BRIEF REPORT

Perceptions of nursing students trained in a new model teaching ward in Malawi

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Abstract

This study aimed to investigate the perceptions of nursing students trained in a new model teaching ward in Malawi. A total of 90students from five nursing colleges were randomly assigned to one model ward and two ordinary wards in a single teaching hospital. The students were administered a revised version of the Student Evaluation of Clinical Education Environment questionnaire. Significant differences among the three wards were found in all items in the communication/feedback subscale, with the exception of the item "nursing staff provided constructive feedback" (P = 0.162). Within the learning opportunities subscale all items showed significant differences among the three wards, whereas 50% of the items in the learning support/assistance subscale had significantly different responses among the three wards. Within the department atmosphere subscale, no significant differences were found in the items assessing whether an adequate number and variety of patients were present in the ward (P = 0.978). The strategies that are being implemented to improve the educational environment showed positive results. Students scored the model teaching ward highly. Students who underwent precepting in the model teaching wards reported having more learning opportunities and a positive learning environment.

Key Words: *Atmosphere; Nursing education; Teaching hospitals; Learning; Malawi*

Nursing education in Malawi has followed the traditional approach, in which students participate in a clinical practice component after completing the theoretical component of the curriculum. The Nurses and Midwives Council of Malawi prescribes that students spend two thirds of the duration of their educational program in practice in order to gain adequate clinical competence. However, Msiska et al. [1] reported problems with clinical education in Malawi. The clinical learning environment is characterized by poor attitudes of nurses towards students, a shortage of qualified staff to teach students, and a gross lack of teaching and learning resources. In order to overcome this situation, the Malawian government has embarked on a set of transformative reforms to improve the qual-

ity of nursing education [2]. Four wards from four teaching hospitals were selected and developed into model teaching wards by the Ministry of Health, with financial support from the International Center for AIDS Care and Treatment Programs through the Nursing Education Partnership Initiative project. The Nursing and Midwifery Department at Mzuzu University provided technical support. The model teaching ward project is one of several efforts to provide a high-quality and productive learning environment for nursing students. The model wards have been equipped with basic clinical resources appropriate for training nursing students. A team of nursing experts provides quarterly supportive supervision in these wards to help students during their training period. Moreover, a considerable number of registered nurses from these model teaching wards have been trained as clinical preceptors. This study described students' experiences with the clinical learning environment in a model teaching ward and two ordinary wards at a single teaching hospital.

Subjects: Five nursing colleges assigned students to clinical practice at a single central hospital in Malawi. This study included both male and female nursing students who were in the second or third years of their nursing programs, because such students have already acquired clinical experience in other ward settings. A total of 90 students, including 30 students from one model ward and 30 students each from two ordinary wards, were randomly recruited into the study over a period of six months from June 2013 to December 2013.

Questionnaire and data collection: The participants in this study were administered a revised version of the Student Evaluation of Clinical Education Environment (SECEE) inventory [3], designed and validated to assess and provide information on the quality of the students' clinical learning environment. The SECEE survey is based on the theoretical framework of cognitive apprenticeship, which emphasizes that students apply tools of conceptual knowledge in an actual environment under the guidance of expert practitioners [4]. The tool was pretested in twenty students at another teaching hospital. Participants' demographic characteristics were obtained, including the ward type (a model ward or an ordinary ward), age, gender, and level of study (second or third year of study in a three-year or four-year program, respectively). The students were then administered the revised SECEE inventory, which contained 29 items in four subscales: communication/feedback, learning opportunities, learning support/assistance, and de-

Table 1. Perceptions of Malawian nursing students of the clinical learning environments in a model ward and in two traditional wards. Lower values correspond to more positive responses

Subscales and items	P-value	Male surgical ward (model teaching ward)	Female surgical ward (traditional ward)	Pediatrics ward (traditional ward)
Communication/feedback				
Responsibilities clearly communicated	0.002	1.55	2.08	1.63
Preceptor/resource nurse communication	0.0001	1.68	3.48	3.63
Instructor provided constructive feedback	0.0001	1.7	3.45	3.3
Nursing staff served as positive role models	0.001	1.55	2.1	2.2
Instructor served as positive role model	0.0001	1.7	3.68	3.88
Nursing staff positive about serving as student resource	0.0001	2.08	3.63	3.63
Nursing staff provided constructive feedback	0.162	2.58	2.98	3.05
Learning opportunities				
Wide range of learning opportunities available at site	0.0001	1.95	2.83	2.98
Encouraged to identify/pursue learning opportunities	0.0001	1.93	3	2.93
Felt overwhelmed by demands of role (reverse coded)	0.041	2.65	2.58	2.08
Allowed more independence with increased skills	0.018	2.33	2.93	3.05
Nursing staff informed students of learning opportunities	0.032	2.25	2.88	2.58
Atmosphere conducive to learning	0.0001	1.55	3	2.63
Allowed hands on to level of abilities	0.025	2	2.5	2.45
Was Successful in meeting most learning goals	0.0001	1.58	3.43	3.58
Learning support/assistance				
Preceptor/resource nurse available	0.0001	1.75	3.3.0	3.68
Instructor available	0.0001	2.15	2.9	3.33
Instructor provided adequate guidance with new skills	0.044	1.98	2.48	2.55
Nursing staff provided adequate guidance with new skills	0.11	3	3.53	3.15
Felt supported in attempts at learning new skills	0.0001	1.73	3.45	4
Nursing students helped each other	0.263	1.95	2.15	2.28
Difficult to find help when needed (reverse coded)	0.486	3.63	3.5	3.4
Instructor encouraged students to help each other	0.592	2.18	2.3	2.45
Department atmosphere				
Adequately oriented to department	0.0001	1.18	2.38	1.75
Registered nurse maintained responsibility for student assigned patient.	0.016	2.6	2.78	3.38
High registered nurse workload negatively impacted experience. (reverse coded)	0.368	2.28	2.05	2.35
Adequate number and variety of patients available at agency	0.978	1.58	1.58	1.55
Needed equipment, supplies and resources were available	0.0001	1.83	3.63	3.83
Competing for skills and resources negatively impacted experience (reverse coded)	0.0001	4.05	2.58	2.2

partment atmosphere. The scoring was based on a five-point Likert scale: strongly agree, agree, neutral, disagree, and strongly disagree (1-5). Lower values indicated positive results, except for reverse items, for whicha lower value indicated a negative result. The use of the SECEE inventory was permitted by Dr. Kari Sand-Jecklin, West Virginia University School of Nursing, Morgan town, WV, USA.

Statistical analysis: The data were analyzed using SPSS version 16.0 (SPSS Inc., Chicago, IL, USA). Descriptive statistics were used to describe the frequencies and percentages of the demographic data. The chi-square test was used to evaluate the statistical significance of differences in the responses for each item among the wards, and P-values < 0.05 were considered to indicate statistical significance. In order to compare students' experiences with the clinical learning environment between the model ward and two non-model wards, the responses to the inventory items were compared using the Kruskal-Wallis test. The non-parametric test was used because the data from the three wards had the same dispersion. Mann-Whitney test was done between each two groups out of three groups to know groups' difference and Bonferroni's post-hoc test was done where significant probability was divided by test frequency, three.

Ethical approval: Ethical approval was granted by the Uni-

Table 2. Post-hoc test with Bonferroni's method after Kruskal-Walli's test for the comparison of perceptions of Malawian nursing students of the clinical learning environments in a model ward and in two traditional wards

Subscales and items	P-value W1-W2[a]	P-value W1-W3	P-value W2-W3	Bonferroni's test[b]
Communication/feedback				
Responsibilities clearly communicated	0.001	0.675	0.004	a,c < b
Preceptor/resource nurse communication	0.000	0.000	0.536	a < b, c
Instructor provided constructive feedback	0.000	0.000	0.458	a < b, c
Nursing staff served as positive role models	0.001	0.002	0.979	a < b, c
Instructor served as positive role model	0.000	0.000	0.595	a < b, c
Nursing staff positive about serving as student resource	0.000	0.000	0.819	a < b, c
Nursing staff provided constructive feedback	0.116	0.089	0.776	
Learning opportunities				
Wide range of learning opportunities available at site	0.001	0.000	0.410	a < b, c
Encouraged to identify/pursue learning opportunities	0.000	0.000	0.800	a < b, c
Felt overwhelmed by demands of role (reverse coded)	0.688	0.020	0.047	a < b < c
Allowed more independence with increased skills	0.026	0.008	0.678	a < c
Nursing staff informed students of learning opportunities	0.011	0.132	0.217	a < b
Atmosphere conducive to learning	0.000	0.000	0.182	a < b, c
Allowed hands on to level of abilities	0.010	0.042	0.629	a < b
Was Successful in meeting most learning goals	0.000	0.000	0.622	a < b, c
Learning support/assistance				
Preceptor/resource nurse available	0.000	0.000	0.293	a < b, c
Instructor available	0.001	0.000	0.060	a < b, c
Instructor provided adequate guidance with new skills	0.043	0.022	0.808	
Nursing staff provided adequate guidance with new skills	0.036	0.522	0.179	
Felt supported in attempts at learning new skills	0.000	0.000	0.041	a < b, c
Nursing students helped each other	0.521	0.091	0.384	
Difficult to find help when needed (reverse coded)	0.379	0.266	0.716	
Instructor encouraged students to help each other	0.521	0.312	0.695	
Department atmosphere				
Adequately oriented to department	0.000	0.000	0.004	a < c < b
Registered nurse maintained responsibility for student assigned patient.	0.446	0.007	0.033	a < c
High registered nurse workload negatively impacted experience. (reverse coded)	0.305	0.742	0.174	
Adequate number and variety of patients available at agency	0.926	0.909	0.830	
Needed equipment, supplies and resources were available	0.000	0.000	0.484	a < b, c
Competing for skills and resources negatively impacted experience (reverse coded)	0.000	0.000	0.101	b, c < a

[a]W1: Male surgical ward (model teaching ward). W2: Female surgical ward (traditional ward), W3: Pediatrics ward (traditional ward).
[b]a: score on male surgical ward, b: score on female surgical ward, c: score on pediatrics ward. "a < b, c" meant that score of groups "a" is less than scores of groups "b, c." If there is no description in the cell, it means that there was no significant difference.

versity of KwaZulu Natal (HSS/0986/012D) and the National Health Sciences Ethics committee in Malawi (NHSRC#1154).

The response rate to the survey was 100%. The age distribution was as follows: less than 18 years old, 25 (20.8%); 19-21 years old, 70 (58.3%); 22-24 years old, 16 (13.3%); 25-27 years old, 4 (3.3%); and more than 28 yearsold, 5 (4.2%). Forty of the students (33.3%) were male, and80 (66.7%) were female. Sixty-four students (53.3%) were in a three-year program and 56 (46.7%) were in a four-year program. No significant differences were found in the assessment of the educational environment between the model ward and the non-model wards according to age and gender (P > 0.05). However, students in a four-year program evaluated the educational environment more positively than those in a three-year program (P = 0.048). Significant differences were found between the model ward and the two non-model wards in six of the seven items in the communication/feedback subscale. Within the learning opportunities subscale, all eight items showed significant differences. In the learning support/assistance subscale, significant differences were found among the three wards in four of the eight items. In the department atmosphere subscale, no significant differences were found in the items assessing whether an adequate number and variety of patients were present in the ward (P = 0.978) and whether nursing staff provided constructive feedback (P = 0.162) (Table 1). Result of Mann-Whitney test and Boferroni's post-hoc test was summarized in Table 2.

The above results demonstrate that the communication dynamics in the model ward were significantly better than in the other two non-model wards. This finding is consistent with those of other studies, which have shown that presence of preceptors changed the nature of communication between students and ward staff. Our study showed that students in the model teaching ward felt supported in gaining new skills. In particular, students reported receiving more guidance from preceptors in the model teaching ward. Preceptorship training prepares clinical nurses with relevant competencies for teaching students in a clinical setting. A comparative study on traditional and precepting-based clinical practice showed that the latter fostered a strengthened knowledge base and clinical skills, improved critical thinking in practice, enhanced student self-confidence, better interpersonal communication, role socialization, and reduced conflict in role expectations [6].However, without proper planning and assignment of tasks within the ward, performing the dual role of both a practitioner and a preceptor can be stressful to nurses, potentially leading to ineffective student teaching and supervision. The present study found significant differences in terms of students' orientations to the department. Namely, the students in the model teaching ward received a more satisfactory orientation than the students in the traditional wards. A high workload among registered nurses had a negative impact on students, which was reported to an equal extent in all the wards.

A longer-term study would also provide valuable information on the progress and outcomes of the reform strategies that underpinned the development of the model wards. Expanding this study to include more than one teaching hospital would have increased the reliability and representativeness of our findings. In conclusion, the development and implementation of a new model ward to improve the educational environment of nursing students showed positive results. Students scored the model teaching ward highly. Students in the model ward who participated in precepting with experienced nurses reported having more learning opportunities and a more positive learning environment.

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CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

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SUPPLEMENTARY MATERIALS

Audio recording of abstract.

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