A Delphi study to validate competency-based criteria to assess undergraduate midwifery students' competencies in the maternity ward[☆]

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ABSTRACT

Background: workplace learning plays a crucial role in midwifery education. Twelve midwifery schools in Flanders (Belgium) aimed to implement a standardised and evidence-based method to learn and assess competencies in practice. This study focuses on the validation of competency-based criteria to guide and assess undergraduate midwifery students' postnatal care competencies in the maternity ward.
Method: an online Delphi study was carried out. During three consecutive sessions, experts from workplaces and schools were invited to score the assessment criteria as to their relevance and feasibility, and to comment on the content and their formulation. A descriptive quantitative analysis, and a qualitative thematic content analysis of the comments were carried out. A Mann-Whitney U-test was used to investigate differences between expert groups.
Findings: eleven competencies and fifty-six assessment criteria were found appropriate to assess midwifery students' competencies in the maternity ward. Overall median scores were high and consensus was obtained for all criteria, except for one during the first round. Although all initial assessment criteria (*N*=89) were scored as relevant, some of them appeared not feasible in practice. Little difference was found between the expert groups. Comments mainly included remarks about concreteness and measurability.
Conclusion: this study resulted in validated criteria to assess postnatal care competencies in the maternity ward.

Introduction

The move to competency-based education fits the aim to enhance the readiness of graduates, to ensure the provision of safe care, and to push their learning orientation throughout their professional career (Frank et al., 2015). Health care competency frameworks are, at the core, educational initiatives to improve patient care. They help to articulate entry-to-practice competencies (Frank et al., 2015). Clearly stated educational outcomes help students' understanding of what is expected of them and guide staff to focus precisely on what students have to achieve during their clinical practice (Shumway and Harden, 2003; Ossenberg and Henderson, 2015). Assessment plays a major role in competency-based education. Competency-based education and

performance assessment are closely related paradigms (Shumway and Harden, 2003). The decision whether students have attained requisite learning outcomes is based on their actual performance. Assessing competencies in practice settings therefore requires competency-based assessment instruments (Frank et al., 2010) that offer criteria to assess student performance (Gulikers et al., 2010; Richardson and Flynn, 2011; Fastré et al., 2014).

Current socio-cultural theories of workplace learning claim that learning and learning outcomes result from active participation in activities and in interaction with complex and dynamic systems of the clinical work environment (Mann, 2011; Govaerts and van der Vleuten, 2013). Assessing learners in a competency-based education context requires a radically different (a) integrated and (b) holistic assessment

method. The integrated approach acknowledges competency as a complex combination of knowledge, attitudes, skills and personal values that are demonstrated at a defined level of proficiency in the particular context of practice (Leung, 2002; Stoof et al., 2002; Lane, 2010; Yanhua and Watson, 2011). The holistic approach on the other hand, takes into account the cultural and social context in which competencies are assessed. The concept 'professional competence' is a holistic term that considers that the competent person 'not only possesses the requisite competencies but is also able to use them and make appropriate decisions and judgements according the context' (Epstein and Hundert, 2002).

Assessment criteria for competency-based education are either competency-based (what the student is able to do) or performance-based (what the student has to do) (Fastré et al., 2014). Competency- and performance-based criteria should be seen as a continuum linked to different levels in professional education or training. Competency-based criteria are less meaningful for novice students compared to advanced students, because the former have not yet attained the required level of integration of knowledge, skills and attitudes (Fastré et al., 2010). There is however, a direct relationship between competency-based and performance-based criteria, because the latter specify context-specific performance in relation to the competencies (Crossley and Jolly, 2012). The nature and quality of effective assessment criteria in competency-based education is an under-researched topic (Fullerton et al., 2016). Some studies revealed performance-based criteria resulted in more accurate assessment because of the directly observable and task-specific nature of these criteria (Idrissi et al., 2016). This confirms the results of Lurie (2012), who indicates that it is important to define assessment criteria in terms of the situations to which they are relevant, rather than as global personal characteristics (Fastré et al., 2014). Similar concepts for assessment criteria were found in the literature, such as observable or measurable behaviour standards (Frank, 2011) and behavioural cues (Ossenberg and Henderson, 2015); often used interchangeably. They all share the fact that they provide more clarity and transparency to the assessment process in that they describe routine behaviours pertinent to care delivery.

Providing high-quality measurable outcomes is an important challenge to improve competency-based assessment in practice. Nowadays, educators are increasingly mandated to measure and report detailed competence measures but they are hindered by the lack of valid and reliable criteria across competencies (Holmboe and Snell, 2011, Kalet et al., 2016). Lack of valid assessment criteria is one of the barriers to (1) clearly understand and communicate standards of practice from regulatory bodies (Ossenberg and Henderson, 2015); (2) align assessment cultures with the profession's values (Watling 2016); (3) make assessment authentic or relevant to students' future work (Harrison et al., 2016); (4) promote learner centeredness (Frank 2011); (5) address the needs of learners who do not meet standards or expectations (Kalet et al., 2016); (6) prevent reductionism (breaking competencies down into the smallest observable units of behavior, creating endless nested lists of abilities that frustrate learners and teachers alike) (Frank et al., 2010); and (7) involve stakeholders in the development of logbooks which ensures local acceptability and feasibility with the additional benefit of combining training and agreed standards (Schüttpelz-Brauns et al., 2016).

The present study aimed to validate assessment criteria for a newly defined competency framework for undergraduate midwifery students' postnatal care in the maternity ward. It builds on a collaboration between twelve midwifery schools who designed a new competency-based educational profile (Flemish Education Council, 2014; Embo and Valcke, 2016). This education profile challenged midwifery educators to reconsider workplace learning and assessment during midwifery practice. It was the catalyst to standardise education, to introduce a workplace learning model based on current socio-cultural learning theories and to put an end to adopting too many different assessment instruments and criteria (Embo and Valcke, 2016). The midwifery schools agreed to gradually implement a competency-based continuous workplace learning model that integrates learning and assessment in a six-step method (Embo et al., 2015). The Achilles heel is the competency framework with concrete and easy-to-use criteria that proved being suitable to monitor learning progress and to support assessment of competencies and professional competence (Embo et al., 2010, 2014). To validate the assessment criteria educational and professional experts could be involved (Epstein, 2007; Ossenberg and Henderson, 2015). The study is embedded in a research project funded by the Mustela Foundation Award 2015 and the education department of the University College Arteveldehogeschool Ghent.

Method

Design

We adopted an online Delphi-survey study to collect opinions from a wide range of experts in order to develop a consensus about the criteria. Consensus methods are used by healthcare professionals and educators because of their presumed capacity to extract the profession's 'collective knowledge' which is often considered tacit knowledge that is difficult to verbalise and formalise (Foth et al., 2016). Consensus methods are supposed to offer quantitative estimates through qualitative approaches, characterised by anonymity, iteration, controlled feedback, statistical group response and structured interaction (Foth et al., 2016). The competencies and assessment criteria were presented to a multidisciplinary expert panel over three iterations as depicted in Fig. 1. The study was conducted in Flanders (Belgium) between April 4th and May 29th 2016. It was approved by the Ethics Committee of the Ghent University Hospital (B-Nr 2016/0250) and the Ethical Review Board of the Dutch Association for Medical Education (NVMO, the Netherlands-Nr 657). Informed consent was obtained from all participants.
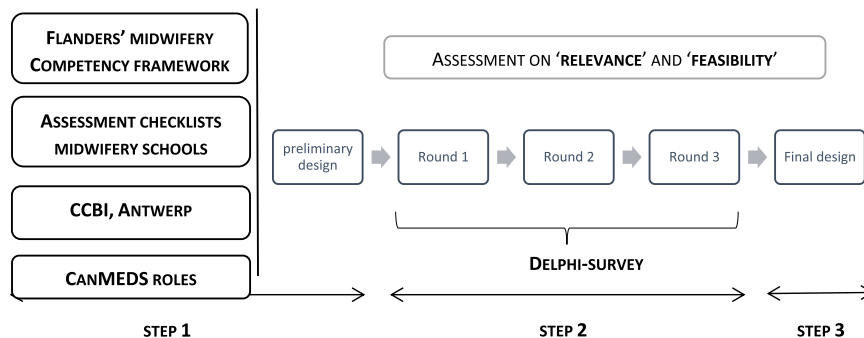

Fig. 1. Overview of the method.