



This is the **author's version** of a work that was **accepted** for publication after peer review. This is known as the post-print.

Citation for author's accepted version

Dunn, Sandra V. and Hansford, Brian. (post-print). Undergraduate nursing students' perceptions of their clinical learning environment. Retrieved from <http://espace.cdu.edu.au/view/cdu:46228>

Citation for publisher's version

Dunn, Sandra V. and Hansford, Brian (1997). Undergraduate nursing students' perceptions of their clinical learning environment. *Journal of Advanced Nursing*,25(6):1299-1306.

Notice: *The publisher's version of this work can be found at:*

<http://dx.doi.org/10.1046/j.1365-2648.1997.19970251299.x>

Undergraduate nursing students' perceptions of their clinical learning environment

Authors:

Sandra V. Dunn, RN, PhD, FRCNA
Senior Lecturer
School of Nursing
Queensland University of Technology
Brisbane, Qld,

Brian Hansford, PhD
Professor and Head
School of Professional Studies
Queensland University of Technology
Brisbane, Qld.

Abstract

The clinical learning environment (CLE) is an interactive network of forces influencing student learning outcomes in the clinical setting. This study used mixed methods to identify factors characterizing students' perceptions of the CLE. The sample consisted of 229 undergraduate students in the second or third year of their biophysical nursing strand. The five subscales of the Clinical Learning Environment Scale, 'staff-student relationships', 'nurse manager commitment', 'patient relationships', 'student satisfaction' and 'hierarchy and ritual', were supported by qualitative data obtained from student interviews. Interpersonal relationships between the participants in the CLE were crucial to the development of a positive learning environment. Student satisfaction with the CLE was both a result of, and influential in creating, a positive learning environment. Nurse educators, clinical venues, and all others participating in the undergraduate nursing students' clinical education, must collaborate in order to create a CLE which promotes the development of well-educated registered nurses capable of providing safe, cost-effective patient care.

Introduction

Clinical education is a major component of the undergraduate nursing curriculum. In order to practice safe, beginning level nursing care, new graduates must have developed not only the theoretical knowledge on which to base their care but the practical application skills required to implement that knowledge. It is in the arena of clinical education that the undergraduate nursing student has the opportunity to develop those crucial application skills. The clinical learning environment has been defined as 'an interactive network of forces within the clinical setting which influence the students' clinical learning outcomes' (Dunn & Burnett, 1995). The clinical learning environment may influence the development of student attitudes, psychomotor skills, knowledge and clinical problem solving abilities (Bloom, 1964; Dunn, 1992; Grahn, 1987; Keeves, 1972; McRobbie & Fraser, 1993).

Previous authors have noted the influence of various factors on student perceptions of their clinical learning environment. Orton (1981), Fretwell (1980) and Pembrey (1980) have described the influence of the nurse manager (NM) in determining the attitudes of staff towards nursing students and the quality of the teaching which the student encounters during the clinical experience. Jarratt (1983) referred to the issues which have created recurrent problems for nursing students, including student schedules which do not correspond to unit shift changes, areas of high workload in which the students are resented as learners when workers are needed, conflicting documentation expectations between the clinical area and the classroom, and structuring of student teaching and assessment. Jarratt (1983) stated the students all too often found themselves the losers in the 'faculty-staff-student triad on nursing units' and asserted that maintenance of a good working relationship between unit staff and faculty was crucial to the development of a good clinical learning environment. The aim of this study was to describe factors influencing undergraduate nursing students' perceptions of their clinical learning environments.

Sample

All second and third year students in the biophysical strand of the undergraduate nursing course at a large university school of nursing in Brisbane, Australia, were invited to participate. These students were participating in a clinical placement of 1 day per week for a period of 8 weeks. Biophysical strand clinical placements included medical, surgical, medical-surgical, orthopaedic, oncology, paediatric, maternity, operating theatre, intensive care, intermediate care, cardiology, plastic surgery, rehabilitation and ophthalmology units.

A total of 229 undergraduate students in the second or third year of their biophysical nursing strand participated in the study. Of this total, 55.9% (n = 128) were in their second year of the programme, with the remainder in the third year. The sample was 15.5% male and 84.5% female. Over 72% (n = 167) of the sample were between the ages of 19 and 22, with a range of 18 to 38 years, and a mean of 22 years 2 months.

Methods

Both quantitative and qualitative methodologies were used to address the research questions. The simultaneous use of qualitative and quantitative methods allowed the researcher to integrate the empirical, interpretive and critical research paradigms, thereby providing a contextually rich portrait of the study setting. This multi-method design served two purposes: triangulation, or validation of findings through use of methods with differing biases to investigate the same concepts with convergent approaches, and complementarity, that is use of the differing methodologies to provide a more complete picture of the study than that which could be obtained using either method singularly (Breitmayer et al., 1993; Greene et al., 1989). As a consequence, it seems reasonable to suggest that greater confidence can be placed in the study findings as one methodological stance informs and enhances the other.

The Clinical Learning Environment Scale (CLES) (Dunn & Burnett, 1995) was used to collect quantitative data on the student perceptions of their clinical learning environments. The CLES and demographic data were collected at the conclusion of the students' clinical experience. The CLES is a 23-item instrument with five subscales: staff-student relationships, nurse manager commitment, patient relationships, interpersonal relationships and student satisfaction (Table 1). It had been previously tested with a sample of 423 undergraduate nursing students and was shown to have strong substantive face validity, and construct validity as determined by confirmatory factor analysis. Reliability coefficients for the subscales ranged from high ($r = 0.85$) to marginal ($r = 0.70$) (Dunn & Burnett, 1995). Demographic data collected included year of the nursing programme in which the student was enrolled, age, gender, employment patterns, and previous nursing experience.

Insert Table 1. Clinical Learning Environment Scale

Qualitative data were collected by means of focus group interviews which were conducted throughout the clinical education experience. In selecting an appropriate sample for the student interviews ($n = 42$), a theoretical sampling technique (Chenitz & Swanson, 1986) was used to include the students on units which had been identified during the pilot study as having extremely good or extremely poor clinical learning environments (top and bottom 5% of the pilot sample). In addition, the sample was selected to obtain data from a wide range of settings, for example public and private hospitals, a variety of patient care specialties, and small and large institutions. Students were asked to describe their impressions of their unit as a clinical learning environment, and comment on characteristics of a clinical learning environment. All interviews were conducted by the researcher, audio-taped, then transcribed.

Written informed consent was obtained from all students prior to their participation in the study. Further verbal consent was obtained prior to interviews. Students were free to not participate in the study, or to withdraw at any time. Student numbers were used to facilitate matching of data, but all identifying information was removed prior to data analysis and reporting.

Data analysis

The Statistical Package for Social Sciences (SPSS) (Chicago, Illinois) was used to perform statistical analyses. Demographic data were described using frequencies, means, standard deviations and ranges as appropriate. The CLES was analysed using factor analytical, reliability, and interscale correlational techniques. MANOVA was used to examine differences between the demographic groups in relation to students' perceptions of the clinical learning environment. Multivariate analysis of variance was followed by univariate analysis and further defined using a Tukey post hoc procedure. A level of significance of 0.05 was adopted for the quantitative analysis.

Qualitative data analysis, that is the organization and interpretation of the responses obtained during the student interviews, was used to combine sections of the data in a variety of configurations in an attempt to find common meanings and themes. These themes were then organized into logical patterns and categories which provided the framework on which data interpretation proceeded (Miles & Huberman, 1984; Morse, 1991). These qualitative categories and interview comments were integrated with the results from the quantitative data analysis, thereby providing a vivid portrait of nursing students' perceptions of the clinical learning environment. This portrait is outlined by the subscales and items of the CLES, and coloured with students' comments describing how those items influenced their learning environments.

Results and discussion

The five factors identified through the CLES-'staff-student relationships', 'nurse manager commitment to teaching', 'patient relationships', 'student satisfaction', and 'hierarchy and ritual'-were used to guide

the integration of the qualitative and quantitative data as they were compared and contrasted with the characteristics identified during qualitative data analysis.

Staff-student relationships

The items forming the subscale 'staff-student relationships' highlighted the major influence of the nursing staff on the students' perceptions of the clinical learning environment. Items with the highest factor loadings were on this scale and their factor loadings included:

- 'Our questions are usually answered satisfactorily' (0.82);
- 'All staff on the unit, from the nurse manager to the newest student, feel part of a unit team' (0.77); and
- 'This was a happy unit for both patients and nurses' (0.75).

These items highlighted the importance the students attached to the willingness of the registered nursing (RN) staff to engage in a teaching relationship and to accept the student as a learner with a legitimate role on the team.

The qualitative category 'attitudes' described the attitudes participants in the clinical environment displayed towards one another. These participants included the RN staff, unit nurse manager, clinical facilitator, student, and other staff on the unit such as the physicians, pharmacists and physiotherapists. The attitudes identified during data analysis were

- (a) the warmth and rapport demonstrated between the participants,
- (b) the support provided in gaining access to learning experiences, and
- (c) the willingness of the participants to engage in a teaching relationship.

Interview comments characterizing the influence of the RN staff on student perceptions of the clinical learning environment included:

'They [the staff RNs] were receptive to students and went out of their way to educate you on certain things, what you were doing, why you were doing it. It was good';

'The [RNs] attitude towards student nurses was great. It makes a huge difference'

or the occasional negative comment,

'There are older [RNs] that haven't gone through the university and they just hate students. They get really frustrated with us'.

Comments such as these served to identify and define the subcategory 'attitudes-RN staff'.

The category 'attitudes' mirrored the dimensions of the clinical learning environment described by the subscale 'staff-student relationships'. In both the quantitative and qualitative data, the areas of import were rapport, teaching and access to learning opportunities. These areas are analogous to those found in the literature on learning environments. Keeves (1972) described the 'principal actors' in the learning environment and stated that it was through the interaction of the individual and the learning environment, including these principal actors, that a change in the individual's performance was achieved.

Fretwell (1980) noted that poor staff relationships and a lack of staff commitment to teaching presented a major constraint to student learning. Poor staff relationships contributed to negative student perceptions of the clinical learning environment for 74% of the students, and inadequate teaching was a factor for 85%. Given the current study's findings of the importance of a warm and

supportive relationship between staff and students, the role of staff in providing access to learning experiences, and need for staff to willingly engage in a teaching relationship, it is not surprising that Fretwell found this area to be of major importance to student learning. Students must be allowed to ask questions, engage in learning opportunities and be accepted as legitimate members of the unit team.

There were areas of minor divergence between the qualitative and quantitative data in the current study. The role of the clinical facilitator and of staff members other than the RNs and nurse manager (NM) in influencing students' perceptions of the clinical learning environment each received prominent mention in the qualitative data but not in the CLES. The clinical facilitator was seen to be both a teacher, providing clinical information and facilitating the link between theory and practice, and a liaison between the students and the unit staff. Interview comments included: '[The clinical facilitator] will walk into the unit and she will say "Look this needs to be done to these students" and clears it up, clarifies all the whole nursing staff, so they can aim towards you then. Also if your nurse doesn't have time to explain some things to you, you can grab the tutor and she can go through it with you again to clarify things'.

In contrast to Jarratt's (1983) view that the role of the clinical facilitator was primarily one of mediator and negotiator, with limited involvement in direct clinical teaching, students in the current study perceived the clinical facilitator as both teacher and liaison. Other researchers have recognized both roles of the clinical facilitator in describing the attributes of an effective clinical teacher (Daggett et al., 1979; Knox & Mogan, 1985; Marriott, 1991; O'Shea & Parsons, 1979).

In the current study, staff other than the RNs and the NM were also perceived as fulfilling a direct teaching role:

- *'The doctor started asking me all these questions...he started explaining. He was always there sort of teaching me',*
- *'I found the one physio that I've spent a lot of time with. He's been great, telling me about all the different problems, what they've had done, and explaining it fully',*
- *'The pharmacist was there. I went and asked her and she was only too happy to help me'.*

Further, the interpersonal relationships between the nursing and non-nursing staff were seen to have an impact on the students' perceptions of their clinical learning environment:

- *'The physios worked really well with the RNs; they have respect both ways. It's good that way. They even filtered through to us'.*

This aspect of the learning environment has not been well explored in the literature.

Nurse manager commitment

A further area of commonality between the qualitative and quantitative data in the current study was the students' perceptions of the role of the NM in establishing and maintaining the clinical learning environment. Items and factor loadings in the NM commitment subscale of the CLES described the NM's influence on valuing the student as a learner, and participating in the student's teaching and learning:

- *'The NM devotes a lot of her/his time to teaching nursing students' (0.90),*
- *'The NM attaches great importance to the learning needs of nursing students' (0.84)*

or, on a contrary note,

- *'The NM here was too busy with more important matters to be able to spend time with us' (0.63).*

An interview comment from one of the students typified students' perceptions of the pivotal role the NM assumed in influencing the attitudes of the entire unit:

- *'The NM has a lot to do with how everyone else under her, like the RNs and the (charge nurses), how they run...when they're happy, it filters out to us. So if you have a really good NM and everyone is at ease, not stressed, well, the RNs help us and we sort of help them. We feel good and fit in'.*

The importance of the NM in providing individual teaching opportunities and promoting an environment for teaching and learning was also noted:

- *'She's a great NM...even if she's busy it's like she'll stop and give you a full explanation of whatever you want to know'.*

Pembrey (1980), Fretwell (1980) and Orton (1981) focused on the role of the 'unit sister' in establishing the clinical learning environment. Their work described the intimate interweaving of the effects of the NMs' attitudes in determining not only the learning environment as experienced by the students, but the staff work environment, and the patient care environment. In the current study the CLES subscale 'NM commitment' was moderately correlated with the subscales 'staff-student relationships' ($r = 0.64, p < 0.001$), 'patient relationships' ($r = 0.42, p < 0.001$), and 'student satisfaction' ($r = 0.48, p < 0.001$). These results supported earlier findings, indicating the pivotal role of the NM in influencing all aspects of the unit environment. Despite the variations in the context of nursing education over the past 15 years, the NM remained a key player in determining the clinical environment in which nursing students learn.

Patient relationships

In the CLES, 'patient relationships' was one of the subscales characterizing the clinical learning environment. Items and factor loadings on this subscale included:

- 'Nursing care is individualized for each patient on this ward' (0.72),
- 'Patient allocation, rather than task allocation, is the practice on this ward' (0.67), and
- 'The patients' needs really are given first priority' (0.66).

Interview comments on students' perceptions of attitudes towards patient care bore a striking similarity to the items from this subscale. Individualized patient care was demonstrated by alteration of routine practice to suit patient needs, for example:

- *'They said they don't have [nursing diagnoses] there in the care plans [because] they would have the neuro patients reading their care plans and that they had "potential for something"...and apparently that was distressing people'.*

Patient needs were also placed first in the student assignments:

- *'Some of the patients...don't want to be attended to by student nurses. You just don't go to that patient; you get assigned to someone else. We can understand that'.*

Patient allocation as contrasted to task allocation was the norm on most units. On occasion this system worked against the students:

- *'She [the RN] gave me two patients one day with nothing to do. John [another RN] was doing something else and asked if I wanted to do it. She said "No, that's not your patient". I wasn't allowed to do it'.*

In contrast, a unit which had evolved a strong team approach to patient care was perceived by the students as very accepting of students:

- *'The attitude towards student nurses was great...you are wanted'.*

The attitude with which the RNs approached patient care often seemed to reflect their attitudes towards the nursing students.

Student satisfaction

A final common theme in the qualitative and quantitative data involved the importance of the students' attitudes towards the other participants in the clinical learning environment and their own learning. The items in the 'student satisfaction' subscale of the CLES were related to the importance of the students' own attitudes in relation to the clinical learning environment. Items and factor loadings included:

- 'I am happy with the experience I have had on this ward' (0.95),
- 'This was a good unit for my learning' (0.92), and
- 'The work I did was mostly very interesting' (0.86).

This subscale demonstrated the highest reliability and factor loadings, and was significantly related to all other subscales ($p < 0.001$).

The relationship between students' attitudes and their perceptions of the clinical learning environment was clear in the interview data as well as the CLES. Students felt it was important for them to play an assertive role in ensuring their own best learning. The comments which illustrated this category included:

- *'There is so much here to learn because of the different areas that you are involved in and if you have got a free moment then you can sit down and learn about something', and*
- *'At this stage you want to be developing skills and developing your own learning as you've got the basic stuff down pat. It is important'.*

The current study supported earlier work in recognizing the relevance of student satisfaction. Orton (1981) described student satisfaction with the learning experience as a characteristic of 'high student orientation' units. These units were also described as recognizing and valuing the student as a learner, and possessing a high degree of staff support and morale. The current study showed the CLES subscale 'student satisfaction' to have the highest inter-subscale correlation with the subscale 'staff-student relationships' ($r = 0.71$, $p < 0.001$), supporting Orton's recognition of the importance of staff attitudes in influencing student satisfaction.

Although student satisfaction is related to student perceptions of the clinical learning environment, one cannot assume that the relationship is causal. It is probably reasonable to assume that student satisfaction is partially a result of a positive learning experience, and that the more satisfied student will be more likely to find further opportunities for a positive learning experience. These complementary perspectives are supported by the current study. The items in the CLES subscale 'student satisfaction' seem to indicate that student satisfaction is an outcome of the positive learning environment, whereas the qualitative data generate a more proactive perspective, indicating that students are to some extent responsible for the development of their own learning environment and learning outcomes. This dual role of human relationships is highlighted in organizational theory and plays a key part in understanding the results obtained from the CLES subscale 'hierarchy and ritual'.

Hierarchy and ritual

Items in the CLES subscale of 'hierarchy and ritual' contained elements relating to both the relationships between participants and the organizational culture of the clinical learning environment. These items and factor loadings included:

- 'Nursing students are expected to obey registered nurses' instructions without asking questions' (0.64),
- 'There was too much ritual on this ward' (0.60),
- 'Nursing students learn more from other students on the unit than from the nursing staff' (0.53), and
- 'The NM does not usually explain instructions coming from a higher level to registered nurses' (0.40).

This subscale produced the lowest factor loadings and reliability coefficient of all the CLES subscales during the final study. It had proven, however, to be a reliable and valid measure during an earlier large sample study (Dunn & Burnett, 1995). It was not appropriate to modify or delete the subscale based on the result for the smaller and more restricted sample in the current study as such samples are more likely to produce sampling errors (Woods & Catanzaro, 1988; Burns, 1994).

The 'hierarchy and ritual' subscale contained items relating to aspects of relationships between the various participants in the clinical learning environment as well as elements of organizational culture as defined by Reichers and Scheider (1990). There is some overlap with the characteristics of the clinical learning environment as described by the CLES subscales 'staff-student relationships', 'NM commitment' and 'patient relationships'. According to Argyris (1972), the human interactions within the organization underpin the structure and hierarchy of the organization. Fretwell (1980) argued that a highly structured environment with a strict hierarchical system was unlikely to meet the students' learning needs. Students' perceptions of their clinical learning environment as depicted by the CLES subscale 'hierarchy and ritual', and their interview comments, seemed to support Argyris' (1972) and Fretwell's (1980) conclusions.

The qualitative category 'organisation' addressed the same influences identified by the 'hierarchy and ritual' subscale and painted a contextually rich portrait of the impact the organization had on students' perceptions of their clinical learning environment. This category dealt with the organizational arrangements made by the clinical venue to meet student learning needs in the clinical learning environment. The subcategories under this section were:

- organizational policies related to nursing students;
- the clinical venue's awareness of the students' learning needs;
- the skills of the RN staff including both their patient care and teaching abilities; and
- the manner in which students' patient assignments were arranged.

Student interview comments reflected the frustration they felt in the limitations organisational hierarchy and ritual sometimes imposed on their learning:

- *'You feel restricted sometimes by the policy that a nurse had to be there to give medication...it's really hard to keep to a time, any time limit at all because you spend the whole day waiting for someone else', and*
- *'I've also found one of the things quite difficult, that being students and not being here every day, when we have handover, sometimes we're not even told what the patient has. Because people work here every day or every second day, then they know what's going on and a lot of the staff don't realise that we don't know. You have to spend half the day sort of just finding out what [the patients] had before you can help them'.*

Interview comments and the CLES subscales merged to describe a unit hierarchy lacking awareness of the students' learning needs, in which organisational arrangements did not foster the students' growth as nursing professionals.

Student comments also addressed the skills of the RN staff, including both their patient care and teaching abilities. It was apparent from the interviews that the ability to teach as addressed in this category was not synonymous with willingness to teach, which was addressed under the 'attitudes' section:

- *'There are a lot of new graduates on the unit as well, so they're just learning themselves. Half the time you think "Do you know what you're doing?" You think sometimes that you know more than they do'.*

If the nursing staff were lacking in patient care and teaching abilities, and if the students perceived the staff were unable to meet their learning needs, the students were forced to rely on their peers to achieve their learning objectives, learning more from other students than from the staff.

Grahn (1987) reported on the deleterious effects a clinical setting caught in the incessant demands of completing tasks will have on student learning. Considering the multiple participants in a clinical setting and the varied objectives which they bring to that setting, it is clear that the ability to meet those varied goals and achieve optimum outcomes will be best found within a unit hierarchy which is not bound by ritual and tradition but is able to respond to the changing needs of the participants in that organisational unit.

Summary

In both the quantitative and qualitative data, the impact of a broad range of people on nursing students' perceptions of their clinical learning environment was readily apparent. The nursing staff, unit NM, students and other staff on the unit were each identified in both the qualitative and quantitative data. The CLES subscales 'staff-student relationships', 'NM commitment', and 'patient relationships' all described aspects of the students' relationships with various participants in the clinical setting. In addition, the attitudes of the RN staff to patient care were described as important to the students' perceptions of their clinical learning environment in both the qualitative and quantitative data. Students' satisfaction with their clinical experience, and the hierarchy and ritual of the clinical unit, were two further factors influencing students' perceptions of their clinical learning environment. These factors correspond to aspects of previous studies which have indicated a positive relationship between satisfaction and learning environment, and demonstrated the role of hierarchy and ritual in influencing the organisational culture.

Recommendations

These results suggest that collaboration between the higher education and health care sectors is essential if the clinical learning environment is to best meet the needs of undergraduate nursing students. With the constraints imposed by current reforms in both health and education, it is critical that partners remember the benefits they stand to gain if they work together to best meet the requirements for well-educated registered nurses with both the creativity and practical skills to provide safe, cost-effective patient care.

- Clinical settings and university schools of nursing should collaborate in the establishment of creative models for clinical education which will take into account current health and education socio-economic reforms.

Keeves (1972) hypothesized that process, attitudinal and structural dimensions, in that order, would be predictive of educational outcome. The results of his study did not support that hypothesis. Nor do the results of the current study. The characteristics of the learning environment identified in this

study were: staff-student relationships, NM commitment, patient relationships, student satisfaction and hierarchy and ritual.

Of these five characteristics, student satisfaction was consistently identified as the most reliable index of clinical learning environment. The results of this study indicate that student satisfaction was both a cause and effect of a positive learning environment. A productive, stimulating and supportive environment created more satisfied students, and more satisfied students facilitated the achievement of a more effective clinical learning environment.

- Students should be encouraged to recognize the influence they exert over their own clinical learning environment, and to proactively work to create the kind of environment which will best meet their learning needs.

The registered nursing ward staff were the most influential participants, apart from the students themselves, in the clinical learning environment. They were the gatekeepers and guides to learning opportunities, and the students' most consistent link between the educational and workplace demands of the clinical environment. If the registered nurses fulfilled their role effectively and supported the students in their professional development, the students were more likely to perceive a positive clinical learning environment. If the registered nurses were unresponsive to student needs, students' learning outcomes were compromised.

- Participation in student education should be an expected and valued part of the registered nurse's role. Registered nursing staff on wards in which students undertake clinical learning experiences should be adequately prepared and supported for their role in student learning.

While students require adequate guidance and support in their learning, they also require appreciation for their contribution to quality patient care. Students need to be valued and included as members of the ward team. In this study, the NM was perceived to exert a major influence on the establishment and maintenance of the ward team, and was vital to the acceptance of the students as learners and patient care providers. The clinical facilitator was seen as invaluable to negotiating the acceptance of the student onto the ward team, with a central role between the university and the clinical setting. The relationship between the NM and clinical facilitator influenced the attitudes with which the other participants in the learning environment approached the students.

- The NM and clinical facilitator should cooperate in the development and implementation of strategies to enhance the acceptance of students as fully participating members of the ward team.

This study also highlights several areas requiring further research. The registered nursing staff exert the greatest influence on student learning of all the participants in the clinical learning environment. Further research is needed to define the best methods for preparing and supporting the registered nursing staff in this role. The Clinical Learning Environment Scale requires further testing with a diverse range of samples in order to determine its reliability and validity with other populations. Finally, with the rapid expansion of postgraduate specialist nursing education in the tertiary education sector, further research to define the characteristics and influences of the clinical learning environment for postgraduate specialty nursing students would be valuable.

Conclusion

The results of this study may assist nurse educators to identify and measure factors within the clinical learning environment which influence student learning outcomes. The clinical learning environment as it exists for and influences the Australian undergraduate nursing student may be characterized by five factors: staff-student relationships, NM commitment, patient relationships, student satisfaction, and hierarchy and ritual. Interpersonal relationships play an enormous role in students' perceptions of

the clinical learning environment. Registered nursing staff, the NM and patients are major figures in the development of students' interpersonal relationships. Effective collaboration between the health care and tertiary education sectors is crucial if students are to achieve optimum learning outcomes. Finally, multiple methodology research offers a valuable tool for the investigation of issues in nursing education. It provides a complete, comprehensible and compelling view of the educational setting in a manner that is valuable at both the micro and macro levels.

References

- Argyris, C. (1972). *The Applicability of Organisational Sociology*. Cambridge University Press, Cambridge.
- Bloom, B.S. (1964). *Stability and Change in Human Characteristics*. John Wiley & Sons, New York.
- Breitmayer, B.J., Ayres, L. & Knafelz, K.A. (1993). Triangulation in qualitative research: evaluation of completeness and confirmation purposes. *Image: Journal of Nursing Scholarship* 25, 237-243.
- Burns, R. (1994). *Introduction to Research Methods in Education (2nd edn)*. Longman Cheshire, Melbourne.
- Chenitz, W.C. & Swanson, J.M. (1986). *From Practice to Grounded Theory*. Addison Wesley, Menlo Park, California.
- Daggett, C., Cassie, J. & Collins, G. (1979). Research on clinical teaching. *Review of Education Research* 49(1), 151-169.
- Dunn, S.V. (1992). Orientation: the transition from novice to competent critical care nurse. *Critical Care Nursing Quarterly* 15, 69-77.
- Dunn, S.V. & Burnett, P. (1995). The development of a clinical learning environment scale. *Journal of Advanced Nursing* 22, 1166-1173.
- Fretwell, J.E. (1980). An inquiry into the ward learning environment. *Nursing Times, Occasional Papers* 76, 69-75.
- Grahn, G. (1987). *Educational Situations in Clinical Settings*. Uppsala University, Uppsala.
- Greene, J.C., Caracelli, V.J. & Graham, W.F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis* 11, 255-274.
- Jarratt, V.R. (1983). 'The time has come' the Walrus said, 'to talk of many things'. *Nursing and Health Care Nov.*, 498-503.
- Keeves, J.P. (1972). *Educational Environment and Student Achievement*. Almqvist & Wiksells, Stockholm.
- Knox, J. & Mogan, J. (1985). Characteristics of 'best' and 'worst' clinical teachers as perceived by university faculty and students. *Journal of Advanced Nursing* 12, 331-337.
- Marriott, A. (1991). The support, supervision, and instruction of nurse learners in clinical areas: a literature review. *Nurse Education Today* 11, 261-269.
- McRobbie, C.J. & Fraser, B.J. (1993). Associations between student outcomes and psychosocial science environment. *Journal of Educational Research* 87, 78-85.
- Miles, M. & Huberman, A. (1984). *Qualitative Data Analysis: A Sourcebook of New Methods*. Sage, Newbury Park, California.
- Morse, J. (1991). Approaches to qualitative-quantitative methodological triangulation. *Nursing Research* 40, 120-123.
- Orton, H.D. (1981). *Ward Learning Climate*. Royal College of Nursing, London.

O'Shea, H.S. & Parsons, M.K. (1979). Clinical instruction: effective and ineffective teacher behaviors. *Nursing Outlook* June, 411-415.

Pembrey, S. (1980). *The Ward Sister-Key to Nursing*. Royal College of Nursing, London.

Reichers, A.E. & Scheider, B. (1990). Climate and culture: an evolution of constructs. In *Organisational Climate and Culture* (Scheider B. ed.), Jossey-Bass, San Francisco, pp. 1-39.

Woods, N.F. & Catanzaro, M. (1988). *Nursing Research: Theory and Practice*. C.V. Mosby, St Louis.

Table 1: Clinical Learning Environment Scale

Staff-Student Relationships

1. All staff on the unit, from the CNC to the newest student, feel part of a health care team.
2. In planning the shift, allowance is made for postgraduate nursing students to gain the widest possible experience.
3. This was a happy ward for both patients and nurses.
4. *I did not feel I was treated as an individual, but rather as 'just another student'.
5. We are generally able to ask as many questions as we want to.
6. Our questions were usually answered satisfactorily.

Hierarchy and ritual

1. *The NM does not usually explain instructions coming from a higher level to Registered Nurses.
2. *Nursing students learn more from other students on the unit than from the nursing staff.
3. *Nursing students are expected to obey Registered Nurses' instructions without asking questions.
4. *There is too much ritual on this ward.
5. *The NM regards the nursing student as a worker rather than as a learner.

Nurse Manager Commitment

1. The NM devotes a lot of her/his time to teaching nursing students
2. The NM has a teaching programme for students on this ward
3. The NM attaches great importance to the learning needs of nursing students.
4. *The NM here was too busy with more important matters to be able to spend time with us.

Patient Relationships

1. Patient allocation, rather than task allocation, is the practice on this ward.
2. Nursing care is individualised for each patient on this ward.
3. The patients' needs really are given first priority.
4. Learning aids such as books/articles are available to nursing students on this ward.

Student Satisfaction

1. This was a good unit for my learning.
2. The work I did was mostly very interesting.
3. I am happy with the experience I have had on this ward.
4. This experience has made me more eager to become a Registered nurse.

* Reverse scoring

(Dunn S.V. & Burnett P. 1995)