THE NATURE OF COMMUNITY HEALTH CARE CENTRE PRACTICE ENVIRONMENTS IN A PROVINCE IN SOUTH AFRICA

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ABSTRACT

The practice environment plays an important role in nursing. Currently, limited information seems to exist on the nature of practice environments within the primary health care (PHC) context of the public health care sector of South Africa. This study describes the demographic profile of community health care centres (CHCs) and professional nurses (PNs) as well as the current status of the practice environment of nurses in the PHC context. A quantitative, descriptive cross-sectional survey design was used. Firstly, demographic data of the CHCs (N=41; n=26) was obtained. Secondly, PNs (N=291; n=195) were surveyed using the Practice Environment Scale of the Nursing Work Index (PES-NWI) and questions focussing on their demographic profile. The demographic profile of CHCs and PNs was described and the confirmatory analysis of the PES-NWI showed that the survey was valid in the PHC context of South Africa.

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The Cronbach alpha ranged between 0.68 and 0.86. Nurses disagreed that the sub-scales named staffing and resource adequacy and nurse participation in PHC/CHC affairs were present in their practice environments. Development and implementation of a positive practice environment programme for the South African PHC context could improve the wellbeing of nurses and assist in the delivery of quality care to patients.

Keywords: community health centres, positive practice environments, primary health care in South Africa, quality of care

INTRODUCTION AND BACKGROUND INFORMATION

South Africa is a developing country and therefore the citizens and health care sector of the country face challenges such as limited finances, lack of resources, and a high burden of disease, which is more prevalent in low and middle-income countries (World Health Organization (WHO), 2009:31). As developing countries harbour three-quarters of the global burden of diseases (WHO, 2009:31), these health care systems are under pressure.

In South Africa the public health care sector serves 83% of the population (Council of Medical Schemes, 2011). This is due to the high unemployment rate, large numbers of refugees and the impact of the global financial crisis on South Africa. As a result, the staffing and resources of the public health care sector are affected because all citizens and refugees in South Africa visit public hospitals/ clinics, Primary Health Care (PHC) clinics, Community Health Centres (CHCs), or mobile clinics that must attend to patients requiring once-off and monthly follow-up treatments. This is because no person can be turned away from health care as it is immoral, unethical and inhumane (Solidarity, 2009:6). This results in high workloads to the staff in an already resource-deprived and infrastructure-hampered public health care sector.

PHC services must be accessible, affordable, available, equitable, effective and efficient, regardless of race, age, ethnicity, faith or social position (Dennill & Rendall-Mkosi, 2012:10). These services focus on promotion, prevention, curative and rehabilitation. Therefore, PHC services in the public health care sector endorsed the District Health System (DHS) (Phaswana-Mfuya *et al.*, 2008:612). The DHS consists of district hospitals, PHC clinics, CHCs and mobile clinics. District hospitals are the first level of referral, and they deliver services not only in emergencies, but also services according to the disease profile of the district. If more specialised care is needed, patients are referred to provincial and/or national hospitals. Therefore, PHC facilities provide the first level of care and the district hospitals the first level of referral for a population in a defined geographical area.

Nurses in the public health PHC context face many challenges in their practice environments. These include nursing shortages, lack of resources, and inadequate support, lack of leadership and problematic interdisciplinary relationships. These challenges could affect job satisfaction levels adversely (Keeton, 2010:803). Studies conducted in South Africa's public health care sector revealed higher levels of job dissatisfaction than among nurses working in the private health care sector (Coetzee *et al*., 2012:1). The main reasons included were high workloads, poor wages, lack of career development opportunities, lack of resources and leadership (Coetzee *et al*., 2012:5–6).

In Africa heath service indicators changed during the past two decades due to many new non-communicable diseases and the HIV pandemic. In addition to this, sub-Saharan African (SSA) faces severe nursing shortages, making it difficult to address these health-related challenges (Munjanja *et al.,* 2005:8). This shortage is ascribed to large numbers of nurses who emigrate and the limited number of young people opting for nursing as a career. Reasons for difficulties to retain nurses in sub-Saharan Africa include occupational risk perceptions such as needle prick injuries, high workloads, lower salary levels compared with other health professionals and limited professional development opportunities (Munjanja *et al.*, 2005:22, 23, 25). These factors affect recruitment, retention and enthusiasm for the nursing profession, which, in turn, affect the quality of care as lower patient-to-nurse ratios are associated with lower burnout levels, increasing job satisfaction and quality of care.

Therefore, establishing a positive practice environment in PHC facilities is important as it has advantages for nurses and it impacts on the quality of patient care (International Council of Nurses, 2009:280). However, no studies could be found on the South African PHC practice environments. Therefore, this study focused on determining the demographic profile of the CHCs and of the nurses, and the status of the practice environment of nurses in CHCs. CHCs were the population of choice because CHCs are larger PHC facilities as they serve larger populations, have larger physical structures and deliver more services.

A positive practice environment is defined as a practice environment that increases the health and well-being of nurses, quality of patient outcomes, organisational performance and community outcomes (Registered Nurses Association of Ontario (RNAO), 2010:2). According to the RNAO, the following points are vital for a positive practice environment: collaborative practice is crucial between nurses and physicians, together with the development of sustainable efficient staffing and workload practices; development and sustaining leadership in nursing; acceptance of cultural diversity in health care and improvement of cultural competency; professional conduct by nurses; and practice environment health, safety and well-being of nurses. Kramer and Schmalenberg (2008:56) add that quality of care is related to a positive practice environment as well as to staff retention and recruitment because of decreased job stress and burnout among nurses.

Positive practice environments are known as healthy work environments, originating from American magnet hospitals. Magnet hospitals had the ability to retain and recruit nurses, diminish burnout and discontent in the practice environment and to improve the quality of care. These hospitals with magnet status demonstrated good management, collegial nurse-physician relations, staffing and resource adequacy (Aiken *et al.,* 2009:228) and support for nurses (Wade *et al*., 2008:344). Parker *et al*. (2010:354) saw a magnet hospital as a practice environment where nurses had independence, authority and control over their practice environments. These foundations, present in magnet hospitals, are attractive to nurses enabling them experience positive practice environments (Parker *et al*., 2010:353). According to Lake (2002:176) and Parker *et al.*, (2010:353), nurse managers' abilities, leadership and support, staffing and resource adequacy, collegial nurse-physician relationships, nurses' participation in hospitals (PHCs/CHCs in this study) affairs and nursing foundations for providing quality care are vital determinants of positive practice environments. These domains are measured by using the PES-NWI. This current study was embedded within a collaborative international research project known as Registered Nurse Forecasting (RN4CAST) (Sermeus *et al.,* 2011).

STATEMENT OF THE RESEARCH PROBLEM

Various studies revealed that positive practice environments not only retain and recruit nurses but also ensure good quality of care (Kramer & Schmalenberg, 2008:56). The sub-scales, namely, nurse managers' abilities, leadership and support, staffing and resource adequacy, collegial nurse-physician relationships, nurses' participation in PHC/CHC affairs and nursing foundations for providing quality care, are foundational predictors when measuring the practice environment of nurses (Wade *et al.*, 2008:350). However, some of these sub-scales are not optimal in the public health care sector of South Africa, due to various factors such as nursing shortages and lack of resources (Solidarity, 2009:2), poor wages, limited career development opportunities and leadership challenges (Coetzee *et al*., 2012:5–6), causing unfavourable practice environments and leading to a gradual decline in the quality of care.

PURPOSE OF THE STUDY

The purpose of this study was to determine the demographic profile of CHCs and PNs as well as the current status of CHCs in relation to the predictors' foundational for a positive practice environment as determined by the PES-NWI.

OBJECTIVES

Objective 1: To identify and describe the demographic profile of the CHCs and PNs in the North West Province (NWP) of South Africa.
Objective 2: To identify and describe the status of the practice environments in CHCs of the NWP of South Africa.

RESEARCH QUESTIONS

What is the demographic profile of the CHCs and PNs in the NWP of South Africa?
What is the status of the practice environment in CHCs of the NWP of South Africa?

DEFINITIONS OF KEYWORDS

Community health centres provide the same services as a PHC clinic, but are open 24 hours a day, seven days a week. The CHC normally delivers maternal and emergency services and there are no more than 30 beds in the facility, where patients can be cared for by staff for not more than 48 hours. There is a procedure room in the facility, but not an operating theatre. Therefore, small procedures such as circumcisions can be performed, but no patient will receive general anaesthesia or be admitted as inpatients (Cullinan, 2006:7).

Positive practice environment has lower burnout levels, better retention and attraction of nurses, and patients experience better quality of care (Lake, 2007:104S). The American Association of Critical-care nurses (AACN) defines a positive practice environment as one with productivity, satisfied employees and rendering quality of care (Kramer and Schmalenberg (2008:56–57).

Primary health care is defined as first level health care rendered to an individual, a family or a community that is 'accessible, affordable, acceptable, available, equal, effective, efficient, continuous, caring comprehensive, comfortable, considerate, scientifically advanced and careful with the patients safety' (Hattingh *et al.,* 2010:61–65).

Quality of care assists staff to experience job satisfaction and improves the efficiency and effectiveness of the health care system (Whittaker, 2011:60)

RESEARCH METHODOLOGY

Design

This study adopted a quantitative descriptive cross-sectional survey design.

Research site

This study was conducted in the CHCs of the public health care sector of the NWP's CHCs (N = 41). Of the four districts of the NWP, only two districts gave ethical permission. All CHCs (N=26) in these two districts of the NWP were included in the study.

Study population

Only PNs working in CHCs of these two districts in the NWP during 2012 were included.

Sample

CHCs and PNs working in CHCs of two districts in the NWP.

Sampling techniques

All-inclusive sampling of all PNs (N=291) working in CHCs of two districts in the NWP.

Sample size

Of the (N=291) PNs that the questionnaire was distributed to (n=195) responded, resulting in a 67% response rate.

Instruments

Demographic profile

The demographic profile of the CHCs was obtained by completing a check list developed for CHCs that included the following: number of consultation rooms; total number of patients consulted per day; number of patients consulted by each nurse per day; number of patients referred to the physician working in the CHC per day; number of patients referred to the hospital per day; average number of patients seen per month; number of professional nurses working in the CHC; total number of other category nurses working in the CHC; total number of PNs with the Clinical Health Assessment, Treatment and Care qualification; staff turnover rate for 2010–2011; staff absenteeism rate for 2010–2011; distance of CHC from the nearest referral hospital; hours the CHC is open and services rendered at the CHC.

The demographic profile of the PNs included the following questions: what is your gender; age; did you receive your basic nursing education in South Africa, if not where; what was your age when you first became a professional nurse; do you

have a baccalaureate degree in nursing; are you a full-time employee of this CHC; how many years have you worked as a PN, in your career and in this CHC; satisfied with nursing as a career; do you have the additional qualification Clinical Health Assessment, Treatment and care, if yes, do you have a diploma or master's degree?

PES-NWI

The 32-item PES-NWI questionnaire used in this study includes five sub-scales: nurse manager ability, leadership and support (4 items); staffing and resource adequacy (4 items); collegial nurse-physician relationships (7 items); nurse participating in hospital affairs (8 items) (PHC/CHC affairs in this study); and nursing foundations for quality of care (9 items). Scores indicate the extent to which participants agree that supportive traits are present and can range from 1 (strongly disagree) to 4 (strongly agree), with higher scores indicating a more supportive practice environment.

The PES-NWI questionnaire had been used in other studies that reported high validity and reliability scores. Cronbach's alpha ranging between 0.71 and 0.98 (Sermeus *et al*., 2011:4; Aiken *et al.*, 2009a:223 –224). The PES-NWI had also been used in a national study conducted in South Africa and showed good reliability and validity with the Cronbach alfa's ranging between 0.64 for the nursing foundations for quality of care factor and 0.89 for the factor collegial nurse-physician relations (Klopper *et al*., 2012). In this study, nine items of the PES-NWI had to be adapted to the PHC context of South Africa because the original PES-NWI questionnaire focused on hospital-based contexts and the PHC context differs with regard to services delivered and management structures. These changes were made in consultation with experts in the PHC context, instrument developers and statistical consultation services. The changes included: item 8 stated that 'Enough time and opportunity to discuss patient care problems with other nurses', the 'patient care problems' was changed to 'consultation uncertainties'; item 9 stated that 'Enough registered nurses on staff to provide quality patient care', term 'care' was changed to 'consultations'; item 15 stated that 'High standards of nursing care are expected by the management', the term 'nursing care' was changed to 'patient consultations'; item 16 focused on the 'chief nursing officer', but was changed to 'operational manager'. This is because the nurse in charge of the PHC clinic/CHC is called the operational manager; item 19 focused on 'A clear philosophy of nursing that pervades the patient care environment', but the words 'patient care environment' were changed to 'Batho Pele principles'. This is because Batho Pele is used in the PHC context and means 'Putting people first', item 22 only the word 'nurse' manager was changed to the 'operational' manager; the only change made in item 25 was that the term 'hospital' was changed to 'clinic/CHC' and the term clinic/CHC was added to the example; item 27 stated 'A preceptor programme for newly hired nurses' was changed to 'An orientation programme for newly-employed nurses; item 28 stated 'Nursing care

is based on a nursing rather than a medical model', the term 'medical' model was changed to 'comprehensive model which includes preventative, promoting and primary care related curative rather than a medical model'; in item 29, 'hospital and nursing committees' was changed to 'task teams within the sub-district'; item 30 the term 'care plans' was changed to 'consultation records'; and lastly, in item 32 the original example was 'the same nurse cares for the patient from one day to the next', the wording was changed to 'the same nurse follows up patients with follow-up visits e.g. chronic diseases, dressing of wounds'.

Reliability and validity

The Cronbach's alpha of the 5 sub-scales of the questionnaire ranged between 0.68 and 0.86. The sub-scale nurse manager ability, leadership and support 0.75; staffing and resource adequacy 0.68; collegial nurse-physician relationships 0.86; nurse participation in PHC/CHC affairs 0.82 and nursing foundations for quality of care 0.71.

Pre-test

After adaptions were made on the instrument, a pre-test was done by asking PNs who have been working in the PHC context to complete the questionnaire and make necessary notes next to questions that appeared unclear. After completion of the questionnaire the researchers had had an in-depth discussion with each nurse focusing on what potential problems they had experienced during completion of the survey.

Data collection procedures

Data were collected in two phases. Structured telephone interviews were conducted regarding the demographic profile of the CHCs. Secondly, PNs were surveyed using the PES-NWI and questions focusing on their demographic profile. The questionnaires were distributed to the different CHCs. After one week, the completed questionnaires were collected and data were captured.

Data analysis

For objective 1, data analysis included descriptive statistics, and for objective 2, descriptive statistics, confirmatory factor analyses and Cronbach's alphas were calculated. In this study, EpiData (version 3.1) and SPSS (2009) were used for data capturing and analysis, respectively.

Ethical considerations

The respondents did not suffer any harm or discomfort during the data collection process as they completed questionnaires only. This study is an extension of the international collaborative research programme, RN4CAST, ethical approval number NWU-0015-08-S1 from North-West University (NWU). The researcher obtained approval from the Department of Health and Social Development in the NWP, sub-district managers and operational managers in the CHCs. All respondents received information leaflets explaining the RN4CAST programme and the study. The information leaflet mentioned that if the nurse completed a questionnaire, voluntary consent was implied. No names were written on the questionnaires, therefore a completed questionnaire could not be linked to any specific respondent, and only the CHC could be identified. This ensured confidentiality and anonymity. The completed questionnaires were kept safe by the researcher and the statistical consultation department of the NWU captured and analysed the data. The questionnaires were stored by the researcher for safekeeping with other records of the RN4CAST programme.

DISCUSSION OF RESEARCH RESULTS

Results

Demographic profile of the CHCs and PNs

The average distance that a CHC was located from the nearest referral hospital was 36km. Most of the CHCs operated 24 hours per day and offered services such as Integrated Management of Childhood Illnesses (IMCI), ante-natal and post-natal services, reproductive health, immunisations, sexually transmitted infections, common conditions, chronic diseases, mental health, anti-retroviral treatment, counselling, and health education, rehabilitation, trauma, mobile clinics and home visits at selected CHCs. There was an average of four consulting rooms in each CHC. The average number of patients consulted per month at the CHCs was 3 545, with an average of 40 patients consulted by each nurse per day and patients referred to the physicians were fifteen per day. The number of patients referred to the nearest referral hospital was 5.

There was an average of 11 PNs in the CHCs, 46% had fewer than 10 PNs, 39% had fewer than 15 PNs and 15% had fewer than 20 PNs working in the CHC. The PNs' average age was 40 years, 66% (n=129) were females and 34% (n=66) were males. The average age when the PNs started their careers as PNs was 31 and they had been PNs for an average of 10 years. Most PNs (97%; n=189) were full-time employees and had worked on average five years in the CHCs. Most PNs (74%; n=144) had diplomas in nursing and 36% (n=70) had baccalaureate degrees. An average of one enrolled and five auxiliary nurses were employed in the CHCs and only four (36%)

of PNs had the Clinical Nursing Science, Health Assessment, Treatment and Care qualifications at each CHC. Overall, the staff turnover rate of nurses, which included transfers, resignations and appointments, was very low. The analysis of the staff turnover rate indicated that 38% of the CHCs had no staff turnover rate. Some 27% only had one staff member and 19% had three and the small percentage of 4% had five and six members transferring, resigning or being appointed in the CHCs. An average of five patients was referred to the nearest referral hospital per day, out of an average of 147 patients consulted daily at each CHC.

PES-NWI

Confirmatory factor analysis of adapted PES-NWI

A confirmatory factor analysis was done and items were clustered into the original five sub-scales of the PES-NWI, which enabled the researchers to determine whether South African nurses in the PHC context clustered items under the same sub-scales as done by nurses in other countries. The sub-scales collegial nurse-physician relationships; nurse manager ability, leadership and support; and nurse participation in PHC/CHC affairs loaded in accordance with theoretical identified subscales. The sub-scales of staffing and resource adequacy split into two factors, items 1 and 8 clustered together under the factor named resources and items 9 and 12 clustered together under the factor named staffing (see Table 2). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy for the analysis was found to be 0.590 and a 76.44% of the total variance.

Table 1: Confirmatory Factor Analysis: Staffing and resource adequacy

Staffing and resource adequacy	Item Loading	
	Staffing	Resources
1 Adequate support services allow me to spend time with my patients.		.57
8 Enough time and opportunity to discuss consultation uncertainties with other nurses.		.23
9 Enough registered nurses on staff to provide quality patient consultations.	.83	
12 Enough staff to get the work done.	.86	

The sub-scale nursing foundations for quality of care split into three factors named quality of care (items 4, 19, 20, 24, 27), continuity of care (items 31 and 32) and standard of care (items 15 and 28) (see table 3).

Table 2: Confirmatory Factor Analysis: Nursing foundations for quality of care

Nursing foundations for quality of care	Item Loading		
	Quality of care	Continuity of patient care	Standard of care
4 Active staff development or continuing education programmes for nurses.	.43		.35
15 High standards of patient consultations are expected by the management.			.63
19 A clear philosophy of nursing that pervades the Batho Pele principles	.75		
20 Working with nurses who are clinically competent in the PHC context.	.36		
24 An active quality assurance programme.	.36		
27 An orientation programme for newly-employed nurses.	.43		
28 Nursing care is currently based on a comprehensive model which includes preventative, promoting and primary care-related curative rather than a medical model.			.37
31 Written, up-to-date consultation records for all patients.		-.43	.41
32 Patient care assignments that foster continuity of care (i.e. the same nurse follow-up patients with follow-up visits e.g. chronic diseases, dressing of wounds).		-.86	

Status of the practice environments in CHCs of the NWP

Table 3: Descriptive statistics of CHCs in NWP

CHCs in NWP	PES-NWI	Mean	Std. Deviation
	Staffing and resource adequacy	2.33	0.71
	Collegial nurse-physician relationships	2.70	0.64
	Nurse manager ability, leadership and support	2.64	0.78
	Nursing foundations for quality of care	3.11	0.46
	Nurse participation in PHC/CHC affairs	2.43	0.65

Two sub-scales, namely staffing and resource adequacy (mean=2.33) and nurse participation in PHC/CHC affairs (mean=2.43), had scores lower than 2.5, indicating that the nurses felt these items were not evident in their practice environments. However, nursing foundations for quality of care was perceived as the most positive (mean=3.11), followed by collegial nurse-physician relationships (mean=2.70) and lastly nurse manager ability, leadership and support (mean=2.64).

DISCUSSION

There was an average of four consulting rooms in each CHC; this is the number of consulting rooms that government intended for CHCs, but was not the norm in all the CHCs. Seventy-four per cent (74%) of the PNs had a diploma in nursing, and 36% a baccalaureate degree. These findings correspond with the South African Nursing Council statistics, which indicate that more nurses have a diploma than a degree. Only one nurse completed his/her studies in another country than South Africa, which was low as research studies reveal that many nurses of African countries migrate to South Africa in order to find better work conditions and opportunities. An average of five auxiliary and one enrolled nurse is employed in the CHCs. This indicates that there is less support available for the PNs, because enrolled nurses have a bigger Scope of Practice than an auxiliary nurse to assist the PNs in the CHC. There is an average of eleven PNs working in the CHCs of which an average of four (36%) nurses with the Clinical Nursing Science, Health Assessment, Treatment and Care qualification, which is relatively low when keeping in mind that for the elected government of 1994 the focus has been on PHC for the past twenty years and the *Skills Development*

Act that was passed in 2000. Overall, the staff turnover rate of all category nurses, which included transfers, resignations and appointments, was very low. This could be related to the high percentage of 85% of nurses who were satisfied with nursing as a career according to the questionnaire. Another contributing factor could be that government's main health care focus is PHC, so that the nurses in CHCs possibly feel they have better career advancement opportunities and remuneration in the PHC context than nurses working in the hospital context.

The average number of patients referred to the physicians was fifteen patients per day, which is very positive as fourteen years ago only 53% of clinics (CHCs in this study) were visited only once a month by a physician. An average of five patients was referred to the nearest referral hospital per day, which is relatively low when keeping in mind that an average 147 patients are consulted per day. It is, however, understandable as the population served is of low socio-economic status, CHCs are located an average distance of 36km from the nearest referral hospital and there are reduced availability of public transport in rural areas.

The descriptive statistics of all CHCs indicated that there were two sub-scales, namely staffing and resource adequacy (mean=2.33) and nurse participation in PHC/CHC affairs (mean=2.43), which had a score lower than 2.5, therefore the nurses felt the items in these two sub-scales was not evident in their PE. However, nursing foundations for quality of care were perceived as the most positive (mean=3.11), secondly, collegial nurse-physician relationships (mean=2.70), and lastly, nurse manager ability, leadership and support (mean=2.64). The highest means score (mean=3.11) of nursing foundations for quality of care was also found in other South Africa studies conducted in CCUs of South Africa, the sub-scale nursing foundations for quality of care (mean=2.93) with the highest score (Klopper *et al.,* 2012:689), possibly indicating that nurses in specialised fields of nursing in South Africa feel they provide quality care to patients.

CONCLUSIONS

The following conclusion could be based on the research findings:

Nurses in the PHC context scored the sub-scales lack of staffing and resources as well as participation in CHC/PHC affairs low. However, the sub-scales, nurse manager ability, collegial nurse physician relationships, nurse manager ability leadership and support and nursing foundations for quality of care had high scores.

Nursing foundations for quality of care had the highest score, which could indicate that nurses working in specialised PHC fields felt that they delivered quality care to patients.

RECOMMENDATIONS FOR PRACTICE

Development and implementation of a positive practice environment programme for the South African PHC context could improve the well-being of nurses and assist in the delivery of quality care to patients.

LIMITATIONS OF THE STUDY

The study was only conducted in CHCs located in the public health care sector of the NWP of South Africa, limiting the findings.

Reliance on cross-sectional data is a limitation, as the data obtained were collected in different CHCs with different locations (which included CHCs, which were located in more densely populated or rural areas) and workloads, therefore the data should be interpreted as data only obtained at a single point of time.

All the demographic and the PES-NWI data obtained from the different CHCs were combined and only a general description of the CHCs was given.

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