Motivational Strategies to Fruitful Learning: Perspectives of Students Nurses from Training Schools in Fako, South West Region, Cameroon

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ABSTRACT

This study onmotivational strategies to fruitful learning by student nurses investigated aassessment, feedback,and the classroom environment in order to assess their effectiveness in enhancing learning. Most often than not teaching of nursing student neglect looking at what could motivate students to fruitful learning, hence, the learning may not be effective as when the motivational factors are known and used. A cross sectional study of three schools in Fako division, South-West Region, Cameroon was survey on what will motivate them to learning. The questionnaire was used as the instrument for data collection with all the objectives clearly represented. Two hundred and eight randomly selected students from the three schools found to make up 30% of the total student population in the schools was used in the study. Data was analysed using Spearman's rank correlation coefficient, frequencies and proportion techniques, and presented in tables. Results have been analysed following student's opinion of the motivation, collapsed opinion, Spearman's correlation and associations between school and level of students. It is hoped that the opinion of the students will enable nurse educators to encourage learning by making use of these strategies as they improve on learning outcome.

Keywords: Nursing, students, learning, motivation, learning outcome.

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INTRODUCTION

Motivation to learning can be influenced by various factors and situations. These factors among others could be knowledge of the teacher, attitudes of the teacher, environmental factors or socio-economic. Most often, research has centred on the socio economic and personal factors, but recognition of these motivational factors by the teachers encourages the teaching and learning process rather than some activities like assessment, feedback and classroom environment. In Cameroon, educators recognize the need to motivate students and have noted motivation as one of the factors considered in the teaching and learning process (Tambo, 2003).

Assessment on its part, for example is the activity

undertaken by teachers and others in the educative process to measure the effectiveness of teaching and learning. It includes setting, marking, recording and reporting of results (Haydn, 2005). It serves as a major motivational factor in learning because during an assessment, students are challenged to make recalls and take initiative (McMillan, 2000). Assessment methods and prerequisites have a greater influence on how and what students learn than other factors (Boud, 1988; Miller and Parlett, 1974). Bostock (2001) noted that; "assessment drives learning through motivation". Assessment can serve as good motivation when it covers the entire course unit or curriculum, thereby encouraging meaningful learning. Thus, it is important to find out whether assessment is properly used in order to motivate nursing students. Bostock (2001) concluded by saying positive motivation can be generated by a careful design and evaluation of innovative assessments: objective testing, peer group and self-assessments in order to understand its impact on students' learning.

Feedback is a formative process which gives information to learners about how they are doing and whether they are on the right track when learning something (Capel and Gevis, 2005). McManus (2005) remarked that we cannot be expected to improve, "especially in the manner that is expected of us if we do not receive enough of the right kind of feedback about our current performance," Castling (1996) stressed that: "all feedback should be specific, positive, accurate and recorded". Learning is an on going process, and in order for it to continue, it is obvious that learners need to know what they have achieved in order to make learning meaningful (Boulton, 2009). McManus (2005) also emphasised on the quality and quantity of feedback given in order to bring about motivation. He suggested that in order for feedback to serve as motivation, performance expectations should be clearly defined, frequent positive feedback provided to specific expectations, and emotionally charged negative feedback avoided. Therefore, it is important to find out the nature of feedback given and its effect on nursing students' learning. The classroom environment refers to the various stimuli: objects, activities, persons and situations that are in constant competition for the learner' attention (Tambo, 2003). Furthermore, Tambo noted that when a teacher is aware of the various stimuli that compete for students' attention, he or she will be better placed to motivate students. Therefore, it is essential to look at how teachers use the classroom environment as a motivational strategy and its effect on nursing students' learning. Noting that, the Classroom atmosphere refers to the types of reward structures used to motivate students (Micheals, 1977) as cited in Biehler and Snowman(1986) exist such as: i.) Individual competition: a small number of students obtain the greatest reward, at the expense of other students.
ii.) Group competition: group of students collaborate with each other to compete with other groups for the available reward.

iii.) Group reward: distribution of reward which is based entirely on the quality of group performance.

iv.) Individual reward: the rewards achieved by individual students are independent of the rewards of other students. Johnson and Johnson (1974) in Bielher and Snowman, (1986) found that cooperative reward structures are more effective in learning and help students develop a positive attitude, especially towards subject area, instructional activities, and other students. However, other authors recommend a combination of both competitive or cooperative and individual or group reward structures to strengthen motivation and achievement for all students.

Classroom management basically entails the establishment and maintenance of class rules for the facilitation of teaching and learning (Tambo, 2003). Studies have shown that when the classroom is well managed, students are able to complete clear assignments in a busy but pleasant atmosphere (Brophy, 1979; Good, 1982). Students learn better when the teacher states and calls their attention to class rules. Therefore, it is essential to investigate the effect of the classroom environment on nursing students' learning.

Statement of Problem

The education of nurses requires that the nurse should be well trained to be competent and full of skills. This can be achieved better when nursing students are motivated to learn. The various strategies that motivate students to learn include assessment, feedback and classroom environment but unfortunately not all nurse educators are neither aware of these, nor aware of their use and more so aware of the effectiveness they have learning and learning outcome. Due to this, the study was carried out to seek the opinion of students so as to demonstrate the importance of the use of motivational strategies for better learning outcome as adequate learning will fail to take place in the absence of sufficient motivation (Fontana, 1981). Hence, in motivating a nurse learner, there must be a better learning outcome and a reduction in the inadequate nursing care/practice observed in some health institutions.

Research question

How do these factors as motivation strategies affect nursing students' learning?
i.) Assessment (ii.) Feedback (iii.) Classroom environment.

Objectives

i.) To assess nursing students perceptions of assessment

as motivation strategy to fruitful learning outcomes.
ii.) To assess nursing students perceptions of feedback as motivation strategy to fruitful learning outcomes.
iii.) To assess nursing students perceptions of classroom environment as motivation strategy to fruitful learning outcomes.

METHODOLOGY

Research Design

A cross sectional survey of sampled student nurses was carried out to assess some motivational strategies deemed necessary for a fruitful learning outcome. A survey was ideal for the present study because motivation is a concept that cannot be measured, or directly observed. Thus, it can only be described as it is or would be. In it both quantitative and qualitative measurements were used. Qualitative in that words have been used to analysethe data with quantitative figures used alongside based on the four points Likert- scale (Nana, 2010).In the context of this study, the focus was on concepts that emerged from qualitative data and the concepts were subsequently integrated in the structured questionnaire and probed over a larger sample.

   The population of the study was from three schools:Department of nursing, Faculty of Health Sciences, University of Buea, Training School for Health Personnel, State Registered Nursing, Limbe and St. Francis School of Health Sciences, (State Enrolled Nursing), Buea because they all had a population that was greater than the sum total of the 30% chosen as sample size. Their choice was also because they cover the various programmes of nursing training in Cameroon. Data were collected from students in order to obtain students' perception on the effects of motivational strategies on their learning. The multistage sampling techniques was used beginning with purposive sampling technique of the schools in Fako (schools that were appropriate for the study), while nursing students at all levels were selected using the simple random sampling method. The instrument for data collection was the questionnaire with close and open ended questions which was a rearranged to ensure that there was a reflection of the specific objectives of the study. Students' responses were organised on a four-point Likert-scale:
Strongly Disagree (SD), Disagree (D), Agree (A), Strongly Agree (SA). Quality control was censured by validity and reliability using the content validity index (CVI). To arrive at the statements that were judged valid the inter-judge coefficient of validity was computed using the following formula:CVI = (No of judges declared item valid)/ (total No of judges)2/2 = 1
Were 1 represents the inter-judge coefficient validity for an item and is repeated for all the items of the instrument

in order to compute an average, thus: CVI for questionnaire2/2 = 1

RESULTS

It was very difficult to obtain all the 208 responses for all the questions hence the results range from 203 to 208 for the various issues under discussion. From the research question, 1 was deemed as:Does the use of assessment as a motivational strategy have an effect on nursing students' learning? Corresponding to specific objective 1: To identify nursing students' perception of assessment as a motivational strategy.

   Table1 shows the distribution of responses of the various components of assessment on a four point Likert-scale, Strongly Disagree, Disagree, Agree and Strongly Agree.Table 2 shows the Collapsed distribution of responses for the identification of motivational components of assessment and its effect on learning, with Strongly Disagree and Disagree collapsed as Disagree, Agree, and Strongly Agree collapsed as Agree.

   In Table2, the respondents indicated that nurse teachers make use of all the motivational components of assessment, except the second item. Students are always told what areas of a topic or course would be covered for the purpose of assessment (tests, exams).In all, 113 students (54.4%) disagreed with the indicator against 95 students (45.6%) who agreed. 115 (56.1%) students agreed that they always understood the requirements of assessment while 90 (43.9%) students disagreed. Finally, 179 students (88.2%) agreed that assessment served as motivation to learn while 24 students (11.8%) disagreed.

Interpretation of Results

The correlation coefficient, r for the effect of assessment on learning is 0.800, this value lies within the range of $0.75 \leq r < 1$. This implies that there is a very strong positive correlation between assessment as a motivational strategy and nursing students' learning. The P-value associated to r is 0.000. This value of $p<0.01$ (**), implies that the correlation is significant at the 0.01 level. Thus, it is not likely that the relationship between assessment and learning occurred by chance. This implies that students perceived the use of assessment as having a very strong positive influence on their learning (Tables 1, 2, 3 and 4).

Perception of students on feedback as a motivational strategy

Does the use of feedback as a motivational strategy have

Table 1. Opinion of students on assessment as a motivational strategy.

Perceived use of Assessment as a motivational strategy	Strongly Disagree	Disagree	Agree	Strongly Agree	N
Our tests and assignments always cover all that was taught for particular topics and exams cover all that was taught for the particular course.	19(9.2%)	56 (27.1%)	88 (42.5%)	44 (21.8%)	207
Students are always told what areas of a topic or course would be covered for the purpose of assessment (tests, exams).	44(21.2%)	69(63.2%)	60 (28.8%)	35 (16.8%)	208
Our assessments always reflect the learning objectives stated during the teaching of the course	3(1.4%)	15(7.2%)	136 (65.7%)	53 (25.6%)	207
Multiple Response Analyses	66 (10.6%)	140 22.5%)	284 (45.7%)	132 (21.2%)	622
Effects of Assessment					
I always understand exactly what the teacher expects from me during assessments.	11(5.4%)	79(38.5%)	96 (46.8%)	19 (9.3%)	205
I increase my study time when I know that assessments would cover a broad section or entire course work in order to earn a better grade, than when it would not.	5(2.5%)	19(9.4%)	89 (43.8%)	90 (44.3%)	203
Multiple Response Analyses	16 (3.9%)	98 (24.0%)	185 (45.3%)	109 (26.7%)	408

Table 2. Collapsed opinion of students on the use and effects of assessment as a motivational strategy.

Perceived use of Assessment as a Motivational Strategy	Disagree	Agree	N
Our tests and assignments always cover all that was taught for particular topics and exams cover all that was taught for the particular course.	75 (36.2%)	132(63.8%)	207
Students are always told what areas of a topic or course would be covered for the purpose of assessment (tests, exams)	113(54.4%)	95(45.6%)	208
Our assessments always reflect the learning objectives stated during the teaching of the course	18 (8.6%)	189 (91.4%)	207
Multiple Response Analyses	206 33.1%)	416 (66.9%)	622
Effects of Assessment			
I always understand exactly what the teacher expects from me during assessments.	90(43.9%)	115 (56.1%)	205
I increase my study time when I know that assessments would cover a broad section or entire course work in order to earn a better grade, than when it would not.	24(11.8%)	179 (88.2%)	203
Multiple Response Analyses	114 (27.9%)	294 (72.1%)	408

an effect on nursing students' learning? The results on table 6 have shown that 117 respondents (56.8%) out of 206 indicated that they are not always provided with feedback while 89 students (43.2%) agreed with the feedback component. Some 155 (75.2%) respondents out of 206 as opposed to 51 respondents (24.8%) also indicated that (when feedback is provided), it is infrequent and not timely.

Though the feedback provided usually carries negatively charged comments 118 respondents (57.3%) out of 206 agreed as opposed to 88 respondents (42.7%) who disagreed. The other 122 (58.7%) respondents out of 208 agreed that feedback points to the areas of students' weakness and specify what exactly they need to know in order to improve against 86 (41.6%) respondents who disagreed.

Interpretation of Results

The correlation coefficient, r for the effect of feedback on learning is 0.000. When r = 0, it implies there is no correlation between the variables. The corresponding p-value 1.000 is too large to be considered significant. Since the p value is large, it implies the data does not give any reason to conclude that the relationship is real. This implies that nursing students perceived the use of feedback as having a weak influence on their learning (Tables 5, 6, 7 and 8).

Students' perception on classroom environment as a motivational strategy

Does the use of the classroom environment as a motiva-

Table 3. The Association between assessment as a motivational strategy and schools.

Assessment	School	Agree	Chi-Square test	Comment
Our tests and assignments always cover all that was taught for particular topics and exams cover all that which was taught for the particular course.	FHS	36 50.0%)		There was a significant association between this indicator and schools. SFSHS students perceived that their assessments were more extensive with respect to course work than students of TSHP and FHS.
	TSHP	30(48.4%)		
	SFCHS	66(90.4%)	$\chi 2=34.684$ Df=2 P=0.000	
Students are always told what areas of a topic or course would be covered for the purpose of assessment (tests, exams)	FHS	20(27.8%)		The perception of students in relation to this indicator differed significantly among the three schools. FHS students agreed the least of being aware of the area their assessments would cover.
	TSHP	24(38.1%)		
	SFCHS	51(69.9%)	$\chi 2=27.966$ Df=2 P=0.000	
Our assessments always reflect the learning objectives stated during the teaching of the course	FHS	62(86.1%)		There was no significant association between this indicator and schools.
	TSHP	60(95.2%)	$\chi 2=3.952$ Df=2	
	SFCHS	67(93.1%)	P=0.139	
I always understand exactly what the teacher expects from me during assessments.	FHS	32 45.1%)		Students' perception with regards to this indicator was significantly dependent on school.
	TSHP	31(50.8%)	$\chi 2=10.986$ Df=2	
	SFCHS	52(71.2%)	P=0.004	
I increase my study time when I know that assessments would cover a broad section or entire course work in order to earn a better grade, than when it would not.	FHS	68(95.8%)		There exists a significant association between this indicator and students' perception which is independent of school.
	TSHP	52(83.9%)		
	SFCHS	59(84.3%)	$\chi 2=6.051$ Df=2 P=0.049	
The amount of time I spend studying does not change whether the course work for assessment increases or not.	FHS	9 (12.7%)	$\chi 2=36.44$ Df=2 P=0.000	The association between this indicator and school was significantly dependent on school.

Table 4. The association between assessment as a motivational strategy and level of students.

Assessment	Level of students	Agree	Chi-Square test	Comment
Our tests and assignments always cover all that was taught for particular topics and exams cover all that was taught for the particular course.	1st year	58 (74.4%)		There was a significant association between this indicator and level of students, though the association slightly differed for third and fourth year students.
	2nd year	53 (63.9%)		
	3rd & 4th year	21 (45.7%)	$\chi 2=10.321$ Df=2 P=0.006	
Students are always told what areas of a topic or course would be covered for the purpose of assessment (tests, exams).	1st year	49 (62.8%)		There was a significant association between this indicator and level of student was significant. Students' perception was dependent on level of the student.
	2nd year	35 (41.7%)		
	3rd & 4th year	11 (23.9%)	$\chi 2=18.565$ Df=2 P=0.000	
Our assessments always reflect the learning objectives stated during the teaching of the course	1st year	71 (92.2%)		First, second, third and fourth year students all agreed more that their assessments always reflected the course learning objectives; though the association was not significant.
	2nd year	77 (91.7%)		
	3rd & 4th year	41 (89.1%)	$\chi 2=0.367$ Df=2 P=0.832	
I always understand exactly what the teacher expects from me during assessments.	1st year	49 (62.8%)		Students of all levels agreed, of being aware of the requirements of assessments, and second year student agreed the least. However, the association of this item and level of student was insignificant.
	2nd year	42 (51.7%)		
	3rd & 4th year	24 (52.2%)	$\chi 2=2.857$ Df=2 P=0.240	

Table 4. contd.

I increase my study time when I know that assessments would cover a broad section or entire course work in order to earn a better grade, than when it would not.	1st year	66 (86.8%)		The association between this indicator and level of student was not significant.
	2nd year	73 (89.0%)		
	3rd & 4th year	40 (88.9%)	χ2=1.016 Df=2 P=0.602	
The amount of time I spend studying does not change whether the course work for assessment increases or not.	1st year	27 (35.5%)	χ2=1.016 Df=2 P=0.602	There was no statistically significant association between this indicator and level of student.

Table 5. Opinion of students on the use and effects of feedback as motivational strategy.

Perceived use of Feedback strategies	Strongly Disagree	Disagree	Agree	Strongly agree	N
I always get written information (feedback) from my teachers concerning my performance after assessments	52 (25.2%)	65 (31.6%)	69 (33.5%)	20 (9.7%)	206
Feedback from my teachers is frequent and timely	65 (31.6%)	90 (43.7%)	38 (18.4%)	13 (6.3%)	206
The feedback I get always points to the areas of my weakness and specify what exactly I need to know in order to improve	39 (13.8%)	47 (22.6%)	77 (37.0%)	45 (21.6%)	208
Teachers usually criticize students when they fail in assessments*	24 (11.7%)	64 (31.1%)	82 39.8%)	36 (17.5%)	206
Multiple Response Analyses (RMA)	192 23.2%)	284 (4.4%)	248 (0.0%)	102 (12.3%)	826
Effects of Feedback					
When I *get* adequate (prompt, specific, and positive) feedback from my teachers, I focus more on the specified goals I need to achieve.	6 (3.0%)	30 (14.8%)	119 (58.6%)	48 (23.6%)	203

* Reversed in the MRA.

Table 6. Collapsed Opinion of students on the use and effect of feedback as motivational strategy.

Perceived use of Feedback as motivational strategy	Disagree	Agree	N
I always get written information (feedback) from my teachers concerning my performance after assessments	117 (56.8%)	89 (43.2%)	206
Feedback from my teachers is frequent and timely	155 (75.2%)	51(24.8%)	206
The feedback I get always points to the areas of my weakness and specify what exactly I need to know in order to improve	86 (41.3%)	122 (58.7%)	208
Teachers usually criticize students when they fail in assessments*	88(42.7%)	118 (57.3%)	206
Multiple Response Analyses	476 (57.6%)	350 (42.4%)	826
Effects of Feedback			
When I get adequate (prompt, specific, and positive) feedback from my teachers, I focus more on the specified goals I need to achieve.	36 (17.7%)	167 (82.3%)	203

*Reversed for MRA.

tional strategy have an effect on nursing students' learning?Results from Tables 9, 10,11 and 12 show that students perceived that nurse teachers' use of the physical environment of the classroom adequately to serve as motivation for students to learn. This is shown by the responses of the first and second items with 126 respondents (60.1%) and 116 respondents (80.2%) who agreed as opposed to 81 respondents (39.1%) and 41 respondents (19.8%) who disagreed respectively. In addition, 156 respondents (76.5%) out of 204 agreed that they found it difficult to lear in a dirty and disorganised class, while 48 respondents (23.5%) disagreed.

Table 7. The association between feedback as a motivational strategy and schools.

Feedback		Agree	Chi-Square test	Comment
I always get written information (feedback) from my teachers concerning my performance after assessments	FHS	18 (25.0%)		Students' perception in relation to this item differed among the various schools.
	TSHP	21 (33.9%)	$\chi2=32.128$ Df=2	
	SFCHS	50 (69.4%)	P=0.000	
	FHS	10 (13.9%)		The perception of students with respect to this item was significantly independent of school.
	TSHP	8 (12.7%)		
			$\chi2=27.467$ Df=2	
Feedback from my teachers is frequent and timely	SFCHS	33 (46.5%)	P=0.000	
	FHS	34 (47.2%)		FHS and TSHP students shared similar perceptions with regards to this item, while those of SFHS differed. An association which is statistically significant.
	TSHP	31 (49.2%)		
The feedback I get always points to the areas of my weakness and specify what exactly I need to know in order to improve			$\chi2=17.561$ Df=2	
	SFCHS	57 (78.1%)	P=0.000	
	FHS	35 (48.6%)		The association of this item and schools differed, though not significantly.
Teachers usually criticize students when they fail in assessments	TSHP	36 (57.1%)	$\chi2=4.519$ Df=2	
	SFCHS	47 (66.2%)	P=0.104	
When I get adequate (prompt, specific, and positive) feedback from my teachers, I focus more on the specified goals I need to achieve.	FHS	57 (81.4%)		The association of this item with respect to schools was insignificant.
	TSHP	50 (80.6%)	$\chi2=0.390$ Df=2	
	SFCHS	60 (84.5%)	P=0.823	
				The opinion of students in the various schools with respect to this item was significantly dependent on school.
Adequate feedback does not change my goal focus, I stick to my plans.	FHS	14 (20.3%)	$\chi2=22.370$ Df=2 P=0.000	

Table 8. The association between feedback as motivational strategy and Level of students.

Feedback	Level of students	Agree	Chi-square test	Comment
I always get written information (feedback) from my teachers concerning my performance after assessments.	1st year	36 (46.2%)		Students' perception with respect to this item was significantly dependent on the level of students.
	2nd year	42 (51.2%)		
			$\chi2=9.400$ Df=2	
	3rd &4th year	11 (23.9%)	P=0.009	
	1st year	25 (32.1%)		
Feedback from my teachers is frequent and timely	2nd year	19 (23.2%)	$\chi2=4.586$ Df=2	Students' perception was independent of level of student.
	3rd & 4th year	7 (15.2%)	P=0.101	
The feedback I get always points to the areas of my weakness and specify what exactly I need to know in order to improve.	1st year	56 (71.8%)		
	2nd year	49 (58.3%)		There was an association between this item and level of student, which was significant.
			$\chi2=14.4.87$ Df=2	
	3rd & 4th year	17 (37.0%)	P=0.001	
	1st year	47 (61.0%)		There was an association between this item and student's perception which was independent of level of student, though not statistically significant.
	2nd year	44 (53.0%)		
Teachers usually criticize students when they fail in assessments.	3rd & 4th year	27 (58.7%)	$\chi2=1.100$ Df=2 P=0.577	
When I get adequate (prompt, specific, and positive) feedback from my teachers, I focus more on the specified goals I need to achieve.	1st year	59 (78.7%)		
	2nd year	74 (88.1%)		
			$\chi2=3.374$ Df=2	Students' opinion on this item did not differ significantly.
	3rd & 4th year	34 (77.3%)	P=0.185	
Adequate feedback does not change my goal focus, I stick to my plans.				The association of students' opinion with respect to this item did not show any statistical significance.
	1st year	28 (36.8%)	$\chi2=0.418$ Df=2 P=0.811	

With regards to the psychological climate of the classroom environment, the respondents indicated that nurse teachers are aware and make use of either group or individual work in the teaching and learning process. This is shown in the table by 107 respondents (51.7%) who agreed for group competitions and 107 respondents

Table 9. Opinions of students on the motivational effects of the classroom environment.

Perceived use of the Classroom environment as a motivational strategy	Strongly Disagree	Disagree	Agree	Strongly Agree	N
My teachers always inspect the classroom to ensure that it is clean (unnecessary objects are removed, clean and visible chalk board etc.) and adequately ventilated.	36 (17.4%)	45 (21.7%)	84 (40.6%)	42 (20.3%)	207
My teachers ensure that students are uniformly seated in class. (for example- students are not concentrated at the back leaving empty seats in front of the class).	18 (8.7%)	23 (11.1%)	97 (46.9%)	69 (33.3%)	207
Group competitions are always organized during teaching sessions.	38 (18.4%)	62 (30.0%)	79 (38.2%)	28 (13.5%)	207
The group with the best work/exercise is always rewarded (praised, given extra marks, amongst others).	59 (29.5%)	73 (36.5%)	49 (24.5%)	19 (9.5%)	200
Students are always encouraged to work as individuals during teaching sessions	27 (13.3%)	69 (34.0%)	81 (41.9%)	22 (10.8%)	203
Individual students with outstanding performance have their work read in class.	55 (26.7%)	80 (38.8%)	53 (25.7%)	18 (8.7%)	206
My teachers always set clear rules for class behaviour (for example- students obtain permission before walking in or out of the class, no late comers when teaching, is going on amongst others).	13 (6.3%)	31 (15.0%)	109 (52.7%)	54 (26.1%)	207
My teachers ensure that set class rules are followed and students who fail to keep rules are punished.	12 (5.9%)	50 (24.4%)	97 (47.3%)	46 (22.4%)	205
Multiple Response Analyses	258 (15.7%)	433 (26.4%)	653 (39.8%)	298 (18.1%)	1642
Effects of the Classroom Environment					
A dirty and disorganised class makes it hard for me to be attentive in class.	16 (7.8%)	32 (15.7%)	100 (49.0%)	56 (27.5%)	204
Working in groups with other students challenges me to study harder.	4 (2.0%)	17 (8.5%)	70 (34.8%)	110 (54.7%)	201
I increase my study efforts when a group reward is given to the best group.	12 (5.9%)	37 (18.3%)	105 (52.0%)	48 (23.8%)	202
I am encouraged to learn when class rules are defined and the teacher ensures they are kept	5 (2.5%)	32 (15.8%)	112 (55.2%)	54 (26.6%)	203
Multiple Response Analyses	37 (4.6%)	118 (14.6%)	387 (47.8%)	268 (33.1%)	810

Table 10. Collapsed opinions of students on the motivational effects of the classroom environment.

Perceived use of the Classroom Environment as a Motivational Strategy	Disagree	Agree	N
My teachers always inspect the classroom to ensure that it is clean (unnecessary objects are removed, clean and visible chalk board amongst others.) and adequately ventilated.	81 (39.1%)	126 (60.1%)	207
My teachers ensure that students are uniformly seated in class. (for example- students are not concentrated at the back leaving empty seats in front of the class).	41 (19.8%)	166 (80.2%)	207
Group competitions are always organized during teaching sessions.	100 (48.3%)	107 (51.7%)	207
The group with the best work/exercise is always rewarded (praised, given extra marks, amongst others.).	132 (66.0%)	68 (34.0%)	200
Students are always encouraged to work as individuals during teaching sessions	96 (47.3%)	107 (52.7%)	203
Individual students with outstanding performance are rewarded (praised, have their work read in class---).	135 (65.5%)	71 (34.5%)	206
My teachers always set clear rules for class behaviour (like students obtain permission before walking in or out of the class, no late comers when teaching, is going on ----).	44 (21.3%)	163 (78.7%)	207
My teachers ensure that set class rules are followed and students who fail to keep rules are punished.	62 (30.2%)	143 (69.8%)	205
Multiple Response Analyses	691 (42.1 %)	951 (57.9%)	1642

Table 10.contd.

Effects of the Classroom Environment			
A dirty and disorganised class makes it hard for me to be attentive in class.	48 (23.5%)	156 (76.5%)	204
Working in groups with other students challenges me to study harder.	21 (10.4%)	180 (89.6%)	201
I increase my study efforts when a group reward is given to the best group.	49 (24.3%)	153 (75.7%)	202
I am encouraged to learn when class rules are defined and the teacher ensures they are kept.	37 (18.2%)	166 (81.8%)	203
Multiple Response Analyses	155 (19.1%)	655 (80.9%)	810

Table 11. The association between the classroom environment as a motivational strategy and schools.

Classroom environment as a motivational trategy	school	Agree	Chi-Square test	Comment
My teachers always inspect the classroom to ensure that it is clean (unnecessary objects are removed, clean and visible chalk board) and adequately ventilated.	FHS	16 (22.5%)		
	TSHP	44 (69.8%)	$\chi2=72.680$ Df=2 P=0.000	The perception of students was significantly dependent on school.
	SFCHS	66 (90.4%)		
My teachers ensure that students are uniformly seated in class. (students are not concentrated at the back leaving empty seats in front of the class).	FHS	40 (56.3%)		Students' perception with respect to this item was significantly similar irrespective of school.
	TSHP	55 (87.3%)	$\chi2=40.829$ Df=2 P=0.000	
	SFCHS	71 (97.3%)		
Group competitions are always organized during teaching sessions.	FHS	17 (23.9%)		There was a significant difference in students' perception with respect to schools.
	TSHP	28 (44.4%)	$\chi2=55.516$ Df=2 P=0.000	
	SFCHS	62 (84.9%)		
The group with the best work/exercise is always rewarded (praised, given extra marks).	FHS	53 (77.9%)		Students' perception with respect to this item differed significantly among school.
	TSHP	51 (82.3%)	$\chi2=32.711$ Df=2 P=0.000	
	SFCHS	28 (40.0%)		
Students are always encouraged to work as individuals during teaching sessions	FHS	32 (45.7%)		There was a significant difference in students' perception by schools.
	TSHP	26 (41.3%)	$\chi2=13.077$ Df=2 P=0.001	
	SFCHS	49 (70.0%)		
Individual students with outstanding performance have their work read in class.	FHS	21 (29.6%)		Students of the various schools showed significantly different perception, with regards to this item.
	TSHP	9 (14.3%)	$\chi2=28.217$ Df=2 P=0.000	
	SFCHS	41 (56.9%)		
My teachers always set clear rules for class behaviour (like students obtain permission before walking in or out of the class, no late comers when teaching, is going on among others).	FHS	45 (62.5%)		
	TSHP	49 (77.8%)	$\chi2=23.294$ Df=2 P=0.000	Irrespective of school, students' perception was significantly similar.
	SFCHS	69 (95.8%)		
My teachers ensure that set class rules are followed and students who fail to keep rules are punished.	FHS	33 (45.8%)		The association between this item and schools differed significantly.
	TSHP	46 (73.0%)	$\chi2=35.433$ Df=2 P=0.000	
	SFCHS	64 (91.4%)		
A dirty and disorganised class makes it hard for me to be attentive in class.	FHS	55 (77.5%)		
	TSHP	50 (80.6%)	$\chi2=1.489$ Df=2 P=0.475	
	SFCHS	51 (71.8%)		
I am always attentive in class whether the class is clean and organised or not	FHS	17 (23.9%)		The association between this item and school did not differ significantly irrespective of school.
	TSHP	23 (37.7%)	$\chi2=8.702$ Df=2 P=0.013	
	SFCHS	33 (47.8%)		
Working in groups with other students challenges me to study harder.	FHS	67 (94.4%)		There was not significant association with respect to school.
	TSHP	54 (87.1%)	$\chi2=2.723$ Df=2 P=0.256	
	SFCHS	59 (86.6%)		
I study harder when I work alone.	FHS	24 (33.8%)		There was no significant difference in students' perception with respect to school.
	TSHP	24 (38.7%)	$\chi2=3.074$ Df=2 P=0.215	
	SFCHS	31 (48.4%)		

	FHS	56 (81.2%)		The perception of students' with regards to this item was independent of school, and it was statistically significant.
	TSHP	38 (62.3%)		
I increase my study efforts when a group reward is given to the best group	SFCHS	59 (81.9%)	χ2=8.613 Df=2 P=0.013	
I increase my study effort (more library time) when rewards are given to individual students.	FHS	58 (81.7%)	χ2=1.239 Df=2 P=0.538	The association was insignificant.
	TSHP	46 (74.2%)		
	SFCHS	57 (80.3%)		
	FHS	56 (78.9%)		Though the perception of students was independent of school, however, it was not significant.
I am encouraged to learn when class rules are defined and the teacher ensures they are kept.	TSHP	55 (88.7%)	χ2=2.884 Df=2 P=0.237	
	SFCHS	55 (78.6%)		
Whether class rules are defined and kept or not, does not distract me from learning.	FHS	25 (35.7%)	χ2=9.0179 Df=2 P=0.010	There existed a slight difference in students' perception with regards to school, which was however significant.

Table 12. The association between the classroom environment as a motivational strategy and level of students.

Classroom environment as a motivational strategy	Level of students	Agree	Chi-square test	Comment
My teachers always inspect the classroom to ensure that it is clean (unnecessary objects are removed, clean and visible chalk board) and adequately ventilated.	1st year	52 (66.7%)		Though the perception of third and fourth year students differed, students' perception was similar, and this was statistically significant.
	2nd year	56 (66.7%)		
	3rd & 4th year	18 (40.0%)	χ2=10.514 Df=2 P=0.005	
My teachers ensure that students are uniformly seated in class. (students are not concentrated at the back leaving empty seats in front of the class).	1st year	64 (82.1%)		There was an association between this item, which was independent of level of student.
	2nd year	72 (85.7%)		
	3rd & 4th year	30 (66.7%)	χ2=6.965 Df=2 P=0.031	
Group competitions are always organized during teaching sessions.	1st year	44 (56.4%)		The association between this item and level of student was insignificant.
	2nd year	41 (48.8%)		
	3rd & 4th year	22 (48.9%)	χ2=1.116 Df=2 P=0.572	
The group with the best work/exercise is always rewarded (praised, given extra marks).	1st year	30 (40.0%)		But for third and fourth year students, the association was significantly independent of level of student.
	2nd year	32 (39.5%)		
	3rd & 4th year	6 (13.6%)	χ2=10.429 Df=2 P=0.005	
Students are always encouraged to work as individuals during teaching sessions.	1st year	42 (56.0%)		Students' perception was significantly independent of level.
	2nd year	45 (54.2%)		
	3rd & 4th year	20 (44.4%)	χ2=1.635 Df=2 P=0.442	
Individual students with outstanding performance have their work read in class.	1st year	28 (36.4%)		There was a significant association between this item and level of student, which was independent on level of student.
	2nd year	35 (41.7%)		
	3rd & 4th year	8 (17.8%)	χ2=7.600 Df=2 P=0.022	
My teachers always set clear rules for class behaviour (students obtain permission before walking in or out of the class, no late comers when teaching, is going on --).	1st year	63 (81.8%)		The association was similar irrespective of level, though this was insignificant.
	2nd year	66 (78.6%)		
	3rd year	34 (73.9%)	χ2=1.078 Df=2 P=0.583	
My teachers ensure that set class rules are followed and students who fail to keep rules are punished.	1st year	55 (73.3%)		An insignificant association irrespective of level of student.
	2nd year	55 (65.5%)		
	3rd & 4th year	33 (71.7%)	χ2=1.270 Df=2 P=0530	

Table 12.Contd.

	1st year	50 (66.7%)		
A dirty and disorganised class makes it hard for me to be attentive in class	2nd year	70 (83.3%)	$\chi^2=6.517$ Df=2 P=0.038	A significant association existed which was not dependent on level of student.
	3rd & 4th year	36 (80.0%)		
	1st year	29 (38.7%)		
I am always attentive in class whether the class is clean and organised or not.	2nd year	30 (37.0%)	$\chi^2=0.724$ Df=2 P=0.696	An insignificant association irrespective of level of student.
	3rd & 4th year	14 31.1(%)		
	1st year	63 (84.0%)		
Working in groups with other students challenges me to study harder.	2nd year	73 (90.1%)	$\chi^2=5.745$ Df=2 P=0.056	There was a significantly similar association which was not dependent on level of student.
	3rd & 4th year	44 (97.8%)		
	1st year	31 (43.7%)		
I study harder when I work alone.	2nd year	30 (37.0%)	$\chi^2=0.692$ Df=2 P=0.708	Students' perception did not differ significantly irrespective of level of student.
	3rd & 4th year	18 (40.0%)		
	1st year	58 (77.3%)		
I increase my study efforts when a group reward is given to the best group.	2nd year	66 (78.6%)	$\chi^2=2.082$ Df=2 P=0353	The association was statistically insignificant.
	3rd & 4th year	29 (67.4%)		
	1st year	60 (78.9%)		
I increase my study effort (more library time etc) when rewards are given to individual students.	2nd year	70 (84.3%)	$\chi^2=4.186$ Df=2 P=0.123	There was no significant association between this item and level of student.
	3rd & 4th year	31 (68.9%)		
	1st year	59 (77.6%)		
I am encouraged to learn when class rules are defined and the teacher ensures they are kept.	2nd year	71 (85.5%)	$\chi^2=1.666$ Df2= P=0.435	The association was independent of students' level.
	3rd & 4th year	36 (81.8%)		
Whether class rules are defined and kept or not, does not distract me from learning.	1st year	35 (46.7%)	$\chi^2=1.070$ Df=2 P=0.586	The association of this item and level of student was statistically insignificant.

(52.7%) who agreed for encouraging students to work as individuals. However, the respondents further indicated that neither group competition nor individual work is appropriately reinforced as shown by 132 respondents (66.0%) who disagreed and 135 respondents (65.5%) who disagreed for either group or individual rewards respectively.

However, 180 respondents (89.6%) out of 201 indicated that they are motivated to learn when they work in groups as opposed to 21 respondents (10.4%) who disagreed and 153 respondents (75.7%) out of 202 who agreed that they are motivated to learn when rewards are given to the best groups while 49 respondents (24.3%) disagreed.

On the use of class rules to ensure an appropriate psychological classroom environment, 163 respondents (78.7%) agreed and 143 (69.8%) respondents on setting and observation of class rules as opposed to 44 respondents (21.3%) and 62 respondents (30.2%) who disagreed with the last two items respectively. 166 respondents (81.8%) respondents out of 203 indicated that they are motivated to learn when class rules are defined and maintained, while 37 respondents (18.2%) disagreed.

Table 13. Summary of findings for the study.

Research (objective)	Questions	Correlation coefficient (r)	Significance		p-value	significance
1		0.800	very strong positive correlation		0.000	Significant at the 0.01 level.
2		0.000	no correlation		1.000	Statistically significant
3		0.800	very strong positive correlation		0.000	significant at the 0.01 level

Interpretation of Results

The correlation coefficient r = 0.800, a value within the range of $0.75 \leq r < 1$. This implies there is a very strong positive correlation between the independent and the dependent variables. p=0.000 (**) since the value of p is less than 0.01(P<0.01), it implies the correlation between the classroom environment and learning is significant at the 0.01 level. The relationship did not occur by chance because the p-value is small. Therefore, nursing students perceived the use of the classroom environment as having a very strong positive impact on their learning.
Table 13 shows a summary of the findings of the study. Amongst the variables under investigation, very strong correlations of independent and dependent variables occurred between assessment and classroom environment andlearning perfect positive correlations. No correlation existed between feedback and learning (Tables 9, 10, 11 and 12).

DISCUSSION

From the above results discussions are visible and summarized as:Students perceived the use of assessment as having a very strong positive influence on their learning. The result of this study agrees with that of Gijbels et al. (2005) and of Gibbs and Lucas (1997), which indicates that assessment shapes learning.

Students perceived the use of feedback as having a weak influence on their learning. With regards to feedback serving as motivation to learn, the findings of this study contradicts that of Rucker and Thomson (2003) which suggested that feedback as a learning process has a helpful effect on students' performance and that of Usman et al. (2011) which indicated that feedback and job role innovation have a significant impact on organizational learning culture, taking learning beyond the context of schooling. However, this finding is in line with that of Maclellen (2001) which demonstrated that feedback was only sometimes helpful and did not spur discussion between students and teachers.

Students perceived the use of the classroom environment as having a very strong impact on their learning. The finding of the current study is in agreement with the results of Beak and Choi (2002) on the impact of the classroom environment, the classroom environment was claimed to be a good predictor of students' academic achievement.

Conclusion

Data analysis revealed that there is a very strong positive correlation between assessment and learning. Though students perceive assessment as motivational, the use of assessment as a motivational strategy is inadequate.

A weak correlation has been found to exist between feedback and learning. However, the use of feedback as a motivational strategy was inadequate. This finding indicates that feedback has a weak influence on nursing students' learning.
There is a very strong positive correlation between the classroom environment and learning, though the use of the classroom environment as a motivational strategy is inadequate.

RECOMMENDATIONS

i.) Nurse educators should always endeavour to understand the motivational strategies of their student.
ii.) Nurse educators should use the identified motivational strategies to enhance learning.
iii.) Nurse educators should counsel students on these motivational strategies for better learning and future better patient outcome.

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