CONTINUAL ASSESSMENT OF STUDENT NURSES

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OPSOMMING

Daar is reeds baie geskryf oor die voortdurende evaluering van kliniese praktyk en die teoretiese aspekte van die algemene wetenskap en kuns van verpleging. Hierdie artikel beoog om die praktiese aspekte van evaluering te verduidelik eerder as om die talryke teorieë te bespreek.

Much has been written about the continual assessment of clinical practice and the theoretical aspects of the general science and art of nursing. This article aims to clarify the practical aspects of assessment rather than to discuss the numerous theories.

Firstly, we need to define that we mean by evaluation or assessment. According to Reilly, "Evaluation is a positive process whose primary purpose is to assess growth". (6, P.93). The process should therefore facilitate learning. This means that the person evaluating the student should act as a counsellor rather than a judge.

Evaluation may be summative i.e. it occurs at the end of a course or year and refers to the extent to which a student has realised the specific objectives laid down. In nursing, summative evaluation consists of the written examinations set by the South African Nursing Council and the oral examinations in clinical practice set by the hospital.

Alternatively evaluation may be formative i.e. it occurs throughout the program and refers to the students' PROGRESS towards realising the objectives set. This is what is aimed at with continual assessment. An important aspect of formative evaluation concerns feedback on performance from the evaluator to the student which in turn assists in improving the student's performance. (6,P.92).

The purpose of evaluation can be summarised as follows:

— creating and maintaining satisfactory standards of performance
— highlighting the needs and opportunities for growth and development
— validating training programs i.e. if the laid-down objectives are not being met the course and its presentation should be reviewed. Possible reasons for objectives not being met may include unrealistically high standards or goals and faulty methods of teaching. (1, P.311).

A brief discussion of the abovementioned purposes of evaluation follows:

Creating and maintaining satisfactory standards of performance

In order to assess whether satisfactory standards of performance are being achieved, objectives must be set against which performance may be measured. Having set objectives, which shall be discussed in more detail later, the student is assessed on her/his ability to achieve these objectives. The pass mark is arbitrarily set at 50% thereby implying that the student who has passed has achieved 50% of the objectives. Fifty percent is generally regarded as the minimum level of competency required to ensure safe performance. A student scoring below 50% is regarded as lacking certain essential elements of the desired level of knowledge. Such a student should be assisted by the evaluation to improve her/his performance and thereby achieve the required levels of patient safety and care.

The Need for Growth and Development

According to Litwack, "Students need to know what they are doing well, where they can improve and in what ways they can change their behaviour". (3, P.145).

Students must know what is expected of them and how they are going to be evaluated. Time should be set aside for discussion of performance with individual students especially with regard to assessment in clinical practice. In this way a student is made aware of her/his shortcomings and if handled correctly and tactfully the discussion should lead to the student being motivated to improve her/his performance.

In discussions of performance, the procedures ensuring satisfactory performance should be emphasised rather than those aspects of a student's performance which have been found to be unsatisfactory.

Validating Training Programs

Evaluation assists in identifying deficiencies in the student's knowledge of the subject matter. Furthermore, feedback from the student can assist the tutor in

determining the effectiveness of her instruction. Consistently poor results very often indicate poor teaching methods.

At this point it would be as well to give some thought to what we mean by the word "objectives". Objectives concern the levels of performance students should be able to attain during the various stages of their training. An objective must be:
— relevant i.e. it must be based on specific educational needs
— measurable
— clearly stated
  (8, pp 152-160)

For example, all students must be able to bedbath a patient. During the first few months of training the objective may be that the student should be able to bedbath the patient within an hour. However, by the end of the first year the objective would be adjusted in accordance with the greater proficiency now expected of the student — the objective may now be that the student should complete a bedbath within half an hour.

Objectives are set in both the theoretical and practical fields for example:

Theoretically a student is expected to be able to list and explain the following steps in the nursing process:
1 Assessing the patient's needs
2 Planning nursing intervention
3 Implementing the planned intervention
4 Evaluating the results of the intervention

However, practically, the student must not only be able to list and explain the abovementioned steps, she/he must also be able to put them into practice. The following is an example of how each of the steps are put into practice:

1 *Assessing the patient's needs*
  1.1 the patient appears flushed (observation)
  1.2 the patient complains of feeling hot (communication)
  1.3 a temperature of 40°C is recorded (physical examination)
In this case lowering the patient's temperature is a primary need.

2 *Planning nursing intervention*
  The following steps may be planned:
  2.1 to report the patient's condition to the sister or doctor
  2.2 to remove the extra bedclothes
  2.3 to tepid sponge the patient

3 *Implementing the planned intervention*
  The steps mentioned under planned intervention are carried out.

4 *Evaluating the results of the intervention*
  The results of the abovementioned steps are evaluated and, if successful, should lead to a reduction in temperature; the patient is no longer flushed and feels cooler.

Taking time to sit down and work out objectives for each section of the course is a long process, but is necessary to ensure that standardised methods of evaluation are used i.e. all students are measured against the same yardstick.

Evaluation

Having set objectives, the next problem is to decide how often and at what stages in the student's training evaluation is to take place. The term continual assessment implies that evaluation is an ongoing process. The actual intervals between evaluations depend on the number of students to be evaluated and the number of people available to carry out the evaluations.

Some hospitals attempt to assess their students every week, but this places an almost impossible burden on the people who are doing the evaluating. In hospitals where students are normally rotated on a monthly basis, it is advisable to train the ward sisters to evaluate the students so that each student can be evaluated at least once a month. While the clinical tutors must also assess the students on a regular basis, with a large number of students it may only be possible to assess each one every two to three months.

It is important that the clinical tutor should ask the ward sister or the registered nurse responsible for clinical teaching on the ward to accompany her when she is assessing students — this allows them to compare their assessment methods and to modify them where necessary.

Although the student is being assessed by a number of people, the use of the same evaluation methods helps to ensure that each evaluation is fair and therefore assists in motivating the student to improve her/his performance. In view of the fact that students are regularly rotated between wards, it becomes impossible for the ward sister to carry out more than one or two evaluations of a specific student. Therefore, in addition to the evaluations carried out by the various ward sisters, evaluations of the same students should also be carried out by clinical tutors. This system allows the clinical tutor to gauge the degree of improvement shown by a particular student.

The tutoring staff of the hospital or college are responsible for evaluating the theoretical aspects of the general science and art of nursing. This evaluation is achieved mainly through the tests written by the students while they are in college and may be supplemented by tests given at intervals while the students are working in the wards.

Evaluation of Theory

Although there is a degree of overlap between theoretical and practical assessment, we will discuss these aspects as separate entities. The systems for evaluating the theoretical aspects are many and varied and the following are a few examples:
1 THE UNSTRUCTURED OR SHORT QUESTION
  — the student's answers the questions may be given full sentences or in point form. Corrections of the answers is simple since the answers have been predetermined
2 ESSAY QUESTIONS
  — this type of question tests the student's knowledge of the subject matter as well as her ability to communicate ideas in a logical and coherent manner. However, the essay-type question severely limits the extent to which the student's knowledge can be tested. Furthermore, essay-type questions are often very difficult to mark objectively

3 ALTERNATIVE RESPONSE/FORCED CHOICE

e.g. True — False
— this method is useful in covering an extensive field in a short period of time.

e . g . if the objective is to define the terminology of heart disease, the student is required to circle the letter T if the statement is *true* or the letter F if the statement is *false*:

Endocarditis is an inflammation of the heart muscle   T/F   (6, P.103)

4 MULTIPLE RECOGNITION QUESTIONS

These questions have the advantage of being objective, valid and reliable but their construction is time-consuming. There are basically two varieties:

Multiple choice— one answer is selected from a number of possible answers.

e.g. if the objective is to name the steps of the nursing process, then the instructions might read as follows:

Circle the letter shown in front of the correct sequence of steps in the nursing process:

A	evaluation, planning, assesment, intervention
B	intervention, planning, evaluation, assesment
C	assessment, planning, intervention, evaluation
D	assessment, intervention, planning, evaluation

(6, P.106).

Multiple response i.e. several correct responses are possible and the selection is based on the best combination of responses.

e.g. If the objective is to identify the physiological results of the exercising of joints, then the instruction may read as follows:

Circle the number preceding the best selection of responses

Question: Which of the following physiological actions occur during the exercising of the knee

A	Blood circulation is increased
B	Muscle tone is improved
C	Sensation in joints is lessened
D	Contractures are prevented
E	Mobility of joints is improved

(1)	All but C
(2)	B D E
(3)	All of the above
(4)	A C
(5)	A C E

(6, P.107)

5 COMPLETION QUESTIONS

The student completes the statement by inserting the missing words or phrases.

e.g. The valve between the left atrium and ventricle is called ....

6 MATCHING QUESTIONS

There are two columns; the right column usually contains more items than the left one. The student is requested to relate the terms in the left column to a statement in the right column.

e.g.

A	B
1 Percussion	a) Use of the sense of touch to feel or press on parts of the body
2 Inspection	b) Tapping a part of the body with the fingers and listening to the sounds produced
3 Palpation	c) Use of the sense of hearing to interpret sounds produced within the body
4 Auscultation	d) Visual examination
	e) Act of perceiving what is detected by the senses

(6, P.111)

Note that it is advisable to list more items to column B than responses required, in order to minimise the chance of correct answers being given as a result of the student resorting to the process of elimination.

7 PROBLEM-SOLVING

This method is designed to assess the student's ability to think critically. She/he is presented with a written description of a nursing problem and is then asked to respond to questions relative to the situation. This form of evaluation also lends itself to group discussion although then it is sometimes difficult to assess each student's contribution. It may also be used in clinical practice.

CLINICAL EVALUATION

According to Litwack: "Clinical evaluation is the process of assessing student progress in all educational experiences outside the formal classroom. It refers to the student's ability to provide competent nursing care under supervision". (3, P.141).

The methods which are used for assessment in clinical practice include the following:

1 OBSERVATION METHODS

Anecdotal notes

This is a brief description of observed behaviour that appears significant for evaluation purposes, sometimes referred to as critical incident recording. Anecdotal records are recorded on a separate sheet and resemble progress notes. These notes cannot be used for marking or grading the student, but are useful in formative

evaluation to help a student improve her/his performance. They are used mainly by clinical tutors when doing "follow up" visits to their students in the wards. The disadvantages of this method are that neither the notes nor the observations are standardised and there is a strong element of subjectivity. Many of the problems encountered can be overcome by adopting a more systematic approach to the collection of anecdotal notes.

The checklist

This is a prepared list of statements related to the performance of actions. Each statement is ticked to indicate whether the action was performed or not and if so in what sequence. For example, if the tutor wishes to evaluate a student's ability to recognise and manage a respiratory arrest, the following checklist would be used. The example gives the type of evaluation that might be obtained and the student's actions can be discussed with recommendations being made for improvement.

Evaluation of how a student attains the objective of recognising and treating respiratory arrest

	PERFORMED	NOT PERFORMED	CANNOT BE DETERMINED	SEQUENCE
1) "Shakes and shouts" victim to determine un- consciousness			✓	
2) Applies chin lift to open airway		✓		3
3) Applies neck lift to open airway			✓	1
4) Uses "look, listen, feel" technique for apnoea		✓		
5) Closes victim's nose by pinching		✓		2
6) Effects light mouth-to- mouth seal		✓		4
7) Gives four quick ventila- tions		✓		5
8) Checks carotid pulse		✓		7
9) Checks pupils (5, p91)		✓		6

Rating scale

The scale has two major components
— a set of defined traits or levels of performance on which the students are judged
— a scale associated with each trait or performance which qualifies the extent to which a trait is possessed by a student or how well the performance is carried out. These scales are particularly useful in assessing interpersonal skills, communication skills, attitudes, interests and even job skills. The rating scale may be graphic where a tick is placed in the box best describing the student's performance. This rating does not result in a score being obtained for each student.

e.g.

RELATIONSHIP WITH PATIENTS					
Unable to establish rapport	Fair rapport but occasional lack of communication	Good rapport communicates concern for patient	Listens and communicates well; instills confidence	Convinces patient of expertise and puts patient at ease	Not observed (3,P.99)

Where a score is required it is more desirable to use a numerical scale where, for example, a numerical rating of 0-4, is indicated for each trait and provides a standardised quality of performance

KEY	
4 = Competent	: The student performs consistently in an effective and efficient manner
3 = Progress acceptable	: Performance is usually effective and efficient, but not always. Has demonstrated marked improvement over a period of time
2A = Needs improvement	: Progress in performance is too slow to be judged satisfactory
2B = Needs improvement	: Task performance is done properly for majority of the time
1 = Progress unacceptable	: No progress in performance has been demonstrated or performance is consistently ineffective and inefficient
0 = No experience	: The student's performance has not been observed or the student has had no opportunity to perform

e.g.

MEDICAL RECORDS	
1 Maintains accurate patient records	3
2 Writes records promptly	2B
3 Comments	

(3, P.100)

You will note that there is not an average or "middle" score shown on this scale as people then tend to simply take the easy way out by marking the student as "average".

2 PRACTICAL EXAMINATIONS

These provide the opportunity to test, in a realistic setting, skills involving all the senses while the examiner observes and checks performance.

We at the University of Pretoria have continued to use practical examinations in addition to our continuous evaluation, as we feel it provides additional motivation for the students to maintain high standards. The format for marking the practical examination is the same as that used for the continual evaluation of students although the former situation is a pre-arranged one, whereas continual evaluation is done in the wards where the students are assessed while they are working. The form we use is based on the nursing process and the marks for each section are weighted according to their importance.

e.g. **Aseptic Procedure**

(1)	Assessing the patient's needs, which includes knowledge of the patient's history, is marked out of 4	4
(2)	Planning the nursing intervention, which includes all preparations both in dressing room and at the patient's bedside, is marked out of 8	8
(3)	Implementing the planned intervention is divided into two sections:	
	(i) The student's interpersonal relations with the patient including communication skills and concern for the comfort and dignity of the patient — marked out of 18	18
	(ii) The procedure or performance itself marked out of 53 and made up of the following components	
	— The aseptic technique of the student is marked out of 25	25
	— Competence and manual skill are marked out of 20	20
	— Rounding off and tidying up marked out of 3.	3
	— A five-point scale for the degree of difficulty of a particular procedure	
	e.g. Renewing a simple dressing — rates 1-2	
	Removing sutures — rates 2-3	
	Irrigation of a wound — rates 4-5	
	Catheterisation — rates 5	5
(4)	The evaluation of the results of the procedure and the recording of both the procedure and the results are marked out of 5	5
(5)	The examination is followed by a short 10-minute oral examination in order to obtain further information on the student's knowledge of certain aspects of the practical examination. This oral is marked out of 10	10
(6)	The student's appearance, neatness, etc., is marked out of 2	2
	The total score is therefore marked out of a possible 100 marks	100

3 WRITTEN COMMUNICATION

Nurses' notes

Nurses' notes, problem-oriented records and other written reports can be used for evaluating purposes. Not only is content-knowledge assessed, but also the student's communicating skills. A rating scale or check list may be used as the actual assessment instrument and the assessment should be repeated at intervals throughout the student's training. Evaluation criteria in nurses' records should include the following:
— the appropriateness of what is said
— the comprehensiveness of significant facts
— the accuracy of data collection and interpretation
— the consistency with which reported plans and actions agree with assessment data (6, P.153)
As patient's charts are legal records of the care provided it is essential that the student's ability to complete them accurately is developed by continual assessment.

Nursing Care Studies

Although there are various ways of doing nursing care studies, including the workbook method, they are all basically individualised learning processes. Each study must be adapted to the student's level of training. They can then be used to evaluate the student's understanding and implementation of the nursing process.

4 ORAL COMMUNICATION

Appraisal interviews conducted after the completion of evaluations present the ideal opportunity for feedback for both student and evaluator.
Conferences which are problem-solving experiences can be organised either among peer groups, where the teacher rates individual participation, or they may be nursing team conferences in the ward where the ward sister assesses the student participation and their understanding of problem solving techniques.

CONCLUSION

We have discussed a few of the aspects of evaluation and different methods which may be used in the assessment process. I do hope this will help to clarify the process of continual assessment. However, as all our needs and circumstances differ, it is not possible to lay down hard-and-fast rules. The South African Nursing Council leaves it to the individual nursing schools to decide what methods of evaluation they wish to use. The Council merely demands that the methods must be quantitative assessments (i.e. measurable), so that the person in charge of the nursing school can submit a certificate stating that the student obtained at least an average mark of 50% in these continual assessments. This certificate is submitted 3 months prior to the month of examination. This aggregate mark is made up of both the tests on theoretical aspects as well as assessments in clinical practice. It is advisable, however, for each school to insist that the student obtains at least 50% in theoretical evaluations as well as clinical assessments. The oral examination in clinical practice set by the hospital as part of the Nursing Council's examination is a completely separate matter, and does not concern us here.

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