Introduction and problem statement

Historically nurse training was carried out in hospitals where student nurses (under the supervision of senior nurses) rendered care to patients in beds. Students were thus trained in hospitals where they were simultaneously employed. Because such training was more orientated to practice than to theory, the training tended to resemble a kind of apprenticeship system rather than a formal system of education.

During the 1940s a new system of training, the block system, was introduced, which ensured that nursing students obtained sufficient exposure to theoretical content. But this system caused students to spend more time at colleges and universities and less time at hospitals thereby separating theory from practice (Potgieter 1992:148). This system also proved unable to integrate theory and practice adequately because tutors were based in colleges and not in hospitals, and communication between the colleges and clinical departments was apparently ineffective.

The following factors led to the reorganization of the nursing training:

- The Health Act 63 of 1977 influenced the nursing profession because it made provision for the development of a comprehensive health care service and designated nurses as key role players in service provision.
- The number of recruits to the nursing profession declined despite an increase in the number of matriculants.

The Van Wyk de Vries Commission of Inquiry into Universities (1974) recommended that nursing colleges be affiliated to universities in the same way as teachers training colleges are (Potgieter 1992:167). After this period, significant changes occurred in nurse training and a more holistic approach to rendering nursing care to clients emerged. Yoder, Cohen and Gorenderg (1998:121) recorded that innovative ways of teaching student nurses were developed so that care could be rendered in a comprehensive and holistic way. This, it was hoped, would bridge the gap between theory and practice.

Since nurses were taught at colleges of nursing, theoretical content would be taught to students who had already been allocated to, for example, a clinical setting where they had to render family planning services as a part of their Community Nursing training. Some kind of briefing needed to be provided for students before they entered any practical situation (White & Ewan 1991:42). Clinical situations could become very daunting to students without theoretical knowledge of the practical situations they would encounter. In such situations, the students became passive rather than active learners, and this could lead to problems in integrating theory and practice.

Despite revolutionary changes in nursing education, integration of theory and practice remains a problem. After observing students working in clinical areas during formative and
summative evaluation, the researcher realised that various problems continued to occur in clinical teaching situations. These problems included: (1) a lack of student involvement during clinical teaching, (2) deficiencies in clinical teaching of students during clinical practice, and (3) insufficient accompaniment of students in the clinical area.

The area of observation on which the researcher concentrated was Community Nursing Science during the rendering of comprehensive family planning services to the community.

**Research objectives**

The objectives of the study were to:

- determine whether the curriculum for family planning allowed for the integration of theory and practice
- identify teaching strategies and media that might enhance the integration of theory and practice and how clinical teaching was done
- determine whether there were any problems encountered during the accompaniment of students when practicing family planning in the clinical area

**Definition of concepts**

**Accompaniment**

Accompaniment encompasses the conscious and purposeful guidance and support for the student based upon her unique needs by creating learning opportunities that make it possible for her to grow from passive observers, through involvement, to independent, critical, practice. This process of accompaniment takes place in conjunction with the direct involvement and physical presence of the tutor/registered nurse/registered midwife, supplemented by the availability of guidelines and learning aids, and supported by the theoretical knowledge acquired in classroom sessions (SANC 1992:6).

**Clinical teaching**

Clinical teaching is that teaching which takes place in the clinical nursing laboratory. It is the means whereby the student is taught and accompanied towards independent practice and a use of her or his own abilities (SANC 1992:7).

**Comprehensive course**

The comprehensive course is a four-year programme for the education and training as a nurse in General, Psychiatric and Community Nursing and Midwifery, which culminates in registration (see R425 22 February 1985 as amended).

**Nursing Student**

The nursing student is a nurse undergoing a four year integrated diploma course leading to registration as a nurse (general, psychiatry, community) and midwife according to Regulation R425 of 22 February 1985, as amended. The student refers to a nurse in basic training doing Fourth year of study that acquire theoretical knowledge at the college and practical skills at the hospital or clinic.

**Preceptor**

A preceptor is a person who enables learning in practica while promoting and participating in the delivery of nursing care (Mashaba and Brink 1994:129).

**Selected clinical situations**

Selected clinical situations include hospitals and clinics to which students are allocated for clinical learning experiences in community nursing science and in which special attention is given to family planning services.

**Theory**

Theory is systematic abstraction that represents perceptual experiences of objects, properties or events (Wilson-Thomas 1995:569). The subject matter of nursing as it is taught in the classroom or college constitutes theoretical content.

**Tutor**

A tutor is any qualified nurse educator who is responsible for teaching at a college.

**Research approach and method**

**Research design**

The research design for this study is described as non-experimental, naturalistic, empirical and descriptive (Polit & Hungler 1995:640). A quantitative design was used to describe and interpret the results.

**Method of Data Collection and Instrument**

The researcher used covert participant observation (Polit & Hungler 1995:123) as her data collection method under the guise of performing routine observations of the clinical facilities available to nursing students. This method of data collection is known to prevent the Hawthorne effect. The researcher has been involved in teaching fourth year nursing students. It was therefore easy for the researcher to gain access to the clinical field.

The researcher used a structured observational method (Burns & Grove 1993:781), which comprised two observation schedules. These schedules clearly identified what was to be observed and precisely defined how the observations were to be made, recorded and coded (Burns & Grove 1993:781). One observation schedule was used as a guideline (criterion) to measure whether or not what had been included in the curriculum was being taught in the practical situation. The second schedule was designed to assess whether what was being done in clinical learning environment for the students allowed them to integrate theory and practice in actual practice. This observation schedule for practica was based on the schedule, which was used for the assessment of the curriculum. The first observation session examined the family planning curriculum and took place on the campus concerned. The second observation session examined the practical performance...
of students in different areas of clinical allocation such as the hospitals and clinics to which they had been allocated for their clinical learning experiences. The researcher observed the student nurses as they rendered family planning services to the clients. In this way the researcher was able to decide whether they were able to relate the services they were offering to the theoretical content which they had learned.

The population and the sample
The target population was composed of forty (40) fourth-year student nurses in one of the tertiary institutions for nurse training in the Northern Province of South Africa. Because the study would have been too wide, it was decided to narrow the scope of the study to one discipline, namely Community Nursing Science. It was then further decided to focus just on family planning.

The reason for choosing fourth-year student nurses was that they have already completed the family planning component of the curriculum in class (theory) and in the clinical area (practica). They were therefore expected to be competent in rendering comprehensive family planning services to their clients. Fourth-year students were also suitable for this study because they were expected to be competent in the examination of clients, prescription of drugs and advice given clients on suitable family planning methods.

The researcher selected a convenience sample (Burns & Grove 1993:245) while bearing in mind that this research method would involve covert observation. All fourth year students (excluding those who were repeating the level) who were in the clinical area during the time of research were included in the study.

Validity and reliability of the instrument
The two observation schedules were developed after a thorough review of the literature, which related to the problems of integrating theory and practice - with special reference to family planning. The instruments were checked for face and content validity by supervisors and colleagues of the researcher, who had a proven record of expertise in research (Brink & Wood 1994:175-176). These people were asked to identify any ambiguities in the wording of items and any unintentional repetition of items. Statisticians were consulted to establish whether the instrument was sufficiently comprehensive to draw meaningful conclusions about a whole range of behaviours, and whether it was appropriate in terms of space and length. After due feedback, some items were reworded while others were discarded to give the instrument greater clarity. During pre-testing of the instrument, reliability was confirmed by a professional statistician who checked the schedules by using the test-retest and found a correlation value of 0.86.

Pre-testing the research instrument
Pre-testing the research instrument was done by observing five (5) fourth year students in one of the clinics, which was not included in the study for 20 minutes each while they attended to clients who needed family planning. Some items which sought to elicit information about cultural practices such as cultural habits, taboos and customs was not observable in practice. Those items were discarded and replaced by an item that sought information about beliefs, values and practices.

Ethical considerations
The rights of the participants in the study were protected, confidentiality and anonymity were maintained as indicated in (Burns & Grove 1993:99) because the names of participating students were not recorded on observation schedules. The three hospitals where the research was undertaken were simply identified as 1,2,3 and the campus as “X”. Permission to conduct the study was requested from:

- The Superintendent General of Northern Province.
- The deputy principal of the campus.
- The superintendent and the nursing service manager of each of the three participating hospitals.

Letters requesting permission to conduct the study were sent to each of the above-mentioned persons. Each letter described the purpose of the study and included the observation schedules, which the researcher intended to use.

The data collection process
The process of data collection was described in two stages, namely:

Stage One
The first observation session was held to observe the curriculum on family planning at one of the nursing campuses in the Northern Province. The schedule of questions, which were generated from information obtained from the literature review, were used to guide the researcher's observations:

Stage two
Forty student nurses were evaluated by means of an observation schedule, which was used for assessing students during practica. The researcher observed how forty (40) fourth-year students provided family planning services to clients.

Data analysis
Data were electronically captured and analysed by the SAS programme. The purpose of the analysis of computerised data was to note the percentage of responses to items. Computer analysis was carried out by using a statistical package known as SAS system (SAS 1985:xv). The t-test was used to determine the significance difference between what was taught in theory and what was actually done in the practical situation (Burns & Grove 1993:782). As the sample was small (n=40), the t-test was the most reliable test to use. (Burns & Grove 1993:507). The t-test was used because the observation sched-
Tutors needed to investigate the possibility of applying a problem-based and community-based curriculum because these forms of experiential learning enable students to develop the necessary clinical skills.

The findings obtained from the practical observation schedule indicated that what was taught in the classroom was not fully applied in the clinical situation. That is, there was a high statistical significant difference (p<0.01) between what was taught and the practical application of that knowledge. Students encountered difficulties in linking the following theoretical contents to the clinical situations namely:

- Related anatomy and physiology, culture (beliefs and practices), administration of a family planning unit, ethical issues, legal issues, pharmacology and emergency contraception. This might be due to the fact that the theoretical content of the curriculum was too idealistic and academic that it bears little relationship to the real needs of clinical practice. These findings concur with those of Chun-Heung and French (1997:458) who noted that if the curriculum is too theory oriented and is not grounded on the realities of clinical practice, it will be difficult when students attempt to integrate theory and practice.

The following theoretical content indicated no significant difference with the practical situation, namely:

- Management of Sexually Transmitted Diseases (STDs) and Human Immuno Virus/ Acquired Immuno Deficiency Diseases (HIV/AIDS). The students could relate the theoretical content of HIV/AIDS and STDs because of the prevalence rate of those conditions and that everyone is talking about them and clients ask a lot about those conditions.

Recommendations

- Projects to enhance student-centered teaching.
- Small group discussions to enhance students' involvement in their learning processes.
- Role play, demonstrations and simulations to develop concrete experiences.
- Values clarification to incorporate value systems, beliefs and practices in the learning process.
- Workbooks to guide students and people who teach them in the clinical situation.

Curationis November 2001
The findings indicated a high statistical significance (P < 0.01). The accompaniment programme classroom teaching responsibility. Acceptors were able to accompany students because they were readily available in the clinical areas. Tutors were not fully involved in doing accompaniment due to lack of time and practice. The findings on accompaniment revealed the following facts:

- Tutors do not perform sufficient degree of accompaniment of students in the clinical area. These findings concur with what Ferguson and Jinks (1994:688) found that the infrequency of tutors visits to the clinical area affects their knowledge of patients and practice in the clinical field and that this hampers their effective guidance of students.
- Tutors rely more on preceptors for clinical accompaniment. Fawcett and McQueen (1994:265) indicated that the use of preceptors led to a separation of tutors from those who teach theory and those teach practice. Apparently those who teach theory were completely withdrawn from the clinical area and this had a negative influence on the integration of theory and practice.

Recommendations

- A programme for accompaniment should be planned for the whole year. Tutors, preceptors, ward staff and students should be involved in this planning process.
- An annual accompaniment programme for tutors, should be drawn to indicate the clinical areas where accompaniment would be done. The programme should indicate clinical areas, which need to be visited, the number of students and the frequency of visits. This would indicate how much accompaniment would be done during that year and might encourage the full involvement of tutors in clinical teaching.

Limitations of the study

This study was conducted in 1999 during the process of rationalisation of the three nursing colleges in the Northern Province founded by the pre-1994 government by combining them into one college. This process of rationalisation led to changes in the curriculum to standardise and to ensure its uniformity with the other two nursing colleges. Since this study was predicated on the old curriculum that existed before this rationalisation took place, various changes (such as those recommended in this research) might already have taken place. The study was limited in scope to the family planning aspect of Community Health Science. It took no cognisance of other fields such as General Nursing Science, Midwifery and Psychiatric Nursing.

Findings from the research could not be generalised to other campuses within the Northern Province or in South Africa because the study focused only on one campus and its clinical area, but the study could be repeated in other nursing colleges to find out if there are problems of integration of theory and practice.

Implications of the study

The findings of the study yielded the following implications applicable to teaching and learning situations:
Effective clinical teaching, accompaniment and teaching strategies that encourage the participation of students are important areas, which enhance the integration of theory and practice in the rendering of family planning services.

Tutors, preceptors and professional nurses have to be accountable and share responsibility for all aspects of nurse training.

All teaching staff needs to cooperate with each other in the performance of clinical teaching and accompaniment.

Because it is desirable that students be given responsibility for their own learning, they should also be involved in the planning process.

The process itself should be learner-driven and tutors should merely act as facilitators of the process.

Nurse educators need to realise that the lecture method is redundant in a setting where the problem- and community based approaches to education are used. The lecture method should only be used to introduce a topic for further discussion and to stimulate and direct students’ own learning efforts.

Conclusion

In conclusion the overall objectives of this study were to ascertain whether what is required in the curriculum is actually being applied in the clinical situation (family planning). Such information would have a direct bearing on the problems that beset the integration of theory and practice. Findings from the research indicated that there were several factors had influenced the integration of theory and practice. The findings made it clear that there was a need for committed and concerted efforts among tutors, professional nurses and preceptors in clinical teaching and accompaniment to render comprehensive care to the family planning clients of the Northern Province.

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