

Students' perception about Logbooks: advantages, limitation and recommendation — a qualitative study

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Abstract

Objective: To identify students' perception concerning advantages, limitations and recommendations about logbooks.

Methods: In this qualitative-phenomenology study, conducted from January to December 2010, 14 undergraduate nursing students were selected by random sampling. The study was done in the neonatal intensive care unit and paediatrics ward of a regional hospital in Bojnord, Iran. At the beginning of the courses, the tutor explained the specific objectives of the core curriculum and how to complete the logbooks. During the course, formative assessment and related feedback were noted down. At the end, two semi-structured focus groups were generated. All interviews were recorded, transcribed and analysed for emerging themes and concepts.

Results: Based on content analysis, three advantages and four limitations of logbooks were identified and recommendations were noted.

Conclusions: An appropriate logbook should be inexpensive, feasible and acceptable to students and should allow rapid collection of valid, relevant and reliable data. However, its methodology needs to be revised.

Keywords: Phenomenology, Logbook, Clinical assessment. (JPMA 62: 1184; 2012)

Introduction

The post-medical education training board in the United Kingdom defines assessment as, "The process of measuring an individual's progress and accomplishments against defined standards and criteria, which often include an attempt at measurement. The purpose of assessment is to make a judgment about mastery of skills, to ensure improvement over time, to arrive at some definitions of strengths and weakness, to rank people for selection or exclusion, or perhaps to motivate them."¹ Ongoing and regular formative assessment with comprehensive summative assessment is essential to follow students' progress.² Logbooks are part of continuous assessment for feedback to students that observe the outcomes of clinical courses,³ and are sometimes used as a tool for individual student guidance, and evaluation of programmes.⁴ Logbooks provide feedback to the students about their progress, allow correction of weaknesses, and guide them on the path to achievements.⁵ Logbooks are developed in accordance with the core curriculum of any course. The students record their professional, clinical experiences based on the objectives in the logbooks.^{6,7} Logbooks facilitate and monitor students' learning, provide a reward system based on competition among peers, encourage immediate and ongoing interaction between the tutors and the students, provide continuous and objective assessment, provide a feedback loop for the

evaluation of learning activities,³ validate the procedural experience at advanced training levels,⁸ and involve training centers.

Despite the benefits of logbooks, their usage in medical education is not well established. Traditionally, logbooks are used simply as means for students to document their activities.³ Unfortunately, trainees are not required to report outcome data and there is no verification process other than to ask the supervisors whether the logbook has been viewed. The data currently required for trainee logbooks do not prepare the trainees for a lifetime of professional audit.⁸

Since students are the main stakeholders in an appropriate logbook design, the aim of this study was to gain insight into the minds of the students regarding the advantages and limitations of logbooks, and what improvements they thought were necessary to make the exercise practical and worthwhile.

Subjects and Methods

The research design was Georgi's (1985)⁹ approach to phenomenology. Interviews in focussed groups were used to generate data that are systematically analysed to search for themes and patterns that illustrate similarities or differences and uncover the meaning of the particular experience.

The participants in the current study were nursing

students of both genders in a regional hospital in Bojnord, Iran, under the supervisory umbrella of the Committee of Research at the Northern Khorasan University of Medical Sciences. Participants were selected according to inclusion criterion which stipulated students who were in the last year of their undergraduate nursing curriculum; sampling was purposive and resulted in 14 students among whom there was no deliberate gender bias. Data saturation was reached during the later part of the interviews, therefore, no more participants were included in the study. The study period was 12 months from January to December 2010.

Consent to participate in the study and for their interviews to be recorded was obtained. The participants were assured through a letter that the recorded interviews would be deleted after transcription.

At the beginning of the session, the tutor introduced the core curriculum, and helped the trainees to collect and retain the relevant documentation at the end of each day. The tutor provided formative feedback and opportunities for the trainees to achieve competencies. Data was obtained by generating two in-depth, semi-structured focus groups, each lasting 30-60 minutes. The participants were asked three open-ended questions: What are the advantages of logbooks; What are the limitations of logbooks; and What are your recommendations to improve the use of logbooks.

The interviewer encouraged the trainees to talk about the theme as freely as possible and tried to hold a dialogue rather than simply asking questions. The statements of the trainees in response to the interviewer's queries about their experiences and feelings led to new follow-up questions and were important in shaping the progress of the interviews.

All interviews continued to gain data saturation and were tape-recorded. Also, hand-written notes were taken during each focus group session. The participants were provided with a written copy of the transcription so they could remove or modify any information they had divulged.

Data obtained during these sessions were analysed using Giorgi's (1985) step-by-step approach to phenomenology. The transcribed interviews were read thoroughly as a whole to gain a general understanding of what the nursing students expressed about the phenomenon. Interviews were re-read several times and the text was condensed into units of meaning, which were then clustered into themes. Checking consistency between the identified themes and the general structure of the interviews for a second time concluded the analysis. The units of meaning were not interpreted; only descriptions of how the participants experienced the phenomenon in their own world. Validity was determined by deciding as to what degree the researcher had been able to grasp the meaning of the participants' experiences. Therefore, the findings were

checked and rechecked.

Results

The 14 participants were aged 20-22 years, and 50% (n=7) were female. Content analysis of the data collected resulted in three advantages, as pointed out by the students. One of the participants said the important point of the logbooks was objective assessment by the tutors who were able to keep their personal bias aside.

Another student talked of greater accountability of the tutors. "When we protest about our grades, some of our tutors are unable to satisfy us. But by using the logbook, this problem can be solved," said one student.

The logbook was also cited as a self-assessment tool. "When I recorded my experiences in the logbook, I appraised my own performance by comparing my progress with the course objectives," noted one student.

The content analysis also brought to surface four limitations. Students pointed out that being final year students, they must do a lot of practical tasks. Instead they were made to complete logbooks which to them was a time-consuming activity.

Students also called logbooks an unfamiliar tool for assessment. "We didn't know much about logbooks. They are new for us, and the students need to know more about it before they are enforced," said one student.

Participants also found the logbooks stressful, arguing that they worry too much about the possibility of forgetting to enter some activity or print which may adversely affect their grades.

Lastly, the students found the logbook to be an invalid assessment tool because some records in logbooks may be fake and the students may not have performed those tasks. "It is better that our tutors don't rely solely on our logbooks for granting grades," said one student.

In response to the last question, the students suggested a more structured logbook in which all students should record their experiences the same day. Some students said that "making a record of activities alone should not be enough; the quality of these records should also be a factor."

Finally, the students suggested a uniform application of the logbook, arguing that in every clinical course, tutors tend to use the logbook differently, which is far from being ideal.

Discussion

This qualitative study showed that the advantages of logbooks are objective assessment, self-evaluation and better accountability. But for improving the quality of learning, reliability of assessment and to remove the limitations, it is

essential to change the structure of the logbooks. Also, objectives of courses should be part of the logbooks, and all tutors need to use them, uniformly.

Logbooks can be used for assessing clinical competence⁹ and can help tutors to assess students objectively. By providing students with logbooks that list objectives, the summative assessment can be more objective, can encourage the students to develop responsibility by providing opportunity for self- assessment.¹⁰

The students in the study found the logbook time-consuming. Various types of electronic logbooks have been developed to reduce the time for reports, portability and adaptability for other uses.¹¹ Nowadays, a number of trainees use free or inexpensive database for desktop, laptop or personal digital assistance (PDA)-type computers to record their own procedural logbooks.^{12,13} The e-logbook is a modern logbook that allow data input easily and quickly.¹⁴ Therefore, such advancements must be made use of while developing logbooks for trainees in medical studies.

The study was the first time that logbooks were used to assess students at the Northern Khorasan Univesity of Medical Sciences in Bojnord, Iran, and it is suggested that logbooks should be used by all its students and they shall be made to fill in the logbooks honestly. Very few studies have been done to determine the accuracy of the documentation of students' experience in logbooks. It seems difficult to create logbooks which are simple to use, and still yield reliable and valid data.⁷ Good assessment should be valid, reliable, educational, acceptable and feasible. Similar to the current study, other researchers have also shown that validity and reliability of logbooks remain a challenge.¹² For improving the reliability of logbooks, it has been suggested to employ inter-observers and/or multi-tutor assessment methodology.

One of the findings of the study was that the students found the logbooks stressful. Some studies suggest that interactive logbooks improve communication between the tutors and the students. The tutors then assigned a grade to students who had been involved in presentations or demonstrations, and making an assessment of the student's performance. Throughout each teaching block, the logbook process will identify students who would benefit from counseling.³ Therefore, it is better to improve interactive logbooks that develop friendly communication between the tutors and the students. As students become less responsible for both recording and charting their own clinical experiences, their anxiety would decrease.

In parallel with the present study, some studies consider that current logbooks are only a record of work that

students carried out, and not of the outcome of their performance. Therefore, logbooks do not adequately prepare trainees for a lifetime of effective audit and self-learning.^{13,15} Although it is tempting to use the logbook as an objective assessment tool, its effect as a learning tool is not clear. Finally, appropriate logbooks should be inexpensive, feasible, and acceptable to students and should allow rapid collection of valid, relevant and reliable data.^{4,7} However, its methodology needs to be revised into e-logbooks.¹⁶

Conclusion

With the introduction of electronic and interactive methodology, the logbook has the potential to become an inexpensive and feasible tool for the students to maintain, and for the teachers to use it as an objective assessment tool.

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