

Theory-practice integration in selected clinical situations

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Abstract

The current changes in health care systems challenge knowledgeable, mature and independent practitioners to integrate theoretical content with practice. The aim of this study was to investigate the problems of integrating theory with practice in selected clinical nursing situations. The study focused on rendering of family planning services to clients as a component of Community Nursing Science.

Structured observation schedules were used to observe the theoretical content of the curriculum as well as the practical application of what has been taught in the clinical area.

The findings of the study revealed that there was a need for an integrated holistic curriculum, which would address the needs of the community. It was concluded that a problem-based and community-based curriculum, intersectoral collaboration between college and hospital managements and student involvement in all processes of teaching and learning would improve the integration of theory and practice. There also appeared to be a need for tutors to be more involved in clinical teaching and accompaniment.

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 de-

clined 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 Gorenberg (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 correlational 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 researchers 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-

ule for theory was used as a criterion to observe whether what was taught was actually applied to the practical situation.

Results and Discussion

Results were categorised under three main headings identified at the beginning of the study as objectives. The observations made at the clinical as well as theoretical environments were summarised as follows:

The extent to which the curriculum allowed for the integration of theory and practice.

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

- Tutors needed to investigate the possibility of applying a problem-based and community-based curriculum because these forms of experiential learning emphasize the consistent integration of theory, skills and attitudes within the nursing profession (Van Aswegen & Van Niekerk 1993:37).
- The application of problem-based and community-based curriculum encouraged shifting from a block system, which separate theory from practica.
- Problem-based learning should ensure that (1) the curriculum is organised around problems rather than discipline, (2) the curriculum is an integrated one rather than one which is separated into clinical and theoretical components, and (3) there will be an inherent emphasis on cognitive skills as well as on knowledge (Bruhn 1992:161).
- Community-based teaching involves addressing problems in the community. Thus tutors should involve

community members (such as traditional leaders and civic members in issues related to family planning), who will enhance the integration of cultural issues in family planning, effective if used as an integrated curriculum. An integrated curriculum should encourage a holistic approach to nursing care and enhance the integration of theory and practice. This would mean that family planning, as a component of Community Nursing Science, should be integrated with General Nursing, Midwifery and Psychiatric Nursing.

The extent to which teaching strategies and media were utilised and how clinical teaching could enhance the integration of theory and practice.

Data was gathered by asking tutors and students questions such as Who does clinical teaching during the period of clinical allocation?

Findings from the observation sessions indicate a 100% response regarding the use of the following teaching strategies: Demonstrations, simulations, lectures and workbooks. Problem-based teaching and small group discussions were used less frequently that is only 27,5% of the respondents indicated a positive response thereof.

The most commonly used teaching media for family planning included: charts, realia used in family planning services, whereas video tapes, slides, audio tapes and computer-assisted learning programmes were not available.

Clinical teaching was mostly done by preceptors. The findings revealed a 100% positive response, whilst a low response of 45% was on tutors doing clinical teaching. From these findings it appears that tutors seem to have difficulties in teaching students in the clinical area as frequently as possible. These findings concur with those of Jones in Bailie (1994:151) who found that tutors gave clinical teaching a low priority and that this could impact negatively on the integration of theory and practice.

Recommendations

The teaching strategies should be congruent with the curriculum, tutor, content and learner. Should the curriculum be problem- and community-based, the teaching strategies used should address the needs arising in problem- and community-based curricula. The following teaching strategies could be introduced:

- Problem-based teaching to develop problem-solving skills.
- Projects to enhance student-centered teaching.
- Small group discussions to enhance students= involve-ment 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.

- Other teaching strategies, which tutors should use to enhance problem-solving skills included: seminars, clinical conferences, case presentations and learning packages.
- In-service training and discussion groups on the use of different teaching strategies could be done to update tutors, preceptors and other professional nurses in the wards.
- Workshops should be conducted on the use of problem based teaching, projects, learning packages and other teaching strategies of which tutors could make better use.
- Holbert and Thomas (1988:31) indicated that there should be a balance between theoretical and practical learning so as to ensure integration of theory and practice (theory and practice should ideally complement each other). Most of the available time should be spent in the clinical area rather than in the classroom because this would encourage the use of other teaching strategies such as problem solving, case studies, projects and demonstrations.
- Communication between college tutors, preceptors and professional nurses in the clinical area should be developed so as to ensure involvement of everyone responsible for clinical teaching including professional nurses from clinical area as they should be able to fit clinical teaching to their daily programme of providing care thus bringing in a balance between clinical teaching and nursing care.
- Professional nurses and preceptors should have regular meetings with the college preceptors and professional staff so that theory could be better applied in the clinical situations.
- Programmes should be compiled for the tutors to work in the wards/clinics with the students as part of the multi disciplinary team.

The influence of accompaniment on the integration of theory and practice

The following observations were made to find out who was responsible in doing accompaniment and if there was a programme in place to accompany students in the clinical areas.

Ferguson and Jinks (1994:688) and Fawcett and McQueen (1994:266) described the different problems of accompaniment encountered by tutors in the clinical settings. Their findings concurred with the findings indicated below.

From the findings preceptors were mostly involved in accompaniment whilst tutors were not involved at all times. These findings showed a high statistical significant difference ($p < 0,01$). The findings meant that tutors were not doing what they were expected to do according to the curriculum. Preceptors 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 classroom teaching responsibility.

The accompaniment programme

The findings indicated a high statistical significance ($P < 0.01$) and this meant that the planned times for accompaniment

demanded by the curriculum were not adhered to. Tutors could only visit the clinical area once a month.

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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