Authentic Assessment in nursing education: Something borrowed something new.

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Background

Nursing is a practice based profession underpinned by theoretical knowledge, both elements gained through a programme of nursing education. The Nursing Council of New Zealand [NCNZ] primarily concerned with public safety, defines competence as "the combination of skills, knowledge, attitudes, values and abilities that underpin effective performance as a nurse (2007, p.20). A definition of nursing knowledge includes the subjects of bioscience, sociology, psychology and clinical competence (Fothergill Bourbonnais, Langford, & Giannantonio, 2008) and excellence in nursing practice encompasses psychomotor, cognitive and affective skills (While, 1994). Assessment to demonstrate accomplishment of the latter two skill sets is seen to be less problematic than the assessment of psychomotor skills acquisition to measure competence (Watson, Stimpson, Topping, & Porock, 2002).

Objective Structured Clinical Examination Origins

Some thirty years ago a Scottish professor, Harden, expressed concern about the subjective nature of medical exams where the assessment (of medical students being examined by senior medical practitioners) was based upon a single real patient event, in a real ward environment. This was further compounded by both the variability of the oral examinations and the examiners. Harden considered this assessment practice highly unreliable and in an effort to counteract this unreliability, fused two emerging assessment techniques in the form of simulated patients [SPs] and multiple scenarios (called stations) to produce the very first Objective Structured Clinical Examination [OSCE] (Bradshaw & Merriman, 2008; Lauder et al., 2008). This organisational framework (Newble, 2004) or assessment format (Boursicot & Roberts, 2005) for clinical competence assessment, consisted of the student rotating around a number of stations, each one having a specified task to be performed within a specified timeframe along with a structured checklist to base marking. The original OSCE, developed in the 1970s by the medical profession, continues to be widely used by medicine to assess competence (Boursicot & Roberts, 2005). The widespread acceptance and implementation of OSCE shows little signs of abating (Lauder et al., 2008).

Objective Structured Clinical Examination Origins for nursing

Nursing interest in OSCEs seemed to gain momentum after the relatively recent migration of nursing education from hospital based schools of nursing into institutions of higher education. This was followed by a perception that clinical skills had somehow become less important, an emphasis being placed instead upon theoretical knowledge (Sims, 2004). In response to this move into institutions of higher education and the perceived de-emphasis on clinical skills, the literature signals that educational providers now find themselves increasingly occupied with simulating the world where training would have occurred. These strategies for developing clinical competence have been further augmented by the use of OSCEs (Bradshaw & Merriman, 2008) which seems to be the principal assessment method used (Joy & Nickless, 2007).

The origins of OSCE implementation in nursing can be found in Canada (Ross et al., 1988) where early OSCE use remained true to the traditional Harden version (Major, 2005). Ross et al. (1988) concluded that this OSCE (with an exclusive focus on psychomotor skills) was inappropriate for nursing, in that it did not reflect the reality of nursing practice. However, if the very nature of an OSCE was deemed unsuitable, it seems worthwhile to consider what may have prompted nurse educators to pursue it. The development of OSCE is set against a socio-political backdrop of rapidly changing health care environs, higher patient acuity, unprecedented technological advances, a chronic global shortage of health care professionals and relatively recent changes to nursing education in western countries (Sims, 2004; Vernon, 2005). The increasing potential for mistake-making resulting in patient litigation further exacerbated the move away from the once, very common practice of "practising" on real patients to hone clinical skills, compounded by shrinking clinical opportunities in the real world. The traditional mechanisms of assessing competence have proven limitations, are unreliable and the researched medical OSCE addresses some of these difficulties (Newble, 2004; Redfern, Norman, Calman, Watson & Murrells, 2002). The problems of effective clinical competence assessment are acknowledged in both medical and nurse education (Du Boulay & Medway, 1999). Just like medical education in the 1970s nursing OSCEs are borne out of concern that skills acquisition and subsequent competence is potentially problematic in nursing education.

Competence assessment

There is little evidence of methodical approaches to the assessment of competence (Chambers, 1998; Neary, 2001) and little agreement within nursing about the meaning of competence (Chambers, 1998), despite an extensive body of literature. Competence could mean safe minimum standards, technical skills or certain desirable qualities (Fogarty, 2005). White (1994) reports that Messick (1984) suggests "competence is what a person knows and can do under ideal circumstance, that is, potential, while performance is actual situated behaviour, that is, what is actually done in the real-life context"(p. 527). Both Worth-Butler, Murphy and Fraser (1994) and Redfern et al. (2002) report Benner's (1982) definition of competence as one incorporating the ability to operate under any conditions in the authentic world. Worth-Butler et al. (1994) agree that competence is both the ability to function in this authentic world and state that "It involves not only observable behaviour which can be measured, but also unobservable attributes including attitudes, values, judgemental ability and personal dispositions; that is - not only performance but also capability" (p.227). Yam prescribes three criteria for an assessment framework to judge competence: "clinical practice performance, experience in the area of practice and evidence-based knowledge "(2004, p.981).

It becomes evident that the method of assessment selected to measure competence is heavily dependent upon the accepted definition of competence. If competence is defined as the need for psychomotor skills alone then observing and measuring those psychomotor skills would suffice. However if competence is defined as a myriad of psychomotor, cognitive and affective skills then any assessment becomes much more complex and demanding. RCN (2003) detail the fact that psychomotor (know-how knowledge) holds greater value than cognitive and affective (know-that knowledge) skills for British nurses. It appears that there are those for whom nursing skills would be deemed exclusively psychomotor in nature and these nurses subscribe to the belief that utilising an objective structured clinical examination [OSCE] will prove useful in the quest to determine competence in nursing students.

While Du Boulay and Medway (1999) may be correct at a micro level when they state that the "establishment of the objective structured clinical examination (OSCE), has removed

some of the ambiguity of clinical assessment" (p.186) the same cannot be said for the conceptual congruence of the nursing OSCE. Unlike medicine, nursing has borrowed and subsequently adapted the OSCE process and in doing so has possibly undermined crucial elements of the original model. The psychomotor skills focus of the medical OSCE would seem to be the stimulus for those developing nursing OSCE to increasingly depart from the original intent, and most report using an OSCE which they have modified, usually without further explanation.

Variations within the concept of a nursing OSCE have been ignored within the literature (Redfern et al., 2002). Rushforth (2007) depicts the diversity of nursing OSCE processes in her review of the literature noting the practice of modifying the original medical OSCE. Shanley (2001) concurs that that OSCE has been viewed as useful, modified and implemented by several Schools of Nursing. Major (2005) reports the work preceding the Salford OSCE which commenced in 1996 where they developed a single patient OSCE to reflect their holistic curriculum which Major describes as "a holistic patient-centered OSCE rather than adopting the workstation approach mentioned in much of the OSCE literature" (p.443). McCallum (2007) concurs that a holistic (singular focus) is more authentic for nurses. The focus on holism and the implied message appears twofold, firstly the notion that nursing provides holistic rather than reductionistic care and secondly that in order to provide this holistic care nursing students needed to know how to apply psychomotor, cognitive and affective skills simultaneously.

Summary of key points from literature review

Rushforth (2007) describes the bedrock upon which the original medical OSCE rests as an extensive evidence base. There is a very existent danger that this has fostered an assumption that all OSCEs are covered by this evidence base. A preliminary literature review was undertaken to scrutinise the degree of research evidence to support OSCEs as a mechanism for assessing the clinical competence (safety) of Bachelor of Nursing students. This highlighted the fact that the nursing OSCE is based on extremely limited and low level research evidence and it should be difficult to influence a move toward the use of nursing OSCE based on this evidence alone. It appears that while this particular assessment is viewed increasingly favourably by schools of nursing and professional bodies there is a

significant paucity of research evidence to support the use of such modified assessment. Given the active evidence based practice environment in nursing education a double standard appears to be present if in fact, assessment methodology falls outside this level of scrutiny.

Generally the research processes are inadequately reported, and consideration of the level of detail required for either auditability or replication by others is absent. Even if this was not a concern, a clear justification for each decision within a study is necessary for research consumers to judge the merit and trustworthiness of the research findings. This judgement was not possible within the work reviewed due to lack of detail. Much of this reviewed research was carried out by educators in their own facilities. As Schools of Nursing move to OSCE, many are involved in evaluative research of their own OSCE implementation; a curious dilemma where invariably the researchers are also responsible for the implementation. The potential for a predisposed bias in favour of OSCE with this type of evaluative research method (e.g. Brosnan et al., 2006; Byrne & Smith, 2008) is not evidently considered to be a concern. Few of the studies sought to generalise beyond their own immediate setting and this is laudable given their generally average sample sizes, convenience sampling, lack of a representative sample and the subsequent effect on internal validity. However the difficulty of being unable to extrapolate findings beyond the immediate study locations, upon which others could base practice change, presents a tension (Fain, 2004; Polit & Beck, 2006; Roberts & Taylor, 2002).

Something borrowed something new

Despite the fact that OSCE use in nursing is based on limited, low level research evidence this form of assessment has been recently introduced in the School of Nursing {SoN} where I work. Prior to this, nursing lecturers performed clinical sign off following a period of instruction and the demonstration of the skill by the student within the Nursing Fundamentals paper, in a less formal manner. However the introduction of a new student centered curriculum (with a constructivist philosophy) requires first year nursing students to spend six weeks in clinical practice as opposed to the single week in the previous curriculum. This OSCE has been deployed as a high stakes summative assessment, which requires successful achievement from the student in order to progress to the subsequent clinical paper (the paper containing the OSCE is a pre-requisite).

The rationale for the introduction of this assessment holds resonance with the reasons cited in the available literature by other SoN. In short, the OSCE was introduced to ensure some degree of competent performance for nursing students prior to their clinical practice experience in the real world (safety for students, clinical agencies, the SoN and most importantly members of the public). The OSCE would make possible a process whereby objective judgements about whether students were suitably prepared (safe) to be allowed into the practice environment (measurement of readiness). It was also thought that the OSCE process would assist to instil a skill set that both students and the clinical agencies would find to be of practical use (ensuring that the students had the ability to be productive and contributing members of the Multi Disciplinary Team during their six week rotation). The inaugural OSCE consisting of seven stations and comprising only psychomotor skills assessment has recently occurred for first year students.

The papers for second year students within the new curriculum are now under construction and attention is increasingly focussed on the development of authentic assessment methods. The intention is to incorporate OSCEs as part of the assessment methodology within three of these papers. Relevant literature is being employed to guide this OSCE design phase. The limitations of exclusively employing OSCEs as the assessment method to demonstrate performance competence have been outlined by Pfeil (2003). Creative and innovative assessment must be supported by relevant research evidence and assessment must not be modified without careful consideration of the original application intent. Given that OSCEs may be poor mechanisms for the assessment of cognitive and affective skills their use will be limited to the assessment of psychomotor skills. The reduction of nursing to a set of psychomotor tasks, however is the antithesis of the holistic care approach valued by many nurses and belies the complex skills needed by nurses. Nursing students require assessment opportunities that pay equal attention to cognitive, affective and psychomotor skills along with evidence to demonstrate the skills of critique and the ability to integrate theory and practice (Redfern et al., 2002).

Using a platform of psychomotor skill demonstration to subsequently demonstrate cognitive and affective skills may hold more merit than an attempt to include all of these required skills in a single OSCE. Truly authentic assessments would offer students the ability to

review, reflect and critique their own performance, with the express intention of continuously improving their own degree of performance competence. Joy and Nickless (2007) provide an innovative method within their skills environment to summatively assess first year nursing students. This appears to commence with an OSCE like assessment (though they do not label it as such). However this event is also visually recorded and then used by the student for the dual purpose of reflection (self-appraisal) and written critique (cognisant of evidence based practice). This is clearly an approach to develop a holistic assessment opportunity for the student, with the various parts of the assessment building upon an initial psychomotor event.

The intention with the School of nursing is to build up an authentic developmental assessment portfolio that is founded upon borrowing the medical OSCE (for psychomotor skills assessment) and developing something new from that stable assessment platform. The use of simple technology to record the student's developing psychomotor skill performance will facilitate opportunities for both self and peer assessment. Students will then have the opportunity to articulate their own knowledge, understanding and critical skills by providing a written critique of their own performance drawing on the associated evidence based practice. This approach offers the potential to both holistically and meaningfully assess the myriad of skills that contribute to competent performance using a developmental approach to learning. Fogarty (2005) considers that OSCE validity can be improved by aligning it with a range of proven assessment methods. Neary (2001) considers the best assessment methodology for competence is an approach using multiple types of assessment. Both Redfern et al. (2002) and Watson et al. (2002) concur that a multi-method approach is best for performance assessment.

Rushforth (2007) considered that the evidence of modification of nursing OSCEs effectively highlighted the need for each newly developed OSCE to be rigorously tested and piloted, to maximise reliability and validity of the assessment. In accordance with this view, research emphasis will be placed on these newly developed OSCE based assessments to determine whether they are fit for purpose and fit for practice.

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