

# ACADEMIC STAFFING PATTERNS IN NURSING COLLEGES IN NATAL AND TRANSVAAL

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## Abstract

*The purpose of this study was to determine post structure in Natal and Transvaal nursing colleges, the extent to which these posts are filled by suitably qualified tutors and the workload of the academic staff in relation to post level and qualifications.*

*Two hundred and thirty-three nurse tutors participated in the study. Data were collected by a questionnaire developed by the researcher.*

*Findings revealed that the post structure was similar in Natal and Transvaal nursing colleges and the workload of nurse tutors was recorded.*

## Opsomming

*Die doel van hierdie studie was om die poste-struktuur in verpleeg-kolleges in Natal en Transvaal vas te stel, asook die mate waartoe hierdie poste gevul is met toepaslik gekwalifiseerde dosente. Die werklading van akademiese personeel in verskillende posvlakke en hul kwalifikasies is ook ondersoek.*

*Twee honderd drie-en-dertig verpleegdosente het in die studie deelgeneem. Data is met behulp van 'n posvraetys versamel.*

*Daar is gevind dat die poste-struktuur in Natal en Transvaal ooreenkom en die werklading van dosente is uitgewerk.*

## INTRODUCTION

Nursing colleges have structured teaching posts but these posts are not always filled by suitably qualified academic staff (SANA Report : 1978, 28). This may lead to problems such as failure to meet the educational needs of students, failure to cope with the workload, ineffectiveness due to insecurity and lack of confidence of unsuitable/under-qualified staff members; unequal distribution of the workload may result in overload, job dissatisfaction and burnout.

Academic staff have responsibility for developing and preparing students of nursing to be professionally and technically competent independent practitioners. Nursing education should enable the nurse to plan and organise

nursing activities, understand human behaviour and make professional judgements. It aims at teaching the student to think and reason for herself and to accept responsibility so that she may grow in professional practice, personal stature and usefulness (Lambertson : 1958,107). Such effectiveness in nursing education may be achieved through sound education in nursing colleges which are properly staffed by suitably qualified, well motivated academic staff. Nursing colleges must have adequate facilities, equipment and a clinical situation able to provide suitable learning practice for students who are directed by effective professional role models (tutors and clinical staff). The questions addressed in this study focus on appropriate staffing norms, levels of staffing and acceptable workloads.

## OBJECTIVES OF THE STUDY

These were as follows:-

- a) The determination of post structures in Transvaal and Natal nursing colleges and the extent to which these posts are filled by suitably qualified personnel.
- b) The description of the workload of academic staff in relation to all components of their jobs, viz lectures, clinical teaching and evaluation of students, administrative duties, marking of tests and examinations and attendance at meetings.
- c) Clarification of utilization of post-basic qualifications.
- d) The establishment of norms related to staffing patterns in nursing colleges.

## DEFINITION OF TERMS

### Tutor

A person who is registered with the South African Nursing Council as a tutor and occupies a post in which teaching is the main function (Nursing Act No. 50 of 1978 as amended).

### Tutorial Staff

All registered nurses who are employed by nursing colleges and/or teaching hospitals for teaching student nurses. These persons may or may not be qualified as nurse tutors. In other words, tutorial staff would include nurse tutors and teaching sisters. In this study this term is equivalent to academic staff.

### Teaching Sister

A registered professional nurse who is employed in a nursing college or teaching

hospital in order to teach student nurses but who is not a qualified tutor.

### **Nurse Teaching**

All activities carried out by personnel related to their duties as a teachers of nurses. These activities include lectures, demonstrations, clinical teaching, clinical supervision, assessments, marking tests/examinations/ assignments, constructing time tables, maintaining registers, allocation of students and conducting/attending and holding meetings and tutorials.

### **Post Structure**

The established posts in a nursing college, such as college head/senior principal, principal/vice principal, senior tutor, tutor and teaching sister, whether the posts are filled or not. Post structure refers to number and level of posts.

### **Suitably qualified**

Suitably qualified means that an academic staff member has a nursing education qualification and a senior academic staff member has nursing education as well as another post-basic qualification.

### **LITERATURE SURVEY**

Brink (1984) reported that out of 605 available nurse tutor posts in South Africa, 431 (71%) were filled by suitably qualified nurse tutors. The remaining 174 (29%) posts were either vacant or filled by registered nurses. This situation was exactly the same as that which was reported by the Board of the South African Nursing Association in 1969, seven years previously. This could only mean that the remedial measures (if any) were very slow or ineffective. Brink's report further showed a shortage of nurse tutors in all provinces. The Transvaal with 59.7% of posts filled and Natal with 66.6% posts filled appeared to be worse off than the Cape with 76.9%, the Orange Free State with 84.8% and the Department of Health with 77.1% posts filled. In a further article Brink (1987,12) reported that about two-thirds of all qualified nurse tutors registered with the South African Nursing Council were not employed in nurse teaching posts, because they were dissatisfied with factors such as:

- Lack of promotion opportunities;
- Lack of opportunities for self-development;
- Heavy workload;

- Burnout on teaching;
- Low salaries;
- No time for family responsibilities.

Tumility (1981, 113) stated that apart from the actual teaching function, the nurse tutor also is required to:-

- Keep up to date with advances and developments in medicine and surgery.
- Be au fait with clinical procedures and diagnostic tests (these may vary in individual hospitals....).
- Keep up to date with government publications relevant to nursing and its specialities.
- Be able to recommend further reading on any subject she teaches to her students.
- Give professional advice and guidance to individual students.
- Assess clinical performance of students in wards situated away from the school of nursing.
- Set and mark tests and examinations.
- Be available to students who need individual help and guidance at various stages of training.
- Attend committee meetings, staff meetings; participate in selection and appointment panels, be mediators when problems arise.

All these responsibilities added to the role functions already outlined, give an indication of the magnitude of the duties of the nurse tutor, the diversity of the demands and the consequent stress with which the nurse tutor lives in her professional life.

The ratio of nurse tutors to students describes the number of staff available to teach the student population of a nursing college. Nursing college ratios may also be broken down to explain the number of academic staff available to teach the student population of a group according to the year of study. For instance one may describe the number of staff allocated to teach students at first, second, third or fourth year, depending on the policy allocation of staff at the particular nursing college. Ratios also may describe the relationship between academic staff teaching a particular subject in relation to the number of students who are taught that subject, as

for example the number of suitably qualified staff to teach psychiatry for the student population of the nursing college (Griffith: 1978).

Brink (1984) reported that average teacher/student ratio in South African Nursing Colleges was 1:47. These were simple college ratios which meant that for every 47 students there was a tutor. If the tutor had to work with students in the clinical situation, how many students would she be able to work with per week? How long would she take to work with each of the 47 students in the clinical situation? Questions such as these remain unanswered.

Van Huyssteen (1981) revealed that in 18 of the 30 nursing schools she studied, ratios ranged between 1:40 and 1:50. In the remaining 12 nursing schools there were no suitably qualified tutors, but students were taught by teaching sisters. Details of distribution of tutors in relation to urban, rural, government or private institutions were not given.

The Human Science Research Council (H.S.R.C.) in 1981 pointed out that the Department of National Education reported on ratios as:

- 1:30 in white nursing schools;
- 1:48 in black nursing schools.

Although it is quite acceptable to teach 30 to 48 students in a classroom situation, it would be very difficult for a tutor thus loaded to give students individual attention in clinical areas or to conduct clinical tutorials for two or three students.

The Department of Health figures for 1987 stated that a ratio of 1:28 was an acceptable figure in South African Nursing Schools (Human Science Research Council : 1988).

The van Wyk Committee (in HSRC, 1988) recommended that the average staff/student ratio in South Africa's Nursing Schools should be 1:10. Kratz (1988) reported that the recommended ratio in Britain was 1:15, but this ratio has never been realised as unqualified nurse tutors are used to fill the gaps. These figures were based on the Briggs report on nursing education which was published in 1972.

During 1990 some noteworthy staffing improvements were reported by Muller as follows:

- In the Transvaal, the ratio was 1 : 14.52;

- In the Cape, the ratio was 1 : 12.17;
- In Natal, the ratio was 1 : 11.09;
- In the Orange Free State, the ratio was 1 : 7.13.

(Muller and Coetzee : 1990)

In general these ratios seem to be affording students and tutors fairly balanced person-to-person attention; nevertheless the basis for these ratios has not been explained by these authors, nor has the workload of individual tutors been explored.

## METHODOLOGY

### Type of Study

A descriptive survey was carried out on a population of tutors in nursing colleges of the Republic of South Africa in order to gain more information about characteristics of their workload. The mail survey approach was used because it is fairly inexpensive in time and money. The questionnaire was convenient for the wide spread subjects, who would remain completely anonymous and there would be no possibility of interviewer bias. The main disadvantage of a questionnaire survey method is that the response rate may be low.

### Sampling

The population for this study comprised academic staff employed in nursing colleges in the Republic of South Africa. It was estimated that the population would include about 2000 subjects.

A sample consisting of all academic staff employed in all the Transvaal and Natal Nursing Colleges was used. The Nursing Colleges used were all those listed in the hospital year book for 1988. The reason for selecting this sample was that these two regions were previously reported as having a relatively high rate of unfilled nurse tutors' posts. For example in Natal there were 81 posts available and only 54 (66.6%) were filled and in the Transvaal 227 posts were available and only 136 (59.7%) were filled (Brink 1984,9). The other reason was that permission for the research was granted by these two regions first.

### Data Collection

Two questionnaires were developed, one to be filled in by the principal in charge of the college, and the other to be filled in by all academic staff employed in each college.

Both questionnaires were sent with a covering letter, asking the principal to distribute them to academic staff and to complete the principal's form. Sufficient questionnaires were sent to distribute to the estimated number of academic staff.

Each questionnaire had a self-addressed, stamped envelope attached so that the participant could return it directly to the researcher. A letter was sent requesting individual staff members to participate by completing and returning the questionnaire directly to the researcher.

The questionnaire sent to the principal dealt with staff establishment, courses offered and student numbers, while the tutor questionnaire covered demographics and details of workload.

## RESULTS

### Sample realization

Completed questionnaires were received from 12 nursing colleges (7 from the Transvaal and 5 from Natal). Finally a total of 233 questionnaires were returned after follow-up letters and telephone calls were made. Tables 1A and 1B reflect demographic characteristics of teaching staff.

### POST STRUCTURES IN NURSING COLLEGES

Posts were categorized into four categories. 'Top' posts were attached to

principals or vice-principals, 'senior' posts to senior tutors, whilst the label 'middle' posts comprised tutors and the 'junior' posts designated of teaching sisters.

Figure 1 shows how these levels were represented in the sampled colleges.

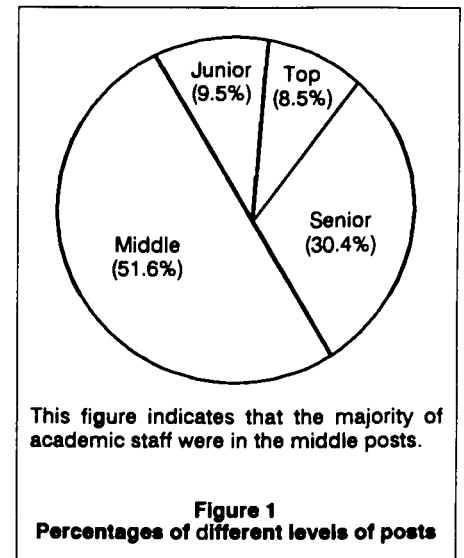


Table 2 shows that there was a great deal of variation between different colleges in relation to academic staff numbers, especially in Senior and Middle post structures. The difference could be due to the difference in College size which might have been related to student numbers and the size of the base hospital.

The significance of differences between the different colleges was calculated by

**Table 1a**  
Colleges, filled teaching posts and questionnaire return

Region	Colleges	Posts Filled	Ques. Returned	
			f	Percentage
Transvaal	A	51	16	31.3
	B	75	40	53.3
	C	53	14	26.4
	D	59	14	23.7
	E	42	15	35.7
	F	46	17	36.9
	G	45	18	40.0
Natal	H	25	23	92.0
	I	23	22	95.6
	J	25	25	100
	K	17	17	100
	L	12	12	100
TOTAL		473	233	

**Table 1b**  
Gender and age of respondents by college of origin

Region	Colleges	Gender		Age in years					
		F	M	- 25	26 - 35	36 - 45	46 - 55	56 - 64	+ 65
Transvaal	A	15	1	0	1	5	3	7	0
	B	40	0	0	6	18	3	13	0
	C	14	0	0	4	16	3	1	0
	D	14	0	0	2	5	6	1	0
	E	15	0	0	1	4	8	2	0
	F	17	0	0	0	8	6	3	0
	G	18	0	0	2	7	6	3	0
Natal	H	23	0	0	2	8	11	2	0
	I	23	0	0	2	9	11	0	0
	J	25	0	0	4	4	11	6	0
	K	16	1	0	6	6	3	2	0
	L	12	0	0	3	6	3	0	0
TOTAL		231	2	0	33	96	88	26	0

apply. For instance, a tutor with an Intensive Care course was teaching anatomy and physiology, but was not teaching nursing science. Forty-two (7.6%) of the qualifications were not actively utilised in teaching. Most of the qualifications in Community Health Nursing were not actively utilised because they were held by top post staff who had few teaching/tutorial periods usually covering topics on administration and/or ethos and professional practice. The "do not know" column was used in cases where respondents did not indicate what they were teaching.

The teaching periods of academic staff, from junior to senior level, range between 15 and 18 per week giving an average of about three periods daily. Tutors would sometimes have four teaching periods a day. At top level there were very few or no teaching periods recorded, because the main function at this level was administrative. The pattern was much the same in all Nursing Colleges studied.

The average time spent by the academic

**Table 2**  
Differences in post structure between nursing colleges

Post level	Nursing college:	Nursing posts in individual colleges												Mean per college
		A	B	C	D	E	F	G	H	I	J	K	L	
Top	frequencies	4	5	5	4	4	4	3	4	4	4	3	1	3.75
	percentage	6	7	8	7	8	7	6	15	13	15	17	8	9.75
Senior	frequencies	17	37	15	7	41	2	2	9	9	10	5	4	13.4
	percentage	27	52	24	9	27	22	2	33	32	38	28	3	30.6
Middle	frequencies	33	29	35	8	25	30	0	12	12	12	9	7	22.6
	percentage	52	40	57	44	8	55	6	22	39	44	50	8	48.7
Junior	frequencies	10	0	6	0	9	9	9	2	5	2	1	0	4.4
	percentage	16	0	10	0	17	16	7	7	16	7	6	0	9.3
TOTAL	frequencies	64	71	61	9	52	55	4	27	31	27	18	2	
t Test		3.0	2.5	2.7	2.4	3.2	3.0	3.1	2.7	3.0	2.7	2.5	2.5	

means of the t test. It was found that each individual college differed significantly from the average across all colleges at the 95% level.

Using the average post structure of the twelve nursing colleges and the standard deviation of each post level, the norms for post structures (Table 3) were developed. For example, the average number of top posts across all colleges was 4, and the standard deviation was 2. Subtracting 2 from 4, gives the lower limit of 2 and adding 2 to 4 gives the upper limit of 6. From table 2 it can be seen that only 1 college in this sample (L) falls outside this norm with only 1 top post.

### UTILIZATION OF POST-BASIC QUALIFICATIONS

Utilization of post-basic qualifications in the teaching situation did not seem to be fully realized. There were 543 post-basic qualifications in twelve nursing colleges and only 127 (23%) were fully utilised which means that the staff members were teaching the subjects for which they were qualified. These were mainly in the Psychiatric, Paediatric, Orthopaedic and Ophthalmic courses. Three hundred and forty (62%) qualifications were partly utilised, which means that qualified staff members were teaching subjects to which certain aspects of the qualification would

staff on preparation differed according to number of lectures per week, with the preparation time range of eight to ten hours per week. Although some people seem to have less time spent on teaching

**Table 3**  
Norms for post structure in nursing colleges

Levels of posts	Number of units
Top	2 to 6
Senior	12 to 16
Middle	21 to 25
Junior	2 to 6

**Table 4**  
**Record of post-basic qualifications**

	Nursing colleges												Total	Percentage
	A	B	C	D	E	F	G	H	I	J	K	L		
No. of posts filled	51	75	53	59	42	46	45	25	23	25	17	12	437	
No. of recorded post-basic qualifications	41	78	46	59	53	44	31	29	28	78	35	21	543	
Ratios	1:1,2	1:1	1:1,5	1:1	1:1,3	1:1	1:1,4	1:1,1	1:1,2	1:3,1	1:2	1:1,7	1:1,1	
Yes totally	12	17	11	13	10	13	8	7	10	12	6	8	127	23
Percentage	29	22	24	22	19	29.5	26	24	36	15	17	38		
Yes partially	18	47	27	41	37	23	20	19	15	58	25	10	340	62
Percentage	44	44	60	59	69.5	70	52	64.5	65.5	74	71	48		
No	6	7	4	3	2	5	1	2	1	6	3	2	42	7.6
Percentage	14.6	9	8.7	5	4	11.3	3	7	3.6	7.7	8.6	9.5		
Do not know	5	7	4	2	4	3	2	1	2	1	1	1	34	6
Percentage	12	9	8.6	3.4	7.5	7	6.5	3	7	2.5	3	5		6

**Workload**

**Table 5**  
**Average workload hours per week according to post level.**

Sample level	Frequency	Classroom teaching	Preparation	Clinical teaching	Meetings	Marking tests and exams	Admin.	Total
Sen. Principal	11	0.01	0.09	0	0.75	0.00	36	36.84
Principal	16	6	2.44	1.25	0.40	4.50	20	34.59
Sen. Tutor	66	17	8.44	2.74	0.25	6.50	10	44.93
Tutor	131	18	10.89	2.39	0.26	10.07	10	52.08
Teaching	9	15	6.67	4.04	0.25	5.02	6	36.96

and preparation, they have time recorded for clinical teaching, marking of tests and examination, doing some administrative tasks and attending meetings.

Clinical teaching time appeared to be limited to an average of one to three hours per week, except for the junior members of the academic staff with an average of four hours per week.

Meetings were attended by all categories of staff according to functional needs. Top level academic staff attended planning meetings, interdepartmental and policy discussion/formation meetings. Senior staff attended some of these meetings as delegated by principals. The rest of the staff attended mainly curriculum development/amendment, subject committee and examination co-ordination meetings. The duration of meetings varied from one to three hours. Some top level staff meetings lasted more than three hours and occasionally curriculum development and subject committee meetings lasted more than three hours.

All the nursing colleges studied recorded a minimum of weekly tests given during block periods and summative tests given at conclusion of each module. Examinations were written towards the end of each academic year. All this resulted in having academic staff involved in constant marking. Assignments, case studies and research project reports had to be read, marked and discussed with students. When tutors were involved with more than one group, the marking time was greatly expanded.

Using the average teaching periods per week and the standard deviation of each post level, the norms for teaching in the classroom (Table 6) were developed.

Clinical teaching carried out by senior tutors, tutors and teaching sisters ranged between the average of 1.25 to 2.93 hours per week. Comments from respondents were that they were bogged down with theory and hardly could find enough time for clinical teaching. The number of students at clinical teaching sessions was large (average of 9-10 per group) and this

made it difficult for the tutor to give individual attention to students.

Using the average clinical teaching periods per week and the standard deviation of each category of the college academic staff, the norms for clinical teaching (Table 7) were developed.

The marking of tests and examinations claimed an average of four to ten hours per week of the tutors time.

**Table 6**  
**Norms for teaching periods in nursing colleges**

Levels of posts	Norms for number of teaching periods per week (45 min. periods)
Senior Principal	to 7
Principal	1 to 12
Senior Tutor	12 to 22
Tutor	13 to 23
Teaching Sister	9 to 21

**Table 7**  
Norms for clinical teaching hours  
per week in nursing colleges

Levels of posts	Average hours for clinical teaching
Senior Principal	0
Principal	1.91 - 4.41
Senior Tutor	2.51 - 4.97
Tutor	2.59 - 4.27
Teaching Sister	2.59 - 5.41

The sum total of combined workload for senior principals was 36 hours per week compared to a 52 hours record for tutors. As the senior principal and principals are more experienced and are in more responsible positions, their workload would be expected to be more than the workload of juniors. Table 6 indicates that the tutor does more work than any other member of the academic staff and it is difficult to give a reasonable explanation for such a situation.

#### STAFF DEVELOPMENT

The ratios of academic staff to non-formal programmes attended varied considerably between levels of staff. The ratio for the top level was 1 : 2,1, while for senior and junior staff it was 1 : 1. The tutors (middle level) were the worst off with a ratio of 1 : 0,5.

#### CONCLUSIONS

This study confirms Paton's (1988) report that there had been improvement in the situation of nurse tutor shortage, since Brink's (1984) record which showed a 28.8% shortage in South African Nursing Colleges. This study showed a 2.4% shortage which did not seem to affect the pattern of staffing in nursing colleges.

Post structures are similar in all nursing colleges, but there is a significant difference in numbers at each level across all nursing colleges. There is an unexplained utilization of teaching sisters (9.3%) in tutors' posts, yet only three personnel were granted study leave to undertake the Diploma in Nursing Education in 1989.

Post-basic qualifications are not fully utilized. Personnel holding specialized qualifications are utilized in teaching other areas of the syllabus instead of their speciality.

Nurses at the tutor level of the post structure are subjected to an excessive workload. Somehow there is a significant irregularity in the distribution of work in nursing colleges, making a pattern of having more work allocated to tutors compared to that allocated to senior tutors and principals. This is in spite of the fact that tutors are less experienced than senior tutors and principals. The workload for senior tutors, principals and senior principals is less than the normal 40 hours of work per week. Comments from senior principals and principals were that consultations and interviews were additional components of their workload.

Tutors seem to take clinical teaching as secondary to teaching the theory of nursing. Mellish (1977) reported that nurse tutors were unable to teach in the clinical situation because they were overloaded with theory.

Judging by the number of senior principals, principals and senior tutors who attended study courses during 1989 compared with that of tutors, it is clear that tutors are not given enough opportunities to attend study courses.

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