pretest 1, of the 492 questionnaires distributed, 361 were returned (73.4%). However, 7 could not be correctly identified and in the meantime 28 nurses had changed units in long-stay psychiatry and had to be dropped. Data of 326 respondents were available on pretest 1. A total of 161 nurses completed the questionnaires three times (49.4%). The mean response of all the time points was 83% in the intervention group and 68% in the control group. The respondents on pretest 1 consisted of unit leaders (17), psychiatric nurses (221), practical nurses (65) and nurses' aids (22). The personal data of one respondent was not available. Seventy-two percent of the respondents were women. The mean age was 34.8 years (sd = 8.2, range 20-58). The respondents had been working in nursing for an average of 13.4 years (sd = 7.4) with 4.5 years (sd = 4.2) on the ward.

Instruments

The three burnout dimensions emotional exhaustion, depersonalization and personal accomplishment were measured using a translated version by Schaufeli (1990) of the Maslach Burnout Inventory (Maslach and Jackson, 1981). The questionnaire consisted of 22 items on a seven-point Likert-scale. Schaufeli and Van Dierendonck (1993) found the Dutch MBI valid and reliable in the assessment of burnout in human service professionals. In addition, information was gathered on four nurse characteristics: gender, age, work experience in nursing and professional position.

The intervention

The intervention involved the introduction of an innovation in nursing care delivery with a special focus on primary nursing. The intervention was based on the general principles of primary nursing. Both psychiatric and practical nurses were assigned to patients as primary nurses based on the complexity of care

needed.

Because adequate feedback and support is very important in primary nursing, special attention was given to this aspect. Nurse managers or quality care coordinators provided the primary nurse with the required support. In addition they gave advice on skills needed and promoted communication between the primary nurses and other health care providers. A special support meeting between primary nurses and other health care specialists was planned. Furthermore, the primary nurses followed a training programme which emphasized communication skills.

The interventions were fully described in an intervention book. The process of implementing the intervention was supported by a group and was evaluated monthly.

Analyses

MANCOVA was performed to test the hypothesis. Because there were major differences in the pretest scores between the intervention group and the control group, the second pretest scores were used as covariates. ANCOVAs were then performed to determine the changes within the three burnout variables in the intervention group and the control group. Finally, subgroup analyses were performed with psychiatric and practical nurses.

RESULTS

Table 1 shows the mean burnout score and the standard deviation at three time points. Significant differences were found between the intervention group and the control group. Table 1 reveals a significantly lower emotional exhaustion in the intervention group on pretest 2, less depersonalization on pretests 1 and 2 and more personal accomplishment on pretest 1. Thus, there were already differences in burnout on the pretests. MANCOVA with pretest 2 as covariate revealed no difference between the intervention group and the control group. Table 1 shows a decrease in personal accomplishment in the intervention group and an increase in the control group. Nevertheless, ANCOVA with pretest 2 as covariate showed no differences between the intervention group and the control group. Subgroup analyses with psychiatric and practical nurses showed no differences in burnout level.

Table 1. Emotional exhaustion, depersonalization, personal accomplishment at pretests 1 and 2 and posttest in intervention and control group

	Intervention group (n = 60)	Control group (n = 101)	t-value
Emotional exhaustion	Mean (sd)	Mean (sd)	
Pretest 1	15.03 (7.88)	17.00 (7.25)	-1.58
Pretest 2	14.47 (7.16)	16.96 (6.63)	-2.20*
Posttest	14.45 (6.47)	15.97 (6.66)	-1.43
Depersonalization			
Pretest 1	5.36 (3.63)	6.76 (4.13)	-2.25*
Pretest 2	5.46 (3.22)	6.72 (3.90)	-2.22*
Posttest	5.61 (2.96)	6.75 (3.68)	-2.17*
Personal accomplishment			
Pretest 1	33.55 (3.83)	31.50 (4.09)	3.16**
Pretest 2	33.10 (3.99)	32.04 (3.94)	1.63
Posttest	32.28 (3.55)	32.21 (3.98)	.11

* $p \leq .05$, ** $p \leq .01$

ADDITIONAL RESULTS

Two main problems were encountered in this study, namely, a high drop-out rate mainly due to job turnover among nurses and imitation of the intervention by the control group. This necessitated the use of additional analyses which are described in this section.

During the 2.5-year period, 77 nurses left the cohort due to job turnover. Large differences in job turnover between the intervention and control group might have influenced the results on the burnout measures. Therefore, the differences were examined between the nurses who continued working in long-stay psychiatry (the stayers) and the nurses who left long-stay psychiatry (the leavers). Forty-six nurses left long-stay psychiatry after pretest 1 while 31 nurses left after pretest 2 (table 2). Of this latter group, 16 burnout measures were available. Nurses who left psychiatry after pretest 1 did not show a higher burnout score than stayers. Nurses who left psychiatry after pretest 2 scored higher on emotional exhaustion and depersonalization than the stayers.

Job turnover was compared between the intervention and the control group. No burnout differences were found between the leavers in the intervention group and in the control group (table 3). The control group had 9.6% more job turnover than the intervention group. This difference was almost significant ($\chi^2 = 3.60$, $p = .06$).

Considering the differences in job turnover between the two groups, it is likely that job turnover influenced the results of the posttest scores. Less burnout was found in the group of nurses who completed the questionnaires three times (161) than in the total sample (326) because respondents with high levels of burnout

Table 2. Burnout variables and job turnover after pretest 1 or 2

	Burnout pretest 1 stayers (n = 280)		Burnout pretest 1 leavers (n = 46)		t-value
	mean	(sd)	mean	(sd)	
Emotional exhaustion	16.89	(7.67)	18.54	(7.56)	-1.85
Depersonalization	6.49	(4.15)	7.13	(3.39)	-.98
Personal accomplishment	32.14	(4.06)	30.89	(4.22)	3.67
	Burnout pretest 2 stayers (n = 197)		Burnout pretest 2 leavers (n = 16)		
Emotional exhaustion	16.14	(6.85)	22.31	(7.73)	-11.79***
Depersonalization	6.41	(3.69)	9.19	(4.92)	-7.91**
Personal accomplishment	32.36	(4.07)	30.81	(3.51)	2.17

** $p \leq .01$, *** $p \leq .001$ **Table 3.** Job turnover in the intervention group and the control group after pretests 1 and 2 and total job turnover

	Intervention group (n = 105)	Control group (n = 221)	χ^2
Leavers after pretest 1	11 (10.5%)	35 (15.8%)	1.69
Leavers after pretest 2	7 (7.4%)	24 (12.9%)	1.89
Total leavers	18 (17.1%)	59 (26.7%)	3.60

left long-stay psychiatry. As a consequence, improvements in the work environment may have no effects due to what is commonly known as "ceiling or bottom effects". Owing to this, a group with high burnout ($n = 57$) on pretest 2 was investigated. Based on the percentiles scores (33% or 67%) of the three burnout dimensions on pretest 2 three groups were constructed: a group with a high level of emotional exhaustion (≥ 19), a group with a high level of depersonalization (≥ 8) and a group with a low level of personal accomplishment (≤ 31). MANCOVA revealed no differences between the intervention group and the control group. In addition, ANCOVA, with pretest 2 as covariate, showed no differences between the intervention group and the control group.

During the study it became apparent that some parts of the intervention were introduced by some control wards through information leakage and through nursing students who switched wards. This led to the assumption that the control group could be seen as an intervention group except for the fact that it did not receive support from the support group. A time-series design would have been the design of choice in this case. Table 4 shows the burnout scores of the total group ($n = 161$) and the group with a high level of burnout (also based on percentiles scores, 33% or 67%).

No differences between the three time points were found in the total group ($n = 161$). However, the scores between the three time points in the group with a high level of burnout showed several differences. In table 4 it can be seen that all

Table 4. Emotional exhaustion, depersonalization, personal accomplishment at pretests 1 and 2 and posttest in the total group (n = 161) and the total group with a high level of burnout on pretest 2 (n = 64). Only the t-values of the total group with a high level of burnout are given

	Total group (n = 161)	Total group with a high level of burnout on pretest 2	t-values total group with a high level of burnout (n = 64)		
	mean (sd)	mean (sd)	1-2	1-3	2-3
Emotional exhaustion					
Pretest 1	16.26 (7.53)	20.67 (6.02)	-2.83**	2.00*	4.57***
Pretest 2	16.03 (6.92)	23.03 (4.24)			
Posttest	15.40 (6.61)	19.25 (5.89)			
Depersonalization					
Pretest 1	6.23 (4.00)	8.72 (4.17)	-2.89**	-.07	3.96***
Pretest 2	6.24 (3.70)	10.28 (1.99)			
Posttest	6.32 (3.46)	8.75 (3.30)			
Personal accomplish- ment					
Pretest 1	32.25 (4.11)	30.13 (3.82)	2.96**	.04	-.3.49***
Pretest 2	32.43 (3.98)	28.75 (1.96)			
Posttest	32.23 (3.82)	30.11 (2.89)			

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

three burnout variables (personal accomplishment has to be inverted) increased after pretest 1 and decreased after pretest 2. This may indicate that due to the project the burnout decreased after pretest 2. However, a group with a high level of burnout on pretest 1 was also investigated. It was found that the burnout decreased significantly between pretest 1 and pretest 2.

DISCUSSION

The hypothesis that burnout among psychiatric nurses will decrease as a result of the introduction of primary nursing is not supported by the results. Several explanations for the results are given and discussed. In addition, some problems encountered in performing a longitudinal study of burnout are evaluated. Discussion of the results and the problems encountered are presented under four headings related to the intervention, the duration of the intervention, attrition, the imitation of treatment and the analyses.

The intervention

The most obvious explanation for the results is that primary nursing has no effect on the burnout level of psychiatric nurses. It was expected that, under certain conditions, such as adequate feedback, the burnout level would decrease. In a separate study the authors investigated the amount of adequate feedback experienced by the respondents (Gassman et al., 1994). The feedback and support was found not to have increased as a consequence of the introduction of the model. Furthermore, nurses in the intervention group reported an increase in their workload as a result of their greater amount of responsibility. Consequently, their burnout score may have increased.

Another explanation could be the power of the intervention. In other words, was the intervention strong enough to find an effect? Two questions are important. Was primary nursing really introduced in this study and was primary nursing or several elements of primary nursing not already in existence on the intervention wards before the study started?

In this study the introduction of the intervention was evaluated monthly on the intervention wards by the use of a checklist. The use of a reliable and valid questionnaire to ascertain whether primary nursing was introduced would probably have been a more appropriate method to verify whether primary nursing was introduced correctly. Thomas and Bond (1990) and Mead (1993) have provided an operational definition of primary nursing. However, the reliability and the validity of these questionnaires have not so far been systematically investigated in psychiatry. Nevertheless, it became clear in the evaluations that primary nursing was for the greater part introduced in the intervention wards.

The second question concerns whether primary nursing was not already in existence on the intervention wards before the study started. Our research group found several elements of primary nursing in psychiatric long-stay settings. However, the elements of primary nursing were often partially implemented and usually not in a consistent way. A major problem was that the roles of the primary nurses were unclear. There was not, for example, a clear task description of the primary nurse. Tasks to be performed and responsibilities were not described. Moreover, the role of the nurse managers in a primary nursing care delivery system was not described clearly; it was not obvious which tasks they had to perform to support the primary nurse. Furthermore, other health care specialists, such as psychiatrists and social workers were not involved in the primary nursing care model; as a consequence they did not know what their role in primary nursing was. Another problem was that the staff meetings were not in line with primary nursing. For instance, all the members of the nursing staff participated in the multi-disciplinary meeting in which the total careplan of the patient was discussed. Overall, the organization was not well prepared for primary nursing. There was no integration of primary nursing within the organization. Therefore, the understanding of primary nursing was poor.

The duration of the intervention

The actual duration of the intervention was one year which was probably too short to find an effect. A period of two years is a more likely period to find an effect. Schaufeli (1990) suggested that the level of burnout is relatively constant

over a period of one year. He argued that it is more a chronic than an acute problem.

Attrition

A serious problem in this study was attrition, the loss of participants at different points of the study. Attrition is problematic because those who drop out of the study may differ in important respects from the individuals who continue to participate; hence the generalizability of the findings may be impaired (Polit & Hungler, 1987). The study started with a cohort of 326 nurses. A total of only 161 nurses, however, filled in the questionnaires three times. An important explanation for this was job turnover (77). Lower levels of burnout were found in the stayers than in the leavers. This result is in line with the findings of Firth and Britton (1989) who found more depersonalization in nurses who left their ward. The effect of job turnover can lead to a "healthy worker effect" in the cohort. Normally this effect represents the fact the health status of workers is a factor in acquiring a job. Nevertheless, in this case this phenomenon also seems to be relevant. A disadvantage of this healthy worker effect was the ceiling or bottom effect through which no effect on the burnout score could be found. As a solution, analyses were performed with a group with high levels of burnout on the pretest score.

It is worth mentioning that the response was about 15% higher in the intervention group than in the control wards, probably due to the nurses in the intervention group being more committed to the study. These differences in responses may probably be the reason that, in the group of 161 nurses who completed a questionnaire three times, burnout on both pretests in the intervention group was lower than in the control group. Additionally, no differences were found in burnout on pretest 1 between the intervention and the control group when the data of all 326 respondents were used.

Imitation of treatments

There are grounds for suspecting that the control group copied some elements of the intervention. Several reasons can be given for this phenomenon. First, the interventions became known in the control wards through leakage of information and through nursing students who switched wards. Thus, there was a project effect; the control wards of the hospitals which participated in the study took advantage of the intervention.

Secondly, in the Netherlands many hospitals and wards are to some extent working on the introduction of a nursing care delivery system with the focus on primary nursing. Hence, independently of the project, elements have been introduced on long-stay psychiatric wards.

Cook and Campbell (1979) noted that in the case of imitation of treatments it is nonetheless important first to analyze the data gained from a randomized experiment. They suggested a detection of the reactions in the control group at an early date. In this study it was not possible to detect exactly the amount of intervention the control group had had. As a solution it was decided to perform a time-series analysis in which the control group was used as an intervention group. Adjusting for the healthy worker effect, a decrease in burnout was found.

However, this was probably due to regression to the mean, because in an additional analysis it was found that nurses with a high level of burnout on the first pretest showed significantly lower burnout levels on the second pretest.

Using control wards outside of the hospital where the intervention took place could have probably prevented this problem. However, a comparison of the intervention group and the control group is then usually more difficult.

Conclusions

Use of quasi-experimental design data did not show that primary nursing had an influence on the burnout level among psychiatric nurses. When imitation of treatments and the ceiling or bottom effects were taken into account in the group with a high level of burnout on the second pretest, a decrease in burnout on the posttest was found. This may indicate that the project decreased the burnout. However, additional results showed that this may be due to regression to the mean. Furthermore, it is important to mention that the use of percentile scores to determine high levels of burnout is rather arbitrary.

Irrespective of the issues discussed in this study, one may conclude that the burnout level of psychiatric and practical nurses does not increase as a result of primary nursing. This may indicate that these nurses have the strength and the potential to work according to the primary nursing principles. Another important finding is that strong indications were found that job turnover decreased as a result of the introduction of primary nursing. This finding is in line with other research (Osinski & Powals, 1978; Fairbanks, 1980; Bekkers et al., 1990; Gardner, 1991).

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CHAPTER

8

GENERAL DISCUSSION

The aim of this study was to determine which work-related factors reduce or prevent burnout among nurses working in long-stay psychiatric care settings. The study involved a diagnostic and an intervention phase. The aim of the diagnostic phase was to explore the relationship between burnout among (long-stay) psychiatric nurses and a number of work-related factors and to describe the tasks of psychiatric nurses working in long-stay settings. Based on the findings of the diagnostic phase it was expected that an intervention, a nursing care delivery system with a special focus on primary nursing, could change these work-related factors in such a way that the burnout level would decrease. The effects of the intervention on burnout and work-related factors were investigated in the intervention phase of the study. Four principal research questions were posed, and the answers to those questions will be addressed first. Then, some major methodological aspects are discussed and theoretical and empirical aspects are reflected on. Finally, the practical implications are discussed and suggestions for future research are made.

SUMMARY OF THE MAJOR RESULTS

The diagnostic phase

Research question 1. Which work-related factors are associated with burnout among (long-stay) psychiatric nurses?

In order to answer this question, a meta-analysis was first conducted with the aim of describing the relative strengths of a number of variables on burnout among psychiatric nurses (chapter 2). A meta-analysis is the statistical analysis of a large collection of results from individual studies for the purpose of integrating the findings into a single, generalized finding (Lynn, 1989). The meta-analysis technique of Hunter and Schmidt (1990) was used because this method corrected best for artifacts that can affect the size of the correlation coefficient. Four inclusion criteria were used to identify relevant studies: the sample had to include for the greater part registered or practical nurses engaged in psychiatric patient care; Pearson's r correlations between burnout and the independent variables had to be reported; the reported results had to come from the original study and studies had to be published in English, Dutch or German. An extensive search strategy was used to identify published and unpublished studies. Nine articles met the criteria for inclusion. From these studies 43 different variables were investigated in relation to burnout. Four variables were investigated in at least three studies. It was found that job satisfaction, staff support and involvement with the organization showed a negative correlation with burnout among psychiatric nurses while role conflict showed a positive correlation. These results are also consistent with the findings of researchers who studied burnout among different populations. Hence, they are not specific to psychiatric nurses. Based on the literature, three typical risk factors of burnout among psychiatric nurses could be identified: the patient group the nurse works with such as patients who are aggressive and suicidal; the inequity in the exchange process between nurses and patients; and the unrealistic expectations nurses have about a patient's potential for rehabilitation. It is recommended that future research should address, in

addition to the above factors, the tasks of the psychiatric nurse, the nursing process, the organization of nursing care and the characteristics of the patient group nurses have to deal with.

Secondly, a correlational study was conducted which included 361 nurses working in long-stay psychiatric care settings to investigate the relationship between burnout and a number of work-related factors among nurses working in long-stay psychiatric care settings (chapter 3). Since the work environment can be seen as an aspect of a ward and not in the first instance as a characteristic of an individual and because group data are more objective than individual data (Frese & Zapf, 1988) two aggregation levels were used: individual level (the psychiatric nurse) and group level (the ward on which the nurse worked). The correlations between burnout and the independent variables were more often significant at individual level than at group level. As the number of cases was low at group level ($n=35$), the significance levels were reached less easily. Furthermore, the explained variances of the regression analyses were much higher at ward level (mean=51%) than at individual level (mean=14%). Differences between the burnout levels on wards can be mainly attributed to the work environment while individual differences are mainly attributed to personal characteristics, such as coping style and the support of a partner.

Results showed that work environments associated with low levels of burnout are those in which workers have good support and feedback, job clarity, autonomy and low levels of complexity in their work and who have managers with a social leadership style.

The relationships between burnout and complexity, autonomy, feedback/clarity and social leadership style are consistent with the literature. However, two surprising associations were found: the level of the patient group and work experience.

High levels of burnout were found among those who worked with a patient group with a high level of performance. This result seems to be contrary to other research findings. Several researchers (Maslach & Jackson, 1982; Savicki & Cooley, 1987; Schaufeli, 1990) have suggested that working with difficult and severely ill patients with a bad prognosis can lead to feelings of helplessness and frustration which can initiate the burnout process. However, nursing care for patients with a high level of performance is likely to be more difficult and stressful than nursing care for patients with a low level of performance. It is possible, for example, that patients in the first group are more assertive with the psychiatric nurse leading to a higher stress level. An alternative explanation of this result was found in another part of this research project (Gassman et al., 1994). It was found that nurses who rated their group of patients as having a high level of performance were also found to record many potential abilities in their patients. In other words, these nurses had higher expectations of their patients' potential for rehabilitation. As a consequence, if these expectations are not realistic and are not realized, the nurse may become frustrated and therefore burnout can increase. This result is in line with Lamb's proposals (1979). Lamb argued that staff burnout is initiated when mental health professionals who work with long-term patients do not recognize that such patients vary greatly in their potential for rehabilitation. This situation leads to unrealistic expectations and frustrations for staff which often leads to burnout (cf. Lee & Ashforth, 1996).

Another interesting finding was that especially the variable "work experience" showed differences between individual and group level. At individual level a significant relationship was only found between work experience and personal accomplishment. At group level, however, there were high negative correlations between burnout and work experience. In other words, on wards where the work experience was higher, burnout among nurses was lower. This suggests that it is not the individual work experience of the nurse that is important in determining burnout, but the mean work experience of the nursing staff. Therefore, the more work experience the staff of a certain unit has, the lower the risk for burnout seems. One explanation could be a selection effect: nurses with high burnout levels left long-stay psychiatry; so older, more experienced nurses stayed. However, this finding was not found at individual level; at that level the work experience determined only a small part of burnout. It is possible that on wards with a high mean work experience, the nursing staff can deal with their problems better while nurses with little experience probably receive more adequate feedback from nurses who are more experienced. Table 1 shows the findings of the diagnostic study. A plus sign indicates a positive relationship, while a minus sign indicates a negative relationship.

Table 1. Results of diagnostic study based on stepwise regression analyses at individual level and between brackets at group level and results of the meta-analysis

	Emotional exhaustion	Depersonalization	Personal accomplishment			
Results meta-analysis						
Job satisfaction	-					
Staff support		-				
Role conflict	+					
Involvement with the organization	-					
<hr style="border-top: 1px dashed black;"/>						
Results correlational study						
	individual ¹	(group)	individual ¹	(group)	individual ¹	(group)
Work experience		(-)		(-)		(+)
Complexity	+	(+)	+		-	
Autonomy		(-)				(+)
Feedback/clarity	-	(-)	-		+	(+)
Social leadership style	-		-			
Level of performance patient group	+	(+)				(-)

¹ = controlled for age and gender

Conclusions: Based on the meta-analysis and the correlation study, it can be concluded that work environments with low levels of burnout among workers have high levels of job satisfaction, support, clarity, involvement with the organization, autonomy, and low levels of complexity. Furthermore, they have realistic expectations about a patient's potential for rehabilitation, they have managers with a social leadership style, and they work on a ward with a high mean work experience.

Research question 2. What are the tasks of long-stay psychiatric nurses?

Since the tasks which nurses perform constitute their work, the study in addition aimed at describing the tasks of nurses working in long-stay psychiatric care settings. A questionnaire was constructed, consisting of 77 items, to describe the tasks of the nurse working in long-stay settings (chapter 4). The nurses (n=361) were asked how often they performed a certain task. Using a principal components analysis it was found that the tasks of the psychiatric nurse, working in long-stay settings, could be distinguished into four groups: personal care tasks, psycho-social tasks, household tasks and organizational tasks. These four task clusters corresponded for the greater part to classifications made by other researchers (Bergen & Hollands, 1983; Dassen, 1989). In order of occurrence, personal care tasks were performed most frequently followed by psycho-social tasks, household tasks and finally organizational tasks. Dassen (1989) also found an emphasis on personal care tasks in psychiatric nurses working in long-stay residential settings. Furthermore, it was found that psychiatric nurses perform most of their tasks in and around their own ward. They rarely performed outreaching tasks such as "visiting the home of the patient" or "having contacts with other health care specialists outside the institution". Factors which explained differences among nurses in the frequency of performing a task were also explored yielding six factors: level of performance of the patient group, the hospital where the nurse works, the nursing care model, the work experience, the age and the professional position of the nurse. It should be borne in mind, however, that an average of only 22% of the variance was explained by these variables. Hence, further research is needed to find appropriate factors which explain the differences between nurses in the frequency of performing tasks.

Chapter 4 addresses, in addition, the question whether the present tasks of nurses working in long-stay psychiatric care settings correspond with the developments and visions concerning the chronic psychiatric patient. In summary, it was concluded that psychiatric nurses, working in long-stay care settings concentrate mainly on personal care tasks in and around the ward. When the patients' potential abilities and their eventual move to the community are taken into account, the work of the nurse has to change accordingly. Within long-stay hospital settings these changes are not yet visible enough. By having a more externally-oriented hospital policy, by cooperating with other health care agencies and using a more patient-oriented model of rehabilitation care, the nurse will help to prepare the patients for the community.

Conclusions: The tasks of nurses, working in long-stay psychiatric care settings, can be distinguished into four groups: personal care tasks, psycho-social tasks, household tasks and organizational tasks. Nurses perform especially personal care

tasks in and around their one ward. Furthermore, the work of nurses in long-stay psychiatric care settings does not fit in adequately with the changes in psychiatric practice.

Intervention phase

Research question 3. What are the effects of the introduction of a primary nursing care delivery system on work-related factors?

Chapter 6 investigated the effects of a primary nursing care delivery system on the work environment of nurses working in long-stay care settings. Several researchers reported positive changes in the work environment due to primary nursing, such as an increase in autonomy (e.g. Molleman, 1990; McGuire & Botting, 1990; Thomas, 1992; Alock et al., 1993), involvement (Thomas, 1992; Alock et al., 1993) and support (Thomas, 1992), while others found negative changes, such as a decrease in clarity (McPhail et al., 1990) and a decrease in support (e.g. Emans & Den Boer, 1988; Akinlami & Blake, 1990; Alock et al., 1993). Furthermore, Metcalfe (1983) found that primary nurses spent more time on communication because more time was spent on assessment and rounds on the ward, while Giovannetti (1980) found more direct care activities in team nursing than primary nursing. Nevertheless, Alock et al. (1993) did not detect a change in the amount of time that primary nurses spent on direct or indirect care activities. However, these findings are not based on quasi-experimental research. The quasi-experimental study of Heeremans et al. (1994) did not find changes in autonomy, feedback, complexity, responsibility or task requirements.

The results of this study showed that primary nurses experienced their work to be more autonomous and less complex. Furthermore, primary nurses performed personal care tasks less frequently and worked more according to a patient-oriented care model. Since two main problems were encountered in this study, a high dropout due to job turnover among nurses and the imitation of the intervention by the control group, additional analyses were performed. It was found that the leavers in the intervention group experienced more social leadership style in their managers than leavers in the control group, which can lead to an underestimation of an effect. Using regression analysis with the posttest as dependent variable and pretest as independent it was possible to predict the missing scores. No differences were found, however, between social leadership style in the intervention and control group.

Another serious problem was that during the course of the study it became apparent that some parts of the intervention were introduced by some control wards through information exchange by nurses and through nursing students who switched wards. This led to the assumption that the control group could be seen as an intervention group, except for the fact that it did not receive support from the support group. A one-group pretest-posttest design would have been the design of choice in this case. Six variables changed during the project; nurses performed fewer psycho-social and organizational tasks, the social leadership style increased, while the instrumental leadership style decreased, and nurses worked more according to the nursing process and in a more patient-oriented way. As no control group was used in this analysis, the results were not as strong as in a quasi-experimental design. Therefore, the results from the one-

group pretest-posttest design must be interpreted with great caution. There are, however, indications that due to the intervention the nurse manager used a social leadership style and nurses utilized the nursing process more.

Conclusions: Primary nurses experienced their work to be more autonomous and less complex. Furthermore, primary nurses performed personal care tasks less frequently and worked more according to a patient-oriented care model. There were indications that due to the intervention the nurse manager used a social leadership style and nurses utilized the nursing process more.

Research question 4. Does the introduction of a primary nursing care delivery system reduce burnout among nurses working in long-stay psychiatric care settings?

In order to examine this question a quasi-experimental design was used (Chapter 7). It was expected that, under certain conditions, such as a primary nursing care delivery with an adequate feedback system (chapter 5), the burnout level would decrease. A cohort of 161 nurses was followed for 2.5 years. Three measurements were conducted: two pretests and one posttest. Results showed that the burnout level did not change as a result of primary nursing. Three major explanations for this result can be given: primary nursing has no effect on the burnout level, the power of the intervention was not strong enough, and due to some methodological difficulties it was not possible to find an effect. The methodological difficulties will be addressed in the next section so first the other two explanations will be discussed.

The most obvious explanation for the results is that primary nursing has no effect on the burnout level of psychiatric nurses. Chapter 6 described several studies which have indicated an effect on the burnout level due to primary nursing. However, the findings of these studies are contradictory. Some studies showed that autonomy and job satisfaction increased due to primary nursing (e.g. Reed, 1988; Sullivan, 1989; Schaufeli, 1990); so the burnout level should have decreased. Other researchers have argued that one of the costs of primary nursing may well be stress and burnout because of too much emotional involvement with the patient and family (e.g. McClure, 1984), while still other authors (e.g. Akinlami & Blake, 1990) noted that the extra responsibility, although in many ways more satisfying, does result in increased levels of stress.

Another explanation can be the power of the intervention. In other words, was the intervention strong enough to find an effect? Three questions are important. Was primary nursing really introduced in this study? Was primary nursing or several elements of primary nursing not already in existence on the intervention wards before the study started? Were the analyses sensitive enough to find an effect? In this study the introduction of the intervention was evaluated monthly on the intervention wards using a checklist. Furthermore, a questionnaire was used to measure the nursing care model in operation on the ward. Based on both methods it became clear that primary nursing was for the greater part introduced on the intervention wards. However, one important factor, namely feedback/clarity, did not change as a result of the intervention although much attention was given to this aspect (chapter 5). Probably the mean scores on the pretest were already quite high. A valid and reliable method of measurement could have

detected the power of the intervention. However, such a method is not yet available (see section "operationalization of the intervention").

The second question concerns whether primary nursing was not already in existence on the intervention wards before the study started. In chapter 6 it was found that the intervention wards worked more according to primary nursing. However, our research group found several elements of primary nursing in long-stay settings. It was found that the elements of primary nursing were often partially implemented and usually not in a consistent way. A major problem was that the roles of the primary nurses, the nurse manager and other health care specialists were usually unclear (chapter 5). Overall, hospital organization was not well prepared for primary nursing. There was no integration of primary nursing within the organization. Therefore, the understanding of primary nursing was poor.

The last question concerns the analyses. In the correlational study it was found that group scores explained more variance than individual scores. Therefore, analyses at group level should have found effects. Additional analyses with group scores did not show differences between the intervention group and the control group. Besides, due to attrition, some mean ward scores were only based on two or three individual scores.

Conclusions: The burnout level did not change as a result of primary nursing. There were indications, however, that job turnover decreased as a result of the introduction of primary nursing.

The findings of the intervention study are presented in figure 1.

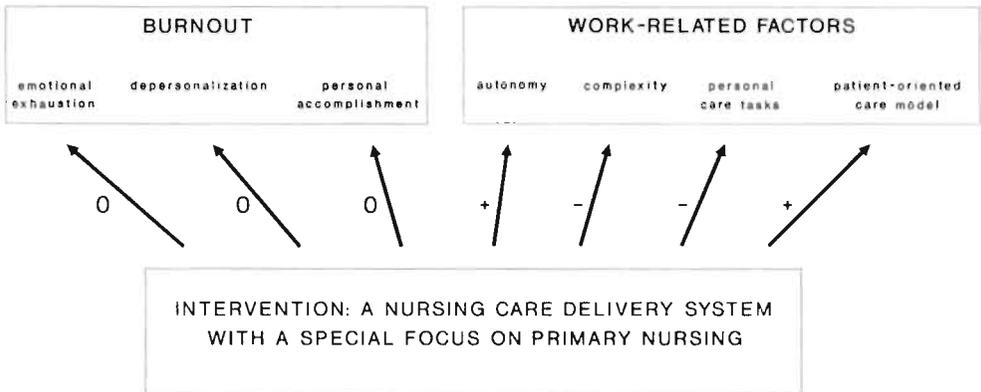


Figure 1. Findings of the intervention study

METHODOLOGICAL REFLECTIONS

Several methodological comments have already been made in the separate chapters. In this section some major methodological aspects will be summarized and discussed. These aspects have, to an extent, an influence on the internal validity of the study, which refers to the degree to which it can be inferred that

the intervention, rather than extraneous factors is responsible for observed effects (Polit & Hungler, 1987).

Attrition

A serious problem in this study was attrition, the loss of participants at different points of the study. Attrition is problematic because those who drop out of the study may differ in important respects from the individuals who continue to participate; hence the generalizability of the findings may be impaired (Polit & Hungler, 1987). Results showed that especially in the study which investigated burnout (chapter 7), attrition, mainly due to job turnover, could have influenced the results. It was found that the burnout level of the nurses who left long-stay psychiatry was higher than the burnout level of those nurses who stayed. It was also found that during the study more nurses left long-stay psychiatry in the control group than the intervention group. Therefore, an under-estimation of an effect may have occurred. However, an additional analysis with a group with a high burnout on the pretest score showed no differences between the burnout level in the intervention and the control group.

Operationalization of the intervention

The operational definition of primary nursing presented us with a problem. No valid and reliable tools were found to measure this construct. In this study the introduction of the intervention was evaluated monthly on the intervention wards by the use of a checklist with 34 open-ended questions (chapter 5). The checklist was used to detect if the components of the intervention as described in the intervention plan were implemented correctly and to detect the main problems concerning the implementation of the intervention. Although the reliability and validity of this checklist was not tested systematically, indications were found which strengthened the validity of the checklist. Other questionnaires used in this study, discussed in chapter 7, showed an increase in autonomy and a patient-oriented way of working on the intervention wards as compared to the control wards. These provided an indication that the intervention or some major parts of it were implemented.

An interesting question is which method can ascertain the existence of primary nursing in an appropriate way. Giovannetti (1986) reviewed the literature between 1970 and 1984 on primary nursing. It was found that, without exception, no investigator had provided an operational definition of primary nursing or any of the other organizational models studied. Later, however, Thomas and Bond (1990), Bowman et al. (1991) and Mead (1993) attempted to provide an operational definition of primary nursing.

Thomas and Bond (1990) developed a self-completion multiple-choice questionnaire intended to identify and discriminate three methods of organizing nursing work: task allocation or functional nursing, team nursing and primary nursing. The questionnaire used six questions to measure the main features identified in the literature as distinguishing the organization of wards: grouping of nurses and length of allocation to specific patients; allocation of nursing work; organization of the duty rota; nursing accountability for patient care; responsibility for writing patients' nursing notes; and liaison with medical/paramedical staff.

Bowman et al. (1991) developed a questionnaire which measured the same three nurses' working methods as Thomas and Bond (1990) did: primary, team and task nursing. Thirteen components were distinguished to classify the nurse's work method: the basis of patient assessment; assessment and evaluation of the patient; degree of the registered nurse's managerial role; accountability, responsibility and authority for patient care; nurse's role in decision making; method of communication between professional groups; method of allocating patients to nurses; leadership style operating on the ward; communication with relatives; the patient's awareness of who has responsibility for his or her care; and the patient's involvement with decision making. Answers to an interview performed with a registered nurse and with a patient enabled the interviewer to complete the multiple-choice questionnaire.

Mead (1993) constructed a questionnaire, partly based on that of Thomas and Bond (1990), which measured 16 characteristics of primary nursing: accountability, authority, responsibility for a caseload of patients; care delivery centred around individual patients' needs; case load attachment from admission to discharge; continuity of care; primary nurse as caregiver; evidence of a philosophy/value system; decentralized decision making; care plans and care planning reflecting that the primary nurse is the principal organizer of care; changes in ward organization; communication pathways indicating that the primary nurse is the principal organizer of care; patient/relative involvement and choice; appropriate skill mix; evidence of a role change for nurses involved; development of collegiate relationships; patients knowing their nurse; and visual evidence of the system.

Unfortunately, the reliability and the validity of all these questionnaires have not so far been systematically investigated. Besides, it is debatable whether these questionnaires, with closed-ended questions, can measure primary nursing in an appropriate way. All questionnaires focus for the greater part on organizational changes. However, primary nursing is not only an organizational change, not only a change in formal responsibilities and accountabilities, but it is also a cultural change and a change in attitudes. Primary nurses have to act as a primary nurse: they must take their responsibilities and be accountable for them. They have to act as professionals. More in-depth questions, as used in the checklist, can probably better assess the change in culture and attitudes. Another disadvantage of these questionnaires may be the occurrence of socially desirable answers. Several nurses know that primary nursing is a useful care delivery system, promoted by many nurses and researchers. It is possible that socially desirable answers are more prominent in structured questionnaires. More in-depth questions would probably decrease the chance of these socially desirable questions.

Nevertheless, despite the disadvantages of these questionnaires, they give an indication of the existence of primary nursing. The use of these questionnaires can be accompanied by other methods such as interviews with primary nurses, nurse managers and patients; investigation of daily reports; and participant observation. It is difficult to ascertain which method is the most appropriate. All methods have their strengths and weaknesses. A triangulation of methods may be the best way to verify if primary nursing is implemented. Further research is still needed to identify the characteristics of primary nursing.

Instruments

Besides the checklist, seven other questionnaires were used in this study. The reliability and the validity of these were discussed in the separate chapters. The scales showed generally satisfactory internal reliabilities (Cronbach's alpha) and validities. The nursing care model scale shows rather a low internal reliability (.54) while the Maslach Burnout Inventory's discriminant validity is debatable. Below, some additional information is given about the validity in general.

All the questionnaires, except the checklist were based in the main on questionnaires developed by other researchers. The questionnaires are self-report measures which are strong with respect to their directness and versatility (Polit & Hungler, 1987). There are, however, also weaknesses such as the likelihood of the occurrence of socially desirable answers. For example, primary nursing and the use of the nursing process have been promoted by several nurses and nurse researchers. So, how can we trust the information the respondent provides, particularly if the questions could potentially require them to reveal an unpopular position? Socially desirable answers with respect to primary nursing (the intervention) have already been discussed in the former section. However, there are reasons to suspect a tendency to give socially desirable answers on the nursing process scale because in the study of Van der Schaft (1987) and in this study high mean scores were found. It is a moot point whether questionnaires, with closed-ended questions, can measure the use of the nursing process in an appropriate way. As compared with primary nursing, the use of the nursing process is not only an organizational change and not only a change in a written procedure, but also a cultural change and a change in attitudes. For example, if a nurse indicated that a nursing diagnosis is made for all the patients, we do not know how this diagnosis is used and how this is evaluated. Therefore, the use of this questionnaire could have been accompanied by other methods, such as investigation of daily reports and nursing care plans (e.g. Boomsma et al., 1994). A triangulation of these methods could have increased the validity.

Besides the occurrence of socially desirable answers it is possible that testing effects changed the opinions and the attitudes of the respondents towards certain concepts or towards some answer categories. If this is the case, changes which were found (or not found) between scores are not a result of the intervention but a result of a transformed perception of a concept. Especially nurses in the intervention group could have experienced some concepts as, for instance, autonomy and patient-oriented care in a different way. It is, however, not plausible that these are an important cause which explains the differences.

Imitation of the intervention

It was found that after the implementation of the intervention, the intervention group and the control group worked more according to a patient-oriented care model and worked more according to the nursing process. This and some personal observations of the researchers lead to the suspicion that the control group copied some elements of the intervention through information leakage and through elements independent of the project. In line with Cook and Campbell (1979), the data were first analyzed as gained from a randomized experiment. Then, analyses were performed in which the control group was used as an

intervention group. However, the one-group pretest-posttest design is often useful for suggesting new ideas, it is normally not sufficient to permit strong tests of causal hypotheses because it fails to rule out a number of plausible alternative interpretations (Cook & Campbell, 1979). Therefore, the results, based on this design, have to be interpreted with great caution. Using control wards outside the hospital where the intervention took place would have probably prevented the problem of imitation; however, comparing the intervention group and the control group would then have been more difficult.

The duration of the intervention

The actual duration of the intervention was one year which was probably too short to find an effect. A period of two or more years would have been a more likely period to find an effect. Schaufeli (1990) suggested that the level of burnout is relatively constant over a period of one year. Schaufeli argued that burnout is more a chronic than an acute problem. It is questionable if burnout is as stable as it is presumed or that it is stable due to a methodological artifact. In this longitudinal study a cohort was followed for a period of 2.5 years. Results showed that nurses with a high level of burnout left long-stay psychiatry (so they left the cohort). It is possible that the nurses who stayed in the cohort were stable in their burnout level (the unstable left psychiatry).

Randomization

A limitation in this study was the lack of randomization. Randomization was not possible because the management of the hospitals designated the intervention wards. They usually chose the wards which were able and willing to innovate. As a consequence, systematic bias was found which could have had an effect on the outcome variables. To handle this problem the intervention group and the control group were made comparable "artificially" by the use of covariates, in this study the pretest scores. It is noteworthy that Tabachnick and Fidell (1989) argue that the mean score of the dependent variable after adjustment for covariates may not correspond to any situation in the real world. Adjusted means are the means that would have occurred if all subjects had had the same scores on the covariates. However, in this study the adjusted pretest scores did not show unrealistic levels.

Another disadvantage of the selection was so-called "ceiling or bottom" effects. When these effects occur, it is nearly impossible to find a change because the scores are already high (autonomy) and low (complexity) on the pretest score. Results showed that the autonomy and complexity were already high in the intervention group as compared to the control group (cf. with scores of Heeremans et al., 1994). As a solution the method of blocking was used, in which the subjects were grouped according to their pretest scores (the covariates) into three group levels: low, medium and high. Percentiles of 33% and 67% were used to distinguish the three group levels. However, the mean scores on the pretest are more than 2 standard deviations below the theoretical score. So, the contention that there are "ceiling or bottom" effects is arguable.

A last problem is the regression to the mean effect. It was found that after 1.5 years nurses with a high level of burnout had a significantly lower burnout level without a specific burnout-reducing intervention. Thus, with or without any

intervention burnout will decrease anyway due to regression to the mean. This indicates the difficulty of finding effects due to an intervention.

THEORETICAL AND EMPIRICAL REFLECTIONS

The aim of the study was to determine which work-related factors reduce or prevent burnout among nurses working in long-stay psychiatric care settings. It has to be recalled, however, that the sample exhibited moderate levels of burnout (using the predefined cut-off points assigned by Maslach and Jackson (1986) for mental health workers) and the levels of burnout are comparable with the scores of a large sample ($n = 1337$) of nurses working in several settings in the Netherlands (Van Dierendonck & Schaufeli, 1992). Nevertheless, it is important to determine work-related factors which can reduce or prevent burnout. Several developments such as the move from institution-oriented to community-oriented care, have changed and will change the work of psychiatric nurses in long-stay psychiatry. It is therefore necessary to ascertain whether psychiatric nurses can handle these changes and how the work should be organized to prevent burnout.

In this study feedback/clarity was found to be the best correlate with the three burnout dimensions. This finding is consistent with several theoretical models (e.g. Hackman & Oldham, 1975, 1976; Hall, 1971, 1976; Karasek, 1979; Cox, 1978, 1985, 1990; Cherniss, 1980; Golembiewski et al., 1986). In addition, in some models complexity (work load) and autonomy were found to be related with burnout (e.g. Karasek, 1979; Cherniss, 1980). The variable work experience is not included in other models because it is not seen as a work-related factor. However, in our study work-experience when aggregated at group level was related to burnout. It is questionable whether the level of performance of the patient group is, as such, an important determinant of burnout. In this study it was found that nurses who were working with these patients also found much potential for rehabilitation in their patient group. If these expectations are unrealistic, frustrations can initiate the burnout process. Van Weelderen (1994) found large differences between nurses' and patients' expectations of the potential abilities of the patients. These differences in expectation can easily lead to frustration and burnout. Some variables did not show the expected relationships. It is notable that the types of tasks nurses perform were not found to be related to burnout but rather to the conditions under which these tasks were performed such as feedback, autonomy and complexity.

The three components of burnout, emotional exhaustion, depersonalization and reduced personal accomplishment were studied separately. Several researchers (e.g. Golembiewski et al., 1986; Maslach, 1993) argued for a multifaceted concept of burnout instead of a single, unitary one. This multidimensional approach implies that interventions to reduce burnout should be planned and designed in terms of the particular components of burnout. Based on the findings of this study, however, the use of a multifaceted approach is not supported. The three burnout dimensions are highly correlated and are more or less correlated with the same work-related factors. Recently, Lee and Ashforth (1996) examined in a meta-analysis how the three burnout dimensions correlated mutually and how demand, resource, behavioral and attitudinal variables correlated with the 3

dimensions of burnout. Emotional exhaustion was strongly related to depersonalization ($r = .64$), whereas both dimensions were moderately related to personal accomplishment ($r = -.33$ for emotional exhaustion and $r = -.36$ for depersonalization). These correlations were somewhat higher than those reported in Maslach and Jackson's (1986) manual (emotional exhaustion - depersonalization $r = .52$, emotional exhaustion - personal accomplishment $r = -.22$ and depersonalization - personal accomplishment $r = -.26$). These findings and our own show that emotional exhaustion and depersonalization develop dependently. Contrary to our findings, Maslach and Jackson (1986) and Lee and Ashforth (1996) found that personal accomplishment develops more independently of emotional exhaustion and depersonalization. Furthermore, contrary to our findings, Lee and Ashforth (1996) found that demand and resource variables such as role conflict, workload and support were more strongly related to emotional exhaustion than to either depersonalization or personal accomplishment. Also they did not find a significant correlation between autonomy and any of the three burnout dimensions. It has to be mentioned, however, that Lee and Ashford did not investigate a particular population.

As mentioned, the correlations and the explained variance aggregated at group level were found to be much higher than those at individual level. Therefore, analyses performed only at individual level may underestimate the importance of work-related factors in relation to burnout. Group data may provide a better picture since it is less influenced by individual differences. The work-related factors complexity and the performance level of the patient group showed a positive relationship with burnout at individual and group level while feedback/clarity showed a negative relationship at both levels. Social leadership style showed only a negative relationship at individual level and work experience and autonomy only a negative relation at group level.

The use of a quasi-experimental design permits causal relationships to be investigated. Therefore, factors which can reduce burnout can be addressed. In the intervention study the intention was to change the work-related factors which were related to burnout. Consequently, a nursing care delivery system with a special focus on primary nursing was introduced. It was found that autonomy increased and complexity decreased in the intervention group as compared to the control group (chapter 6). These changes could have decreased the burnout level (chapter 3); results, however, showed that the burnout level did not decrease due to these changes. Earlier in this chapter several explanations were given such as the power of the intervention, the imitation of the intervention by the control group and the duration of the intervention phase. Little attention has been paid, however, as to whether, based on theory, primary nursing can reduce burnout. It is disputable, for instance, if more autonomy can reduce burnout among persons with a high level of burnout. Akinlami and Blake (1990) noted, for instance, that the extra responsibility, although in many ways more satisfying, does result in increased levels of stress. On the other hand, Hall (1971, 1976) proposed that work motivation and satisfaction were enhanced when a person successfully and independently achieved a goal that was challenging and personally meaningful. In Hall's model job challenge, autonomy support and feedback are influential factors. Cherniss (1993) noted that in defining the concepts of psychological success and failure, Hall not only described the symptoms of what later became known as

burnout; he also identified the job and organizational characteristics that tend to be associated with lower levels of burnout. Primary nursing enables the decision-making process to be identified with and controlled by one person (Johns, 1990). By working according to a primary nursing care model nurses can, for instance, achieve a goal more independently and are more committed to their goals because these goals are patient-oriented. So, Hall's model gives several indications that primary nursing is an important nursing care delivery system to reduce burnout. Therefore, it is too early to conclude that primary nursing is not important in reducing burnout.

Besides, primary nursing is in many other ways an appropriate nursing care delivery system. This is because nurses working in long-stay psychiatric care settings are, as a result, more able to prepare their patients for their move to the community, are more competent to help their patients in accordance with the vision of rehabilitation, and are more able to work without the continued support of others. Primary nursing is, therefore, an attractive option for health care providers. It provides flexibility and versatility for psychiatric nurses in meeting the challenges of the future.

The question remains whether a person with a high level of burnout is accessible to a complex intervention such as primary nursing. However, while burnout can be understood as representing a negative assessment of one's work experience (Gillespie & Numerof, 1984), not only are organizational interventions important to reducing burnout, but so are more individual-oriented approaches such as strategies of active coping with stress.

It is still a moot point whether the model of primary nursing can be modified in such a way that it has the potential to decrease burnout. In the Netherlands, differentiated practice has been introduced in several health care organizations. Therefore, a distinction has been made between two expert levels: registered nurses and practical nurses on the basis of professional responsibilities and qualifications. The difference between these two expert levels is not based on task allocation but on the assignment of patients based on the complexity of care (N.R.V., 1988). As a consequence of the introduction of differentiated practice, nurses are in a position to become more autonomous and to use their acquired knowledge and skills to their utmost. Differentiated practice is expected to result in higher job satisfaction and, as such, less burnout. Although in this study an attempt was made to integrate the principles of differentiated practice into primary nursing, based on the complexity of care, a clearer delineation of the roles of nurses and practical nurses could have provided the opportunity for nurses to use their knowledge and skills to the maximum, thus leading to higher autonomy and lower burnout.

PRACTICAL IMPLICATIONS

In order to prevent the occurrence of burnout, it is recommended that nurse managers create a work environment in which the risk factors of burnout are minimized. Therefore, the following aspects should be taken into consideration:

Nurses must have adequate feedback and support from their managers, colleagues and other health care specialists. Therefore, it is recommended that

managers provide opportunities in which support and feedback can be given during staff meetings. The support should be directed towards the typical risk factors of burnout among psychiatric nurses, such as, inequity in the exchange process between nurses and patients, towards nurses who work with violent and suicidal patients and towards the views on the potential of rehabilitation.

It is recommended that managers develop a social leadership style. Therefore, they should pay attention to the comfort, well-being and job satisfaction of their staff and should be open to suggestions and ideas.

Since the work experience of nurses plays an important role in burnout as a high mean work experience on a ward decreases the risk of burnout, it is advised that nurse managers pay adequate attention to this phenomenon when dealing with questions regarding staffing policy.

Nurses must have a high level of autonomy in their work whereby their skills and capabilities have to be taken into account. It is recommended introducing primary nursing because this nursing care delivery system increases autonomy and is an appropriate system for psychiatric nurses as through the use of this system patients can be better prepared for their move to the community. Many psychiatric hospitals have recently introduced this system. However, primary nursing is often partly implemented and usually not in a consistent way. Therefore, managers should pay attention to conditions leading to effective implementation, for instance, integrating primary nursing into the organization. In chapter 5 several conditions are described which lead to an effective intervention.

IMPLICATIONS FOR FUTURE RESEARCH

A large number of correlational studies on burnout have been conducted. Many studies investigated the same factors and found the same results. Therefore, studies concerning the relationship between burnout among psychiatric nurses and other factors have to focus on factors typically valid for these nurses, such as the patient group nurses work with, the use of the nursing process and the organization of nursing care delivery. Nursing research should focus on operational definitions of typical nursing phenomena, such as the nursing process and primary nursing. It can be questioned, however, whether more correlational research can give new insights into the relationship between burnout among psychiatric nurses and other factors. We think that the emphasis must lie on longitudinal and quasi-experimental research which can test the effectiveness of burnout-reducing factors among nurses. Furthermore, it is recommended to test the effectiveness of primary nursing in combination with the introduction of differentiated practice on burnout. Hall's model (1971, 1976) can be an appropriate theoretical framework to test this effectiveness. It is important, however, to pay sufficient attention in research articles to the methodological problems which are commonly encountered in longitudinal and quasi-experimental research, such as, for instance, attrition and selection effects. Several articles which described quasi-experimental research did not pay sufficient attention to these problems.

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The aim of this study was to determine which work-related factors reduce or prevent burnout among nurses working in long-stay psychiatric care settings. Five of the 43 psychiatric hospitals in the Netherlands, distributed across the country, participated in the study. In these hospitals 35 wards could be seen as long-stay wards. The 4-year study involved a diagnostic and an intervention phase. The aim of the diagnostic phase was to explore the relationship between burnout among (long-stay) psychiatric nurses and a number of work-related factors. Because the tasks which nurses perform constitute their work, the diagnostic study aimed in addition to describe the tasks of psychiatric nurses working in long-stay settings. Based on the findings of the diagnostic study potential risk-factors to reduce or prevent burnout were determined. Next, an intervention was developed with the aim to change these potential risk factors in such a way that the burnout would be decreased. In the intervention phase of the study the effects of the intervention on work-related factors and burnout were investigated.

In chapter 1, a general introduction to the field is provided and research questions are presented.

Chapter 2 and 3 address the question "which work-related factors are associated with burnout among (long-stay) psychiatric nurses?" Based on a meta-analysis (chapter 2) and a correlation study (chapter 3), it was concluded that in work environments with low levels of burnout, nurses have high levels of job satisfaction, support, clarity, involvement with the organization, and autonomy, and low levels of complexity. Furthermore, they have realistic expectations about a patient's potential for rehabilitation, they have managers with a social leadership style, and they work on a ward with a high mean work experience.

The tasks of nurses working in long-stay psychiatric care settings are described in chapter 4. It was found that these tasks could be distinguished into four groups: personal care tasks, psycho-social tasks, household tasks and organizational tasks. Nurses perform especially personal care tasks in and around their own ward. Furthermore, it was argued that the work of nurses in long-stay psychiatric care settings does not correspond adequately with the changes in psychiatric practice.

Chapter 5 presents a full description of the intervention and how it was implemented. The intervention was based on the general principles of primary nursing, on the recommendations of the diagnostic study and on an investigation of the present way of working. The intervention emphasized six elements: tasks and responsibilities of the primary nurse; tasks regarding quality, support and feedback; patient-oriented way of care; the role of other health care providers; staff meetings; and training sessions. Furthermore, chapter 5 addresses the major problems and solutions encountered during the implementation.

Chapter 6 investigates the effects of primary nursing on some work-related factors of nurses in long-stay psychiatric care settings. In a quasi-experimental research design a cohort of 176 nurses was followed for 2.5 years. Results showed that as a result of primary nursing, nurses found more autonomy in their work and experi-

enced it to be less complex. Furthermore, primary nurses performed personal care tasks less frequently and worked more according to a patient-oriented care model.

In chapter 7 a study is presented which was set up to test the effectiveness of primary nursing on the burnout level of psychiatric nurses. It was expected that a primary nursing care delivery with an adequate feedback system would lead to a decrease in burnout. Results showed that although the burnout level did not change as a result of primary nursing, psychiatric nurses and practical nurses seemed able to work according to the principles of primary nursing. Another important result was that there were strong indications that job turnover decreased as a result of the introduction of primary nursing.

Chapter 8 is a general discussion of the main findings. The methods used are analyzed critically and some theoretical and empirical reflections are made. Finally, practical implications are discussed and recommendations for future research are made.

Dit proefschrift handelt over de relatie tussen burnout en het werk van psychiatrisch verpleegkundigen werkzaam in de verblijfspsychiatrie. Burnout is een syndroom van emotionele uitputting, depersonalisatie en verminderde persoonlijke bekwaamheid dat voorkomt bij personen die in hun werk intensief met mensen omgaan. Van emotionele uitputting is sprake wanneer de emotionele reserves van een persoon opraken zodat deze niet meer in staat is op psychisch niveau iets voor een ander te betekenen. Depersonalisatie betreft de aanwezigheid van een negatieve en ongevoelige houding ten opzichte van personen waarmee men werkt. Depersonalisatie kan er toe leiden dat men de ander gaat zien als iemand die zijn problemen verdient. Van verminderde persoonlijke bekwaamheid is sprake wanneer iemand denkt niet bekwaam genoeg te zijn om het werk goed te doen, hetgeen gepaard gaat met insufficiëntie-gevoelens.

Burnout is een serieus probleem. Behalve dat het schadelijk is voor de verpleegkundige zelf heeft het ook schadelijke gevolgen voor patiënten en voor de organisatie als geheel. Een verpleegkundige met burnout is niet meer in staat zich in te leven in de situatie van een patiënt en heeft de neiging zich vooral bezig te houden met niet-patiënt-gebonden activiteiten zoals vergaderen. Op organisatieniveau leidt het tot een verhoogd ziekteverzuim en een verminderde produktiviteit. Gezien deze negatieve gevolgen is het belangrijk om burnout bij verpleegkundigen te verminderen, of beter nog te voorkomen.

Verschillende factoren zijn van invloed op het ontstaan van burnout. Deze zijn te onderscheiden in kenmerken van het werk (bijvoorbeeld autonomie, steun en werkdruk) en kenmerken van de verpleegkundige (bijvoorbeeld copingstijl, geslacht en verwachtingspatroon). In dit proefschrift is met name ingegaan op de kenmerken van het werk.

De kans op burnout lijkt voor verpleegkundigen die in de verblijfspsychiatrie werken groter dan voor verpleegkundigen die werkzaam zijn in andere velden van de gezondheidszorg. Verpleegkundigen in de verblijfspsychiatrie werken immers langdurig en intensief met chronisch zieke patiënten en krijgen vaak minder steun van andere disciplines dan verpleegkundigen die op de meer acute afdelingen werken. Daarnaast krijgen verpleegkundigen in de verblijfspsychiatrie nu en in de toekomst te maken met ingrijpende veranderingen in hun werk doordat de zorg individueler en patiëntgerichter wordt en doordat de zorg verschuift van het ziekenhuis naar de maatschappij. Deze ontwikkelingen kunnen zowel positieve als negatieve gevolgen hebben voor verpleegkundigen. Enerzijds krijgen zij wellicht gevarieerder werk en betere kansen zich te ontplooiën, anderzijds kan de werkdruk toenemen en kunnen er onduidelijkheden optreden omtrent wat er nu precies van de verpleegkundige verwacht wordt.

Het dient gezegd dat uit de studie naar voren kwam dat het burnout-niveau van verpleegkundigen in de verblijfspsychiatrie niet hoger is dan van verpleegkundigen

in andere velden van de gezondheidszorg. Gezien de bovengenoemde risicofactoren is het desalniettemin belangrijk om burnout in samenhang met het werk te onderzoeken bij deze groep verpleegkundigen.

Het doel van de studie was:

inzicht krijgen in werkgerelateerde factoren die burnout kunnen verminderen of voorkomen bij verpleegkundigen werkzaam in de verblijfspsychiatrie.

Vijf Algemeen Psychiatrische Ziekenhuizen, verspreid over verschillende regio's in Nederland, namen aan het onderzoek deel. Het onderzoek bestond uit een diagnostische fase en een interventiefase. In schema 1 wordt een algeheel overzicht van de studie gegeven. Het doel van de diagnostische fase was om een aantal werkgerelateerde factoren vast te stellen die burnout kunnen verminderen. Vervolgens werd een interventie ontwikkeld die deze werkgerelateerde factoren op een dusdanige wijze konden veranderen dat de burnout daalt. Tenslotte werd in de interventiefase van het onderzoek de effecten van de interventie op de werkgerelateerde factoren en burnout geëvalueerd.

Diagnostische fase

bepalen van werkgerelateerde factoren die burnout kunnen verminderen



ontwikkelen van interventie die deze werkgerelateerde factoren kunnen veranderen zodat de burnout daalt



Interventiefase

evaluatie van de interventie op werkgerelateerde factoren en burnout

Schema 1. Overzicht van de studie

Diagnostische fase

In de diagnostische fase werd de relatie bestudeerd tussen burnout en een aantal werkgerelateerde factoren zoals taakhoud, steun, autonomie en de patiëntengroep. Tevens werd onderzocht welke taken de verpleegkundige werkzaam in de verblijfspsychiatrie uitvoert.

De onderzoeksvragen van de diagnostische fase luiden:

1. *Welke werkgerelateerde factoren hebben een relatie met burnout bij psychiatrisch verpleegkundigen werkzaam in de verblijfspsychiatrie?*
2. *Wat zijn de taken van de verpleegkundige werkzaam in de verblijfspsychiatrie?*

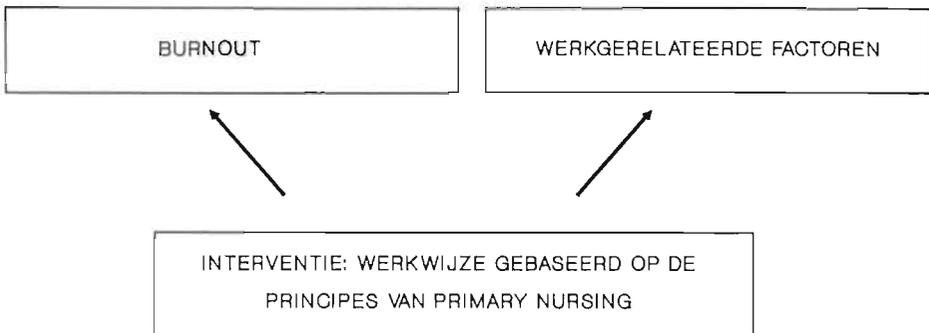
Uit de diagnostische fase en uit een literatuuronderzoek kwam naar voren dat burnout verminderd zou kunnen worden door ondermeer de verpleegkundige een zekere mate van autonomie, steun en duidelijkheid te geven. Verwacht werd dat een interventie gebaseerd op de principes van *primary nursing* deze werkgerelateerde factoren dusdanig zouden veranderen, dat de burnout zou dalen. Primary nursing is als volgt te omschrijven: een patiënt wordt toegewezen aan een verpleegkundige (de primary nurse), de primary nurse heeft een 24-uurs verantwoordelijkheid voor de zorg voor de aan haar of hem toegewezen patiënt; de primary nurse is verantwoordelijk voor de planning en de kwaliteit van de zorg voor deze patiënt; de zorg is gericht op de behoefte van de patiënt. De interventie is als volgt te omschrijven:

- a) De verpleegkundigen en verzorgenden kregen een aantal patiënten toegewezen op basis van de complexiteit van de zorg en op basis van hun deskundigheid. Deze verpleegkundige of verzorgende (de persoonlijk begeleider) was verantwoordelijk voor de coördinatie van de uitvoering van de totale zorg van de aan hem of haar toegewezen patiënten.
- b) De taken die uitgevoerd dienden te worden teneinde de persoonlijk begeleider te ondersteunen in haar of zijn werk werden expliciet omschreven. Het afdelingshoofd of een aparte functionaris, de coördinator kwaliteitszorg, konden deze taken uitvoeren.
- c) Door middel van een stappenplan werd de inbreng van de individuele patiënt bij de zorgverlening geoptimaliseerd. Het stappenplan omvatte het overleg met de patiënt, inventarisatie van wensen en behoeften, individuele behandel- en verpleegplannen, op het individu gerichte regelgeving en het zonodig ontwikkelen van de potentiële vaardigheden.
- d) Andere hulpverleners zoals psychiaters, psychologen en maatschappelijk werkers werden geïnformeerd over hun veranderende rol in het nieuwe model. Om meer duidelijkheid te creëren in de taakafbakening tussen de persoonlijk begeleiders en andere disciplines werden een aantal schriftelijke werkafspraken gemaakt over de taakverdeling.
- e) De bestaande overlegsituaties werden gestroomlijnd. Van alle besprekingen op afdelingsniveau werd aangegeven wat de doelstelling was, wie er aan deelnamen en hoe vaak de bespreking plaatsvond.
- f) Alle medewerkers van de interventie-afdelingen werden voorgelicht over de interventie. Daarnaast kreeg men een tweedaagse training. Centrale aandachtspunten hierbij vormden de grotere autonomie, prioriteitsstelling, planning en gespreks- en onderhandelingsvaardigheden.

Interventiefase

In de interventiefase werden de effecten onderzocht van deze werkwijze op burnout en op een aantal werkgerelateerde factoren aan de hand van een quasi-experimenteel onderzoeksdesign. Drie metingen werden verricht: twee voormetingen en één nameting. De eerste voormeting was het diagnostisch onderzoek. De respondenten kregen drie keer een vragenlijst voorgelegd. Tijdens de eerste voormeting en de nameting werden zowel burnout als werkgerelateerde factoren gemeten, bij de tweede voormeting alleen burnout. Gedurende de laatste vier maanden voorafgaand aan de tweede voormeting werkte een projectgroep de interventie uit in elke participerende instelling. Op elf verblijfsafdelingen werd de

nieuwe manier van werken ingevoerd (de interventiegroep). Deze afdelingen werden vergeleken met 21 afdelingen waar de werkwijze niet werd ingevoerd (de controlegroep). In figuur 1 wordt het theoretisch model weergegeven van de interventiefase.



Figuur 1. Theoretisch model interventiefase

De onderzoeksvragen van de interventiefase luiden:

3. *Wat zijn de effecten van een werkwijze gebaseerd op de principes van primary nursing op een aantal werkgerelateerde factoren?*
4. *Vermindert een werkwijze gebaseerd op de principes van primary nursing de burnout?*

RESULTATEN

Onderzoeksvraag 1. Welke werkgerelateerde factoren hebben een relatie met burnout bij psychiatrisch verpleegkundigen werkzaam in de verblijfspsychiatrie?

Om deze onderzoeksvraag te beantwoorden werd eerst een meta-analyse verricht met als doel de sterkte van de relatie te beschrijven tussen burnout bij psychiatrisch verpleegkundigen en een aantal variabelen (hoofdstuk 2). Een meta-analyse is een statistische analyse van een grote verzameling van resultaten afkomstig van meerdere studies met als doel om de resultaten te integreren en te komen tot één totaalresultaat. Vier criteria werden gebruikt om te bepalen welke studies relevant waren voor de meta-analyse: de onderzoekspopulatie moest voor het grootste deel uit in de psychiatrie werkzame verpleegkundigen of verzorgenden bestaan; de correlatie tussen burnout en een variabele diende uitgedrukt te worden in pearson's r ; de resultaten moesten beschreven worden in een oorspronkelijke studie en de studies moesten geschreven zijn in het Engels, Duits of Nederlands. Negen artikelen, alle gepubliceerd, voldeden aan de insluitingscriteria. In deze artikelen werden 43 verschillende variabelen in relatie tot burnout

beschreven. Een variabele werd alleen in het onderzoek meegenomen wanneer deze in tenminste drie studies voorkwam. Vier variabelen werden in meer dan drie studies beschreven. Drie variabelen, te weten arbeidstevredenheid, steun van collega's en organisatiebetrokkenheid vertoonden een negatieve relatie met burnout terwijl rolonduidelijkheid een positieve relatie vertoonde. Deze vier relaties werden ook in onderzoeken gevonden bij personen met een andere beroepsachtergrond en in onderzoek bij verpleegkundigen werkzaam in uiteenlopende velden van de gezondheidszorg. De resultaten lijken dus niet specifiek voor psychiatrisch verpleegkundigen. In twee van de negen onderzoeken die aan de inluitingscriteria voldeden, werden significante relaties gevonden tussen burnout en werkgerelateerde factoren die vrij specifiek lijken voor psychiatrisch verpleegkundigen, te weten het werken met depressieve en suïcidale patiënten en de ongelijkheid in het uitwisselingsproces tussen verpleegkundigen en patiënten.

Het tweede onderzoek dat verricht werd om bovenstaande onderzoeksvraag te beantwoorden betrof een correlatieel onderzoek, waarbij de relatie werd onderzocht tussen burnout bij verpleegkundigen werkzaam in de verblijfspsychiatrie ($n=361$) en een aantal werkgerelateerde factoren (hoofdstuk 3). De volgende factoren werden onderzocht: autonomie, steun/duidelijkheid, complexiteit, de taakhoud, het verpleegkundig organisatiemodel, methodisch werken, leiderschapsstijl en het functioneringsniveau van de patiëntengroep. Er werd op twee niveaus gemeten: op individueel niveau (de verpleegkundige werkzaam in de verblijfspsychiatrie) en op groepsniveau (de afdeling waar de verpleegkundige werkt). Opmerkelijke verschillen werden aangetroffen tussen de resultaten op individueel niveau en groepsniveau. De correlaties tussen burnout en de onafhankelijke variabelen waren vaker significant op individueel niveau, hoewel deze hoger waren op groepsniveau. Omdat het aantal afdelingen ($n=35$) vrij laag was, werd het significantie-niveau minder snel bereikt. Daarnaast was de verklaarde variantie op groepsniveau (gemiddeld 51%) hoger dan op individueel niveau (gemiddeld 14%). Een verklaring hiervoor kan zijn dat de individuele verschillen zich uitmiddellen over de afdelingen. Het bleek dat verpleegkundigen minder burnout hebben wanneer ze in hoge mate steun, duidelijkheid en autonomie in hun werk hebben, het werk niet complex is, het afdelingsmanagement een sociale leiderschapsstijl heeft en wanneer de patiëntengroep een laag functioneringsniveau kent. Verder werd gevonden dat werkervaring op individueel niveau een lage correlatie heeft met burnout, terwijl de gemiddelde werkervaring op groepsniveau een sterke correlatie heeft met burnout. In tabel 1 worden de resultaten van de diagnostische studie weergegeven. Een plusteken betekent een positieve relatie, een minteken een negatieve relatie.

Tabel 1. Resultaten van de meta-analyse en resultaten van de correlatiestudie (gebaseerd op stapsgewijze regressie-analyse op individueel niveau en tussen haakjes op groepsniveau)

	Emotionele uitputting	Depersonalisatie	Persoonlijke bekwaamheid			
Resultaten meta-analyse						
Arbeidssatisfactie	-					
Steun		-				
Rol conflict	+					
Organisatiebetrokkenheid	-					
<hr/>						
Resultaten correlatiestudie	Emotionele Uitputting		Depersonalizatie		Persoonlijke Bekwaamheid	
	individueel ¹	(groep)	individueel ¹	(groep)	individueel ¹	(groep)
Werkervaring		(-)		(-)		(+)
Complexiteit	+	(+)	+		-	
Autonomie		(-)				(+)
Feedback/duidelijkheid	-	(-)	-		+	(+)
Sociale leiderschapsstijl	-		-			
Functioneringsniveau patiëntengroep	+	(+)				(-)

¹ = gecontroleerd voor leeftijd en geslacht

Onderzoeksvraag 2. Wat zijn de taken van de verpleegkundige werkzaam in de verblijfspsychiatrie?

In de diagnostische fase werd eveneens onderzocht welke taken verpleegkundigen, werkzaam in de verblijfspsychiatrie, uitvoeren (hoofdstuk 4). Een vragenlijst werd ontwikkeld die 77 taken omvatte zoals 'begeleiden van patiënten bij het baden of douchen' en 'praten met patiënten over hun gevoelens en emoties'. Aan de respondenten werd gevraagd de frequentie aan te geven waarin zij een taak verrichtten in de vorm van nooit (0), jaarlijks (1), maandelijks (2), wekelijks (3) en dagelijks (4). Op basis van een principale componenten-analyse konden vier taakclusters goed geïnterpreteerd worden: persoonlijke zorgtaken, begeleidingstaken, huishoudelijke taken en organisatie/coördinatie-taken. Deze vier taakclusters corresponderen voor een groot deel met classificaties van andere onderzoekers. Persoonlijke zorgtaken werden het meest frequent verricht, gevolgd

door begeleidingstaken, huishoudelijke taken en organisatie-/coördinatie-taken. Verder verrichtten verpleegkundigen hun taken meestal op of rond hun eigen afdeling. Ze doen weinig werkzaamheden buiten het ziekenhuis, zoals bijvoorbeeld het verrichten van huisbezoeken en hebben weinig contacten met disciplines of instanties die niet aan het ziekenhuis verbonden zijn.

In hoofdstuk 4 werd eveneens onderzocht welke factoren de verschillen in taken verklaren. Dat bleken er 6 te zijn: het functioneringsniveau van de patiëntengroep, het ziekenhuis waar de verpleegkundige werkt, het verpleegkundig organisatiemodel waar mee wordt gewerkt en de werkervaring, leeftijd en functie van de verpleegkundige.

Daarnaast werd bediscussieerd of de huidige taken van verpleegkundigen, werkzaam in de verblijfspsychiatrie, aansluiten bij de toekomstige ontwikkelingen en visies in de psychiatrie. Samenvattend kon geconcludeerd worden dat dit niet het geval is. De verpleegkundigen richten zich met name op persoonlijke zorg-taken, terwijl de potentiële vaardigheden van deze patiënten op het gebied van sociale en huishoudelijke vaardigheden liggen. Verder verrichten deze verpleegkundigen hun taken veelal in of rond hun eigen afdeling. Wanneer er rekening wordt gehouden met de potentiële vaardigheden van de patiënten en met het feit dat de zorg zich verplaatst van de instelling naar de maatschappij, dan dienen de taken van de verpleegkundigen overeenkomstig te veranderen.

Interventiefase

Onderzoeksvraag 3: Wat zijn de effecten van een werkwijze gebaseerd op de principes van primary nursing op een aantal werkgerelateerde factoren?

In de literatuur worden zowel positieve als negatieve effecten beschreven als gevolg van de invoering van *primary nursing*. Positief is dat de autonomie en de organisatie-betrokkenheid toenemen, negatief is dat de duidelijkheid afneemt. Verder komen uit de literatuur tegenstrijdige bevindingen naar voren betreffende de steun die de verpleegkundige krijgt bij de invoering van *primary nursing*.

Uit de resultaten van het onderzoek kwam naar voren dat verpleegkundigen die volgens de principes van *primary nursing* werken meer autonomie in hun werk hebben, het werk als minder complex ervaren, minder persoonlijke zorgtaken verrichten en meer patiëntgericht werken. Verder werden er indicaties gevonden dat de verpleegkundig manager meer volgens een sociale leiderschapsstijl werkt en verpleegkundigen meer volgens het verpleegkundig proces werken.

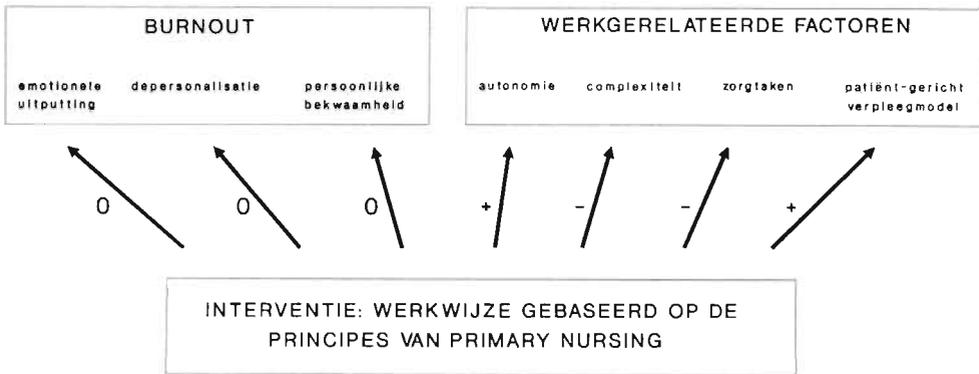
Onderzoeksvraag 4. Vermindert een werkwijze gebaseerd op de principes van primary nursing de burnout?

In de literatuur werden geen studies gevonden die de effecten van het invoeren van *primary nursing* op burnout expliciet onderzoeken. Wel kon uit diverse onderzoeken worden opgemaakt dat er mogelijk effecten zijn. Zo komt uit sommige onderzoeken naar voren dat door de invoering van *primary nursing* de arbeidstevredenheid van de verpleging stijgt en - omdat burnout en arbeidstevredenheid hoog met elkaar gecorreleerd zijn - mogelijk ook de burnout. Andere onderzoekers suggereren echter het tegenovergestelde namelijk dat *primary*

nursing de emotionele betrokkenheid bij de patiënt en de familie verhoogt waardoor de kans op burnout toeneemt.

Verwacht werd dat een werkwijze gebaseerd op de principes van *primary nursing* - mits als aan een aantal belangrijke voorwaarden werd voldaan zoals bijvoorbeeld duidelijke steunverlening aan de verpleegkundige - de burnout kan verminderen.

Uit het onderzoek kwam naar voren dat het burnoutniveau niet veranderde door de implementatie van *primary nursing*. Wel werden er indicaties gevonden dat door de invoering van *primary nursing* het verloop op de interventie-afdelingen afnam. In figuur 2 worden de resultaten van de interventiefase weergegeven.



Figuur 2. Resultaten interventiefase

METHODOLOGISCHE REFLECTIES

In deze paragraaf worden een aantal belangrijke methodologische aspecten besproken die gedurende de interventiefase van het onderzoek naar voren kwamen. De verschillende aspecten hebben in meer of mindere mate een effect op de interne validiteit, de mate waarin de interventie verantwoordelijk is voor de gevonden resultaten en geen andere factoren.

Selectieve uitval

De studie toonde aan dat verpleegkundigen die de verblijfspsychiatrie verlaten een hogere burnout hebben dan verpleegkundigen die blijven (hoofdstuk 7). Daarnaast kwam naar voren dat er vaker verpleegkundigen uit de controlegroep de verblijfspsychiatrie verlieten dan verpleegkundigen uit de interventiegroep. Door deze selectieve uitval is het mogelijk dat er geen effecten werden gevonden. Aanvullende analyses, waarbij rekening werd gehouden met deze selectieve uitval, gaven echter eveneens geen verschillen te zien tussen de interventiegroep en de controlegroep.

Operationalisatie van de interventie

Een probleem in deze studie was dat er geen betrouwbaar en valide meetinstrument voorhanden was om de interventie, een werkwijze gebaseerd op de principes van *primary nursing*, te meten. De implementatie van de interventie werd maandelijks aan de hand van een checklist geëvalueerd. Daarnaast werd gebruik gemaakt van de vragenlijst 'verpleegkundig organisatie-model'. De betrouwbaarheid van deze vragenlijst was echter vrij laag (.54). In hoofdstuk 8 worden diverse gestructureerde vragenlijsten beschreven die tot doel hebben *primary nursing* te operationaliseren. Het is echter de vraag of met behulp van deze vragenlijsten *primary nursing* goed in kaart kan worden gebracht. De vragenlijsten richten zich met name op organisatorische veranderingen. *Primary nursing* is echter niet alleen een organisatorische verandering, maar ook een verandering van attitude en van de organisatiecultuur. De *primary nurse* moet bijvoorbeeld een patiëntgerichte attitude hebben en gebruik maken van haar of zijn verantwoordelijkheden. Een ander nadeel van deze vragenlijsten is de kans op sociaal wenselijke antwoorden. Een triangulatie van verschillende methoden om *primary nursing* te operationaliseren, zoals interviews en gestructureerde vragenlijsten, is wellicht de beste methode om *primary nursing* te meten.

Imitatie van de interventie

Door informatie-overdracht tussen afdelingshoofden en door verpleegkundigen die van afdeling veranderden, maar ook door landelijke ontwikkelingen, kwam gedurende het onderzoek naar voren dat de controle-groep elementen van de interventie overnam (besmetting). In eerste instantie werden de data geanalyseerd alsof het een gerandomiseerd experiment betrof. Hierna werden analyses verricht waarbij de controle groep ook gezien werd als interventiegroep. Een design met één groep en één voormeting en één nameting is echter niet sterk genoeg om causale verbanden te onderzoeken. De resultaten die met dit design werden gevonden, dienen dan ook voorzichtig geïnterpreteerd te worden.

De duur van de interventie

De eigenlijke duur van de interventie - één jaar - was misschien te kort om een effect te vinden. Longitudinaal onderzoek wijst dikwijls uit dat burnout vrij constant is over een periode van één jaar. Het is echter de vraag of burnout werkelijk zo stabiel is, of dat het stabiel is door een methodologisch artefact. In deze studie werd een cohort over een periode van 2.5 jaar gevolgd. Er werd gevonden dat verpleegkundigen die de verblijfspsychiatrie verlaten een hogere burnoutscore hebben dan degenen die blijven. Het is mogelijk dat verpleegkundigen met een stabiel burnoutniveau in het onderzoekscohort aanwezig blijven en verpleegkundigen met een onstabiel burnoutniveau het cohort verlaten.

Randomisering

In deze studie bepaalde het management van de participerende instellingen - op basis van bereidheid en motivatie - welke afdelingen voor interventie in aanmerking kwamen. Een voordeel hiervan was dat de kans dat de interventie daad-

werkelijk werd ingevoerd vrij groot was. Een nadeel bleek echter dat de interventiegroepen en de controlegroep reeds bij aanvang van het onderzoek op een aantal factoren niet gelijk waren. Zo hadden de verpleegkundigen in de interventiegroep meer autonomie en kregen zij meer steun dan verpleegkundigen in de controlegroep. Een nadeel hiervan was dat door zogenoemde 'bodem- of plafond-effecten' er mogelijk geen effect kon worden gevonden. Aanvullende analyses waarbij rekening werd gehouden met deze effecten lieten echter geen verschillen zien tussen de interventiegroep en de controlegroep.

THEORETISCHE EN EMPIRISCHE REFLECTIES

Het doel van de studie was het determineren van werkgerelateerde factoren die burnout kunnen verminderen of voorkomen bij verpleegkundigen werkzaam in de verblijfspsychiatrie. Uit de studie kwam naar voren dat de variabele steun/duidelijkheid, autonomie, complexiteit, het gemiddelde aantal jaren ervaring van het personeel op de afdeling, het functioneringsniveau van de patiëntengroep en de sociale gedragsstijl van het afdelingshoofd het beste correleren met burnout. Steun, autonomie en complexiteit (werkdruk) worden als belangrijke determinanten voor burnout beschreven in verscheidene theoretische verklaringsmodellen. De vraag is of het functioneringsniveau van de patiëntengroep op zich een belangrijke determinant voor burnout is. Uit nadere analyses bleek dat verpleegkundigen die werken met patiënten met een hoog functioneringsniveau bij deze groep ook veel potentiële vaardigheden aangeven. Met andere woorden ze dachten dat deze patiënten in de toekomst van minder hulp gebruik zouden maken. De kans bestaat dat wanneer deze verwachtingen niet reëel blijken te zijn, verpleegkundigen gefrustreerd kunnen raken waardoor burnout kan toenemen. Sommige variabelen vertoonden niet de veronderstelde relaties. Zo zijn de taken die de verpleegkundige uitvoert niet gerelateerd aan burnout.

Maslach (1993) beschouwt burnout als een multidimensioneel in plaats van een uni-dimensioneel concept. Deze multidimensionele benadering impliceert volgens Maslach dat interventies zich op een bepaalde dimensie dienen te richten. De resultaten van deze studie bevestigen deze multi-dimensionele benadering niet. De drie burnoutdimensies correleren sterk met elkaar en ze vertonen min of meer dezelfde correlaties met de werkgerelateerde factoren.

De correlaties en de verklaarde variantie tussen burnout en de werkgerelateerde factoren waren op groepsniveau hoger dan die op individueel niveau. Het is mogelijk dat wanneer er alleen op individueel niveau naar burnout wordt gekeken de bijdrage van werkgerelateerde factoren worden onderschat. Daarnaast geven groepsdata wellicht een beter beeld omdat individuele invloeden worden vermindert.

Causale verbanden kunnen worden onderzocht met een quasi-experimenteel onderzoeksdesign. In de interventiefase van het onderzoek werd geprobeerd de variabelen die een relatie vertonen met burnout te veranderen, teneinde burnout te voorkomen. Om dit te bereiken werd een werkwijze ingevoerd, gebaseerd op de principes van *primary nursing*. Het bleek inderdaad dat door dit model de autonomie steeg en de complexiteit daalde in de interventiegroep. Verschillen in

burnoutscore tussen de interventiegroep en de controlegroep werden echter niet gevonden. Op basis van de gegevens uit het onderzoek kan worden geconcludeerd dat door de invoering van een werkwijze gebaseerd op de principes van *primary nursing* het burnoutniveau van verpleegkundigen werkzaam in de verblijfspsychiatrie niet daalt, maar ook niet stijgt. Er werden echter wel aanwijzingen gevonden dat door de interventie het verloop afneemt.

In de sectie "methodologisch reflecties" worden verschillende verklaringen gegeven waarom er geen effecten werden gevonden. Er is echter nog weinig aandacht besteed aan theorieën die aangeven dat door de introductie van *primary nursing* de burnout kan dalen. De theorie van Hall (1971, 1976) geeft indirecte duidelijke aanwijzingen dat dit wel het geval kan zijn. Hall stelt dat de motivatie en satisfactie toenemen wanneer een persoon succesvol en zelfstandig een doel bereikt dat uitdagend en betekenisvol is. Verder geeft Hall een aantal factoren aan die deze motivatie en satisfactie positief beïnvloeden zoals autonomie, steun en feedback. Uit de literatuur en uit het onderzoek komt naar voren dat door te werken volgens de principes van *primary nursing* het werk uitdagender is, de verpleegkundige zelfstandiger werkt en dat er patiënt-gerichte en dus betekenisvolle doelen gesteld worden. Het is daarom nog te vroeg om te stellen dat *primary nursing* niet de potentie heeft om burnout te verminderen.

De vraag blijft echter of het model van *primary nursing* op een dergelijke wijze veranderd kan worden dat het burnout kan verlagen. In Nederland wordt in verschillende psychiatrische ziekenhuizen functiedifferentiatie ingevoerd. Er wordt dan een duidelijk onderscheid gemaakt tussen werkers op het eerste en tweede deskundigheidsniveau c.q. tussen verpleegkundigen en verple(e)g(st)ers op basis van professionele verantwoordelijkheid en kwalificaties. Bij het onderscheid in twee deskundigheidsniveaus gaat het niet om het toewijzen van taken, maar om de toewijzing van een verpleegkundige beroepsbeoefenaar aan een patiënt uitgaande van de complexiteit van de zorgsituatie. Een consequentie van functiedifferentiatie kan zijn dat verpleegkundigen beter van hun autonomie, kennis en vaardigheden gebruik kunnen maken. Functiedifferentiatie leidt dan tot meer arbeidstevredenheid en minder burnout. Hoewel in deze studie de principes van functiedifferentiatie in de interventie geïntegreerd werden, zou een duidelijker onderscheid tussen de twee deskundigheidsniveaus verpleegkundigen en verple(e)g(st)ers beter in staat stellen hun autonomie, kennis en vaardigheden te gebruiken.

AANBEVELINGEN VOOR DE PRAKTIJK

Om burnout te voorkomen dienen managers een werkomgeving te creëren waar de risico's op burnout worden geminimaliseerd. De volgende aanbevelingen zijn hierbij van belang.

Verpleegkundigen dienen adequate steun en duidelijkheid in hun werk te krijgen van hun managers, collega's en andere disciplines. Het is daarom belangrijk dat verpleegkundig managers voorwaarden scheppen waarbij steun en duidelijkheid kunnen worden gegeven. De steun dient zich met name te richten op risicofactoren die speciaal gelden voor psychiatrisch verpleegkundigen, zoals de

ongelijkheid in de uitwisselingsrelatie met patiënten, het omgaan met agressieve en suïcidale patiënten en het verwachtingspatroon dat de verpleegkundige heeft over de potentiële vaardigheden van patiënten.

Het wordt aanbevolen dat managers een sociale leiderschapsstijl ontwikkelen. Ze dienen daarom ondermeer open te staan voor suggesties en ideeën vanuit hun verpleegkundig team en aandacht te besteden aan de arbeidstevredenheid van de verpleegkundigen op hun afdeling.

Een lage gemiddelde werkervaring van een verpleegkundig team verhoogt de kans op burnout. Het management dient daarom rekening te houden met de leeftijdsopbouw van de verpleegkundige teams.

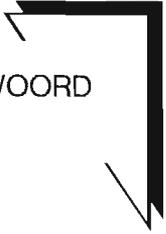
Verpleegkundigen dienen een hoge mate van autonomie te hebben, rekening houdend met hun kennis en vaardigheden. Het wordt aanbevolen om volgens de principes van *primary nursing* te werken. Dit model verhoogt niet alleen de autonomie, maar geeft de verpleegkundige en de organisatie betere kansen in te spelen op toekomstige ontwikkelingen. Patiënten kunnen beter begeleid worden bij hun terugkeer naar de maatschappij en er kan beter aan de individuele wensen van patiënten tegemoet worden gekomen. Verschillende psychiatrische ziekenhuizen hebben reeds delen van dit systeem ingevoerd. De delen zoals bijvoorbeeld patiënttoewijzing staan echter dikwijls op zichzelf en zijn niet geïntegreerd in de organisatie. Het is daarom belangrijk bij de invoering van een werkwijze gebaseerd op de principes van *primary nursing* de verschillende onderdelen van het model in samenhang te bezien en om personen die de gevolgen van de nieuwe werkwijze ondervinden bij veranderingen te betrekken.

AANBEVELINGEN VOOR ONDERZOEK

De nadruk in toekomstig onderzoek naar burnout dient te liggen op longitudinaal onderzoek en quasi-experimenteel onderzoek. Verder wordt aanbevolen om het effect te onderzoeken van een werkwijze gebaseerd op de principes van *primary nursing* in combinatie met een goed doorgevoerde functiedifferentiatie op burnout. Bij longitudinaal of quasi-experimenteel onderzoek is het van belang extra aandacht te besteden aan de problemen die bij dit onderzoek voorkomen zoals bijvoorbeeld selectieve uitval, besmetting en selectie-effecten. Verder dient verpleegkundig onderzoek zich te richten in het operationaliseren van verpleegkundige aspecten zoals bijvoorbeeld het verpleegkundig proces en *primary nursing*.

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