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Assessing student midwives clinical skills in an academic setting: OSCEs a link to the real world of practice?

Recent changes to midwifery education in Ireland have included the establishment of a four year BSc Midwifery (BScM) programme in September 2006 and a shortened 18 month post registration Higher Diploma in Midwifery (HDM) programme in September 2007. The primary purpose of transfer of undergraduate midwifery education into the third level setting is to impact positively on the quality of maternity care given to mothers, babies and their families. While the change to third level education is very welcome every effort must be made to ensure that strategies which support the practice based nature of midwifery are reflected throughout the curriculum

Clinical midwifery staff and midwifery lecturers aim to develop students to their full potential so that at point of registration the student meets An Bord Altranais's (2005) Requirements and Standards for Midwife Registration. The development of fundamental clinical skills is an important component in preparing students to meet the responsibilities of a midwife. However, the design of the curriculum has meant that students spend less time in the clinical practice environment with less time to gain competence in performing clinical skills. In addition, staff in clinical areas are carrying increasingly high workloads which has necessitated new approaches to the teaching, learning and assessment of clinical skills (Nicol and Freeth, 1998). It is important that midwives are not identified as having sole responsibility for the development of student midwives' clinical skills but that lecturers and students themselves play a vital role in ensuring students have attained an appropriate level of clinical competence.

The development of clinical skills laboratories ensure that students have what O' Neill and McCall (1996, p125) refer to as 'beginning clinical competence before they are exposed to the 'real world and real patients''. O' Neill and McCall (1996) also suggest that Objective Structured Clinical Examinations (OSCEs) have the potential to promote integration and consolidation of skills prior to clinical placement. OSCEs form part of the assessment strategy of the undergraduate midwifery programmes underpinned by the concept of women centered care in the University of Limerick. This paper evaluates the experiences of students and lecturers in the first stage of rolling out this strategy. Reference will be made to the preparation, process, and implementation of OSCEs. The benefits and limitations of this form of assessment in relation to this experience are considered and compared with the literature.

Definition of OSCE

The original purpose of OSCEs, as first described by Harden and Gleeson (1979) in the medical literature was for examining the skills acquisition of medical students. The student is given the opportunity to demonstrate practical and /or theoretical skills

in relation to a given scenario at a station (Alinier 2003). A station is the name given to a scenario or situation drawn from clinical practice that has been devised for the student to experience (O' Neill and McCall, 1996). The evidence base for the use of OSCEs is extensive in medicine while that related to nursing is more limited (Rushforth, 2007). There is minimal evidence in relation to the use of OSCEs in midwifery with the exception of Rennie and Main in 2006 and more recently Jay's study (2007). From a practice perspective the Confidential Enquiry into Maternal and Child Health (2007) builds on prior recommendations that all members of the multidisciplinary team have the opportunity to practice dealing with emergencies in a simulated situation. As a result it is considered best practice in obstetric units to perform regular obstetric drills, hence the emphasis on OSCEs within the midwifery programmes.

Using OSCEs for assessment purposes

OSCEs can be used as both a formative and summative assessment to enhance skill acquisition through simulation (Alinier 2003) and are considered a reliable way of assessing basic skills (Mohanna et al 2004). In the Dundee experience recounted by Davis (2003) OSCEs were used for summative assessment of medical students. Davis (2003) refers to Millar's pyramid where OSCEs are seen as level three, assessing "shows how" superceded only by 'does' demonstrated via portfolio. The debate has progressed beyond issues of reliability and validity with OSCEs unchallenged as the assessment tool of choice at this level of Millar's pyramid (Davis 2003).

Preparation for OSCEs

Cioffi (2001) suggests the use of clinical simulations can enable experiential learning to occur. The availability of a midwifery clinical skills laboratory provides an environment with space and equipment which facilitates teaching, learning and assessment of clinical skills. Students had an opportunity to practice for the OSCEs at preset times in the clinical skills laboratory under the supervision of a lecturer. Some students also had the opportunity to practice the emergency drills with midwives in the labour ward setting which they reported as being very beneficial.

In preparation for the OSCEs the students were divided into two groups. Each group was given one of the scenarios in Box 1. One group of students dealt with the emergency whilst the other group observed on camera in another room. When the 'Registrar' who was the clinical laboratory co-ordinator answered the bleep the student was asked the questions linked to the scenario. The reaction of the students to some of the questions helped to reinforce the learning for both sets of students while increasing the sense of real time in terms of dealing with the emergency.

Box 1

Scenario I

Post partum Haemorrhage

Mary, a first time mother who begins to bleed following the birth of her baby

Questions asked by the Registrar when answering the emergency bleep

1. Is the placenta in or out
2. Have you repeated syntometrine
3. What are the woman's vital signs
4. Is there an IV line up
5. Has she been grouped and cross matched

Scenario 2

Cord prolapse

Collete is in the bathroom in the antenatal ward when she has a cord prolapse

Questions asked by the Registrar when answering the emergency bleep

1. What is the fetal heart
2. How far is the woman's cervix dilated
3. Has theatre been contacted

The operational issues centered on obtaining room space and adequate time. Challenges to be overcome included negotiating within a setting where scheduling is carried out centrally, to issues such as where will the students wait prior to the assessment and identification of a private area for feedback. Environment and equipment requirements for the OSCEs and the setting up of the stations prior to the assessment all needed to be considered. Criteria for the assessment were developed. Assessors were carefully briefed about their role in the assessment process. Consideration was given to pre assessment anxiety (Nicol and Freeth 1998) with a co-

coordinator seen as having a crucial role to play in the process (Brosnan et al 2006). Noise and activity can affect students' concentration and anxiety levels with one station in each room being the ideal (Rennie and Main 2006). However this presents challenges in a university setting that is limited by scheduling and availability of space.

OSCE Process

The OSCE process as with any exam strategy is stressful for students which in turn can affect the validity of the assessment (Ross et al 1988). Franklin (2005) suggest that the stress associated with OSCEs can be eased with adequate preparation. Student preparation for the OSCEs began in the first week of the programme where they were given an outline of the assessment process, scenarios and the marking criteria.

Student 2: BSc M

“We were very much aware of how we would be assessed which made it much more easy to focus”.

Student 17 BSc M

“I was well prepared and felt extremely confident. There were no surprises on the day. I knew what to expect which helped with the nerves”

Practice sessions facilitated by the module leader were provided to ensure that all students had an opportunity to review a demonstration of the correct way to perform an OSCE and to practice the skills as recommended by Khattab and Rawlings (2001). Students found these sessions beneficial in preparation for the OSCE assessment.

Student 5 BSc M

“Where to start!! Very nerve wrecking, but to be honest the practice sessions were brilliant and really gave me the confidence in the learning I had done. I will never forget the pelvis!!”

Student 17 BSc M

“I found the practice sessions valuable in relation to practicing with the equipment”

Procedure for OSCEs

Two stations were set up in a clinical skills laboratory. The students were allocated fifteen minute slots. The coordinator escorted each student to the allocated station. A scenario was given to each student by an examiner, for example in the case of the 1st year BSc Midwifery students, a primigravida attending the midwives clinic for her

antenatal check at thirty eight weeks pregnant. The student was expected to demonstrate knowledge and understanding of the theory and skills underpinning abdominal palpation while simulating caring for a woman in practice. In the case of the midwifery complications module for the Higher Diploma Midwifery students the scenarios included post partum haemorrhage and shoulder dystocia. On completion, time was allocated for discussion with the student reflecting on their performance. The examiner scored the student's performance on the basis of preset criteria. Once the assessment was completed the student was taken to a private area where an indication of pass or fail was given to the student

Evaluation of OSCEs

Nicol and Freeth (1998) suggest that one of the dangers of this assessment strategy is that midwifery practice may be perceived by the student as a set of tasks rather than providing a holistic approach. To address this within our assessment strategy, the student was expected to perform as if this was a real life situation with a mother and baby, demonstrating application of theory to practice. A measurement tool based on the Diploma in Midwifery pilot programme (Carroll 2003) used practice cues to determine whether the performance was at the required standard. Further development of measurement tools will be needed to ensure reliability and validity as the assessment strategy unfolds.

The OSCEs focused the students learning and students reported that the knowledge and skills learned in the process were invaluable in preparing them for clinical practice placements.

Student 8 HDM

“The OSCE is a good way of learning the theory and applying it to practice and being assessed gives a good indication of where you are at”

This is congruent with Brosnan et al's work in 2006 which evaluated the process and outcomes of OSCEs for nursing students. Students in that study identified the OSCE assessment strategy as a meaningful, appropriate and fair assessment and that they were more prepared and more confident for clinical placements. Students in Rennie and Main's (2006) study found that practicing skills helped them to remember, leading to more in depth learning. The students comments in this evaluation reflect these findings:

Student 3 HDM

“OSCEs were a great method of learning and motivated us as well. Doing practical exams makes theory more applicable to practice”

The lecturers involved in the assessments provided feedback on the process and commented on the level of knowledge and the ability to apply theory to practice.

They also commented positively on the educational benefits of OSCEs as an assessment method which is in line with Alinier's findings in 2003. Haigh (2007) identifies that developing simulations from real life scenarios is time consuming yet a highly beneficial process. Comments from this evaluation concur with this and lecturers also noted that the preparation and implementation of the OSCEs was more labour intensive than other assessment strategies.

Following initial evaluation of the experience by the BSc Midwifery students the need for students to practice in their own time was identified. A clinical skills laboratory for student use was piloted last semester which has been used by a large number of midwifery students.

Student 5 HDM

“Excellent way of learning easier when doing..... Having the practice lab open was of great benefit”.

The next stage

In light of our evaluation of the first stage of the OSCE strategy changes will be implemented to improve the process and quality of this form of assessment. Measurement tools and marking criteria will continue to be developed to ensure that they are reliable and valid.

Video recording will be used for moderation purposes and be made available to the external examiner. The use of video play back can also be used for students to evaluate their performance. Anderson and Stickley (2002) found that despite some reservations by students that video playback was a very powerful form of learning. The tapes can also be used for research purposes (Nicol and Freeth, 1998).

Nicol and Freeth (1998) suggest that student self-reflection on their performance prompts them to identify strengths and weaknesses and promotes learning. Therefore, in addition to the availability of a taped recording, it is planned to give the student a self-assessment form to be completed after leaving the station. More detailed immediate feedback to students needs to be considered in line with the comments from Khattab and Rawlings (2001).

Conclusion

This article has highlighted the value of implementing a modified OSCE strategy within a midwifery programme in a university setting. An insight into opportunities and challenges associated with this assessment strategy is offered. It is acknowledged that the development of clinical skills within a laboratory setting does not replace real clinical experience. However it does equip students with some skills that can be directly transferred into practice resulting in learners gaining increased confidence and improved clinical judgement.

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