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Original Article

Entrustable professional activities in nursing: A concept analysis

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ABSTRACT

Objective: Entrustable professional activities (EPAs) is a newly emerging concept. This paper aims at analyzing the concept of “EPAs” to clarify the meaning and to identify its components for optimum understanding of the concept for use in nursing education and future research.

Method: Three databases – ProQuest, Ovid, and PubMed– were retrieved, and Walker and Avant’s concept analysis approach was used to analyze the concept of EPAs.

Results: Based on the analysis, three attributes of EPAs were defined, namely 1) EPAs should be restricted to a limited number of tasks; 2) reflect the experience curve; and 3) include acceptance of responsibility and accountability. The antecedent of EPAs is a holistic and integrated assessment approach. This will eventually lead to anticipated consequences such as a mastery of core competencies and an increase in the level of autonomy.

Conclusion: The study may contribute to a reduction in the ambiguity of this concept to better apply it in nursing practice.

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What is known?

- Entrustable professional activities based assessment approach has been described extensively in medical education, but the approach lacks clarity in its meaning and how it should be used in nursing education.

What is new?

- A theoretical definition of entrustable professional activities based assessment approach is proposed. An example of a detailed description of formulating entrustable professional activities framework is provided, to facilitate its application within the context of nursing education.

1. Introduction

Changes in healthcare systems have added extra demands on nursing educators in their preparation of students to proficiently and safely provide care for patients. Hence, nursing educators are

devoted to improve students’ competency-based assessment utilized to evaluate students in clinical practice.

For students to be considered competent in nursing practice, they must be evaluated against a proposed list of standard competencies including but not limited to professionalism, communication and critical thinking. These skills are gained during the training period. Although competency-based assessment has been used at all levels of undergraduate and graduate nursing education and its importance has been established [1], researchers have raised concerns that the approach is fragmented and unable to measure the individual competencies that are necessary to perform a task in clinical practice [2]. For example, the ability of nursing students to competently communicate does not necessarily make the student skillful in performing history-taking. Indeed, in addition to communication skills, history-taking requires professionalism, knowledge and analytical skills to perform the task effectively.

Further, displaying a competency in laboratory or simulated environments does not guarantee a competent nurse in an authentic clinical setting [3]. Nursing educators can provide examples of students who perform well in a simulated environment, but poorly in a real clinical setting [1]. Indeed, the simulated clinical setting is unable to represent the high degree of uncertainty found in the clinical environment. The performance of care in an unpredictable complex environment is not a simple linear process. The quality of care provided to patients in an authentic clinical

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environment is highly context dependent [4], while competencies are context independent [1].

Educators and researchers are aware of the challenges in evaluating competency in clinical practice and this has been translated into voiced criticism of competency frameworks [5]. Efforts to bridge the gap between clinical practice and competency frameworks within the daily work in patient care has led to the emergence of the concept of entrustable professional activities (EPAs) [5]. The EPAs concept was first introduced by ten Cate [5] in 2005 to better connect competency to daily clinical practice. EPAs were viewed first as pertaining to Graduate Medical Education [6]. Subsequently, the view has changed to include Undergraduate Medical Education.

EPAs have been the subject of an abundance of studies. Indeed, the concept has become an integral part of many graduate/post-graduate medical training programs including but not limited to: entry into residency [7], internal medicine residents [8], emergency medicine residents [9], pediatric residents and family medicine [10]. The intention of using EPAs by these programs is to address any practice gap indicating that graduates were not entering residencies with the necessary skills to provide safe care.

EPAs can be perceived as the activities to be undertaken in daily patient care [5]. In the nursing context, EPAs are the units of professional tasks that establish what a Registered Nurse (RN) does in daily practice. These activities can be simple or complex. For example, a RN must be able to assess and identify a change in patient condition and take actions to prevent further worsening. Even an intern nurse can contribute to patient care performing simple but important tasks if the intern nurse has had sufficient practice. Indeed, a nursing intern may be entrusted to care for a post-operative patient if there are no complications expected.

EPAs have been rapidly acknowledged among international medical schools which may reflect the need for better assessment methods in medical education [1]. In nursing literature, however, little has appeared so far [3]. This paper aims at analyzing the concept of “EPAs” to clarify the meaning and identify its components for optimum understanding of the concept for use in nursing education and future nursing research.

2. Method

2.1. Select concept

EPAs-based assessment is a continually developing concept in medical education [3]. The EPAs will be analyzed through the process of concept analysis to identify their defining attributes, antecedents and consequences to contribute to the development of a valid assessment tool that might ensure an appropriate evaluation of students’ competencies in order to provide safe nursing care.

2.2. The aims of the analysis

The aim of conducting this analysis is to promote clarification of the EPAs for uses and future studies in the field of clinical practice. Therefore, the EPAs will be defined and the related concepts will be recognized to identify the relationships that exist between these concepts. The analysis will also provide an operational definition for the EPAs which will contribute to the development of new knowledge.

2.3. Search strategy

To find papers relevant to “Entrustable Professional Activities”, the keywords used were “trus* OR entrus* OR profession* OR act*”, where the asterisk can be filled with one or multiple letters. For

example, “act*” should hit on activity, action and active as well as actionable, and so on. To target only papers related to Entrustable Professional Activities’, the following set of keywords was employed: “assess* OR compet* OR doctor* OR nurs* OR physician* OR medic*”. Thus, the search phrase was (entrus* OR profession* OR act* AND assess* OR compet* OR doctor* OR nurs* OR physician* OR medic*). To ensure that the search was as broad as possible, three databases were used – ProQuest, Ovid, and PubMed along with dictionaries that were searched for studies linked to the concept of interest. No time limit of publication was applied. However, the review was restricted to publications that were peer reviewed, published in full and in English.

2.4. Inclusion criteria

Initially, 174 hits of scientific reports were yielded. The hits were then culled to remove 61 duplicate papers. Of the remaining papers, 53 papers were further excluded because they were outside the medical domain. The author assessed the full texts of the remaining 60 studies to identify whether they clearly 1) contained a particular definition of EPAs or described EPAs in general; 2) discussed the history of the EPAs; 3) discussed the relationship between EPAs and competencies; and 4) reported the findings of any application of the concept in the medical and the nursing educational field. Nineteen studies remained (see Fig. 1).

3. Synthesis approach to concept analysis

The eight steps of concept analysis established by Walker and Avant [6] were then followed to analyze the concept of EPAs. The process of analysis includes the following: 1) select a concept; 2) determine the aim of analyzing the concept; 3) identify the uses of the concept; 4) determine the defining attributes; 5) identify a model case; 6) identify borderline and contrary cases; 7) identify

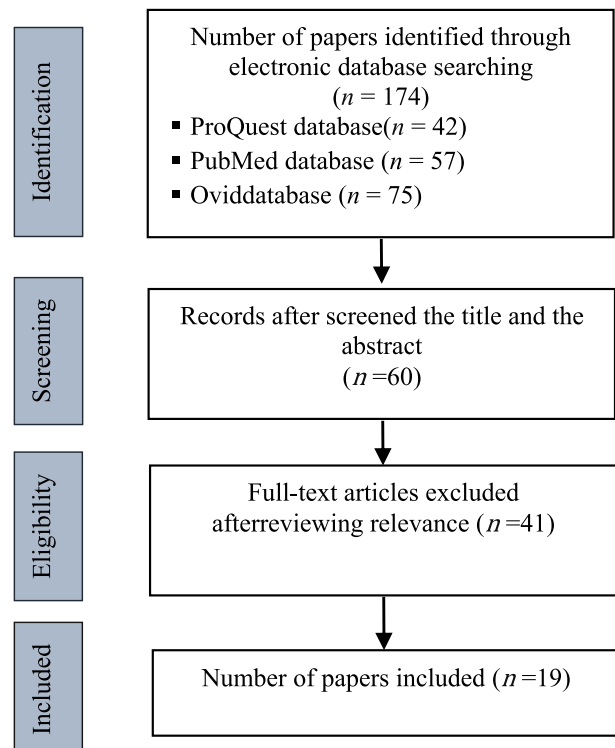


Fig. 1. Flow diagram of the evidence selection process.

the antecedents and consequences of the concept; and 8) define the empirical referents. Although the steps are listed in a linear fashion, Walker and Avant noted that the process is iterative and the researcher can move back and forth among the eight steps.

4. Results

4.1. Defining the concept

As per the Merriam Webster dictionary, the word entrusted, also entrust, is defined as “to confer a trust on; to deliver something in trust to; to commit to another with confidence.” [11]. The word professional is defined as “relating to, or characteristic of a profession; characterized by or conforming to the technical or ethical standards of a profession” [11]. Meanwhile, in the Merriam Webster dictionary, the word activity refers to “the quality or state of being active; behavior or action of a particular kind” [11].

Entrustable Professional Activities (EPAs) have been defined as “tasks or responsibilities to be entrusted to a trainee once sufficient specific competence is reached to allow for unsupervised practice” [12]. It was also defined by van Loon and colleagues [13] as a collection of tasks trainees must be able to deal with to adequately perform their professional work. According to ten Cate [5], EPAs build upon three key elements:

- (1) “Entrustable” refers to acts that require trust to be performed without supervision;
- (2) “Professional” refers to the occupations with a specific qualification; and
- (3) “Activities” refer the tasks that are to be performed.

4.2. Defining attributes of entrustable professional activities

Attributes are those characteristics that are most frequently associated with the concept of Entrustable Professional Activities mentioned in the literature [6]. Reviewed literature revealed that EPAs build upon three main defining attributes:

- (1) Restricted to a limited number of tasks;
- (2) Reflect an experience curve
- (3) Acceptance of responsibility and accountability

4.2.1. EPAs should be restricted to limited number of tasks

Not all nursing tasks can be defined as EPAs. Indeed, when considering nurses’ activities there will be numerous tasks that can be listed, like “assessing vital signs”, or “administering medication”; however, EPAs that can be entrusted to be performed individually without supervision should be limited to tasks that are of [5,14]:

- (1) high importance and that need specific knowledge, attitude and skills;
- (2) executable within a definite timeframe
- (3) observable and measurable of the process and the outcome by a supervisor

For instance, “giving intramuscular (IM) medication” and maintaining patient hygiene –are both tasks of nursing daily work. However, IM medication compared to patient hygiene, needs specific knowledge, attitude and skills to be performed. Patient hygiene does not require specific knowledge and skill and therefore is not a good example of an EPA. Indeed, patient hygiene can be done by nursing assistants. Meanwhile, IM medication can only be given

by trained and qualified nurses. IM medication can be executed by students within a time-frame; it is observable, and both the process and the outcome (inject medication on patient muscle) are measurable.

4.2.2. Reflect experience curve

A central point in EPAs is having an experience curve [7,9,15]. The experience curve should be based on two main elements: repeating the task, or accumulation of a body of knowledge over time that is needed to perform a task. Experience curves are observable steps that are measured by the supervisor as the students move from states of incompetence to competence. Supervisors should expect to see a slow experience curve for complex tasks, while simple, frequently encountered tasks should have a steeper experience curve. Experience curves should have a detailed description of observable behavior so that both students and supervisors have a standard against which to make assessments. For instance, the following represents five levels of observable behavior:

- (1) Student has knowledge only and cannot perform the activity at all
- (2) Student can perform the activity under full supervision
- (3) Student can perform the activity with indirect supervision
- (4) Student can perform the activity independently
- (5) Student can provide supervision to junior learners undertaking the activity

4.2.3. Include accepting responsibility and accountability

Responsibility and accountability have been mentioned in some definitions of EPAs in the literature with an emphasis on the role of supervisors [16].

Responsibility is shared between both supervisors and students while accountability is specific to students. Indeed, when supervisors assess for the purpose of identifying student readiness to be entrusted to undertake a certain task, then the supervisors are responsible for their assessment decision. On the other hand, students who accept responsibility for the risks associated with that task being entrusted to them are solely accountable for their own actions. Accountability is specific to students depending on their knowledge, skills, behaviors and competencies. To ensure successful completion of tasks entrusted to students, the entrustment decision may involve more than one supervisor and must be a formal process. However, some supervisors may use students’ perceived confidence as an indicator of their ability to perform tasks competently, while others believe that students’ over confidence is a sign of their inability to know their self-limitations. To take the full responsibility to decide whether to entrust students to perform a task under minimal supervision and for students to be responsible and accountable for their own action, supervisors need to ensure that the nursing student is competent, honest, works conscientiously, and knows self-limitation.

4.3. Related concepts

Once the EPAs’ defining attributes have been outlined, it becomes important to identify concepts that are relevant to the EPAs. In this paper, we wish to differentiate EPAs from competencies and delegation, as these concepts appear to be the most closely related concepts to EPAs. “Competency” and “delegation” are used to define the EPAs concept, when in fact they have different meanings.

EPAs do not replace competencies, but rather they can be viewed as a way to translate the abstract concept of competency into the everyday practice [14]. EPAs should be seen as the unit of

the nurses' work, such as physical assessment, medication administration etc., meanwhile competencies are the abilities of nurses to do that work with "professionalism", teamwork and communication. In contrast to EPAs, competencies are considered extensive and include very detailed descriptions of tasks [17]. Competencies have been recognized as essential to provide safe clinical practice, however, they are neither objective nor quantifiable [18]. Indeed, deciding if the nursing student is competent to perform a certain task depends on the ability of the student to integrate a group of competencies [17]. It will be challenging for the assessor to examine a group of competencies in isolation. It is therefore not an easy evaluation system [5].

The second concept is delegation. Entrustment and delegation share several characteristics, and this is perhaps why they have been used interchangeably in literature. Delegation largely encompasses assignment of a routine task related to patient care to a nursing assistant while retaining accountability for the outcome [19]; EPAs, on the other hand, are the assignment of highly important tasks to a trainee or intern. Indeed, routine tasks can be learned by doing in everyday practice. Delegation is an important element of the nursing administrative process. It addresses the increasing shortage of the number of the qualified nurses. Without delegation, especially to qualified nursing assistants and interns, nurses are overworked. EPAs in the workplace specific to delegation can help codify the essential aspects of the nurse's work and establish the necessary involvement of nursing assistants and interns in primary patient care. However, EPAs specific to delegation is difficult to formulate. It can be argued that accountabilities and responsibilities are essential components of delegation but are not clear in units of practice that can be entrusted to a qualified nursing assistant and interns. Nonetheless, aspects of delegation (eg, knowledge, skills, competencies) are included in the Core EPAs for trainees. There is a need to create EPAs for delegation, since using EPAs in the workplace can address one of the areas of confusion encountered by nurses in daily work delegations.

Recently, the concept of dynamic delegation was introduced to describe trust when dealing with urgent unpredictable situations [20]. Dynamic delegation refers to the ability of senior leaders in a team to delegate leadership roles to more junior team members. Consequently, it builds novice team members' skills. Both EPAs and dynamic delegation share the same aspect of entrustment. However, caution must be taken not to interfere with patient safety measures.

4.4. Uses of the concept

Using EPAs as an assessment and training framework is increasing internationally. For instance, it has been adopted and applied by the American Association for Medical Colleges [21], and Medical Schools in Canada [22]. The main principle of using EPAs in the training of undergraduate nursing students is to have "entrustable" students i.e.: student interns prepared to do essential work without direct supervision. EPAs assessment approach permits the evaluation of a number of competencies through the lens of activities that nursing students are expected to perform in clinical practice [23]. The approach aligns with workplace training and provides clinical instructors and students with clear guidance regarding their roles. Further, there is an obvious interest in working with EPAs to ease student transition from undergraduate to the graduate level [24]. Indeed, the approach reflects a gradual increase of mastering of core competencies to perform an EPA independently.

EPAs competency-frame work is a systematic approach that can be used to assess each student to perform one of the core EPAs under no supervision at the entry level of clinical practice.

Integrating EPAs into the clinical evaluation system, allow the assessor to assess students' progression through the semesters [25].

4.5. Formulating EPAs framework

There are many activities expected of a nursing student to perform in the internship period. How then do educators decide upon which to include in EPAs framework? Identifying what to include in the list of EPAs for an undergraduate program is an iterative process and may include searching literature, evaluating curricula, considering national guidelines, using Delphi technique, seeking experts' opinion and so on. Once activities that are core and expected to be entrusted at the end of the program have been identified and listed, each core EPA should be formulated and described briefly in a way that clarifies what is expected of the students. The following steps are suggested to adequately formulate an EPA [12,23, 24, 25, 26]:

- (1) After identifying the core EPAs [23,24], all smaller activities that must be practiced and mastered to perform the core EPAs should be identified. For example, the nursing health assessment, "Core EPA 1", requires that nursing students to be familiar with the activities of history-taking and physical examination, including vital signs and laboratory results. These smaller activities can be listed as a smaller EPA;
- (2) Each of smaller EPAs is mapped with specific relevant competencies, to be evaluated and mastered during training years. For example, history taking needs communication, professionalism and clinical reasoning. Competencies add credibility to the EPA, and support and provide a framework for observation and assessment;
- (3) To apply EPAs in practice, each EPA must be extended beyond mapping it with competencies to include milestones of the expected observable behaviors and the context for those milestones. The milestones highlight EPAs relevant for pre-practice students and prevents any misunderstandings that might occur;
- (4) Specific assessments approaches should be developed to evaluate the milestones [25]. This may include objective structured clinical examination (OSCE), procedural checklist, logbook, clinical practice portfolio, direct observation of procedural skills, case studies and so on. Accordingly, entrustment decision is made.
- (5) To formulate an entrustment decision for EPA, supervision scale is required. The scale should have five levels of EPA-related supervision [25] and may range from "not allowed" to practice an EPA to "completely allowed" to practice an EPA with no supervision. Each level of the scale has a direct effect on the trainee and on the patient care;
- (6) Entrustment decision implies the acceptance of patient safety risks associated with the task being entrusted. For supervisors to entrust a nursing student to undertake a certain task and to accept responsibility for the risks associated with that task, they need to ensure that the nursing student is fulfilling the following criteria [26]:
 - (i) Competencies, including specific knowledge, skills and attitude
 - (ii) Having learning objectives and truthfulness
 - (iii) Working meticulously and displaying anticipated behavior
 - (iv) Knowing own limitations and keen to ask for help when needed

An example, of how an EPA is formulated is provided in [Table 1](#).

Table 1
Example of EPA for training and evaluation of nursing student.

Core EPA	Nursing health assessment				
Smaller EPA	History-taking Vital signs Physical examination Laboratory results				
EPA Description	The trainee performs a complete and focused history and physical examination in a prioritized, organized manner that is tailored to the clinical situation and specific patient case				
EPA Context	Patients stable and cognitively competent Patients with a non-life threatening condition Patients with life threatening condition				
Relevant Competencies	Communication Professionalism Clinical reasoning Procedural Infection control Knowledge application Interpretation				
Observable Milestone	<ul style="list-style-type: none"> • Complete and accurate description of the signs and symptoms • Complete and accurate collection of patient's history including: past, present, family, personal and social • Audit patient record • Maintain effective communication • Maintain patient respect and privacy • Foster patient confidence and trust • Use the correct technique appropriate to age and condition • Apply infection control measures • Identify and describe normal and abnormal findings • Use data to prioritize the nursing diagnosis and patient care plan • Follow logical sequence • Use appropriate physical examination maneuvers • Complete systems assessment • Use assessment data to explore and prioritize the nursing diagnosis and patient care plan • Use laboratory findings to interpret and prioritize the nursing diagnosis and patient care plan 				
Level of achievement of EPA	Student has knowledge only	Student can perform the activity under full supervision	Student can perform the activity with indirect supervision	Student can perform the activity independently	Student can provide supervision to junior learners doing the activity
Entrustment decision	Permitted to observe the EPA	Full supervision	On demand supervision	No supervision	Supervise others

Building upon the previous steps, EPAs framework can provide clear assessment goals for instructors. Working with EPAs as an assessment approach is currently progressing and will potentially include a broad range of different methods and approaches. In this regard, a five-year pilot study in the United States that includes ten medical schools, sought the implementation of the EPA assessment framework to improve the transition of medical students from undergraduate to graduate status with the essential goal of improving patient care [27]. Further, ten Cate and colleagues [28] incorporated EPAs with an undergraduate medical training program for the purpose of making graduates more focused on their responsibilities in health care practice [28]. EPAs are believed to bridge the gap between competency and implementation of knowledge, skills and attitudes [3].

4.6. Case example

4.6.1. A model case

Construction of a model case is an important part of concept analysis. It illustrates the use of Entrustable Professional Activities that involve all of their important attributes [6]. Examples of EPAs in nursing are in the performance of a health assessment, identification of priorities for care, planning care, implementing interventions and so on. An example model of an activity that a nurse can be entrusted to perform in a health assessment is history-taking.

A student Amal is required to perform history-taking from a

patient at the end of her rotation in the medical ward. History-taking is a very important task in the daily work of a nurse. To perform history-taking, Amal needs to demonstrate observable skills or abilities in the taking of a complete symptom description, an accurate collection of the patient's history, interpersonal and communication efforts, maintenance of patient respect and privacy. The supervisor is mandated to assess Amal's performance against behavioral markers or reference points to measure the progress of Amal, leading to a conclusion: worthy of entrustment to perform the activity without direct supervision OR not yet worthy of entrustment. It is expected that Amal will be able to perform history-taking from a patient within a month of her posting in a medical ward. The supervisor watched Amal as she progresses towards appropriate levels of competence in history-taking. Once Amal meets the acceptable level of competence, the supervisor begins to trust that Amal has the ability to perform history-taking with minimal to no supervision.

The example of the model case given above illustrates the attributes of EPAs previously described in this analysis.

4.6.2. Borderline case

Concept analysis of EPAs involves constructing borderline cases. According to Walker and Avant [6], a borderline situation is an example that includes some of the defining attributes, but with some excluded. An example of an EPA is to "perform physical examination." In this example, performance of logically sequenced and appropriate physical examination maneuvers, being able to

communicate with the patient and the family of the patient, and applying infection control principles are important competencies to assess.

Ms. Asma is a clinical instructor, required to assess student Zainab's performance of history-taking. Ms. Asma trusts Zainab's performance without even observing her work. Ms. Asma made her decision based on prior credentials. Ms. Asma thinks that student Zainab achieved a good score in the written exam, so there is no need to evaluate her through direct observation. Although history-taking per se includes all the attributes of an EPA activity, the entrustment decision was not made on grounded trust.

4.6.3. Contrary Case

A contrary case is an example of what a concept is not [6]. The following case does not represent EPAs because it lacks all of the defining attributes. In this example, ...“performing a lumbar puncture” is a task requiring specialized medical knowledge and skills – even an expert nurse cannot perform it. Although the task per se is an EPA, it is not suitable to be translated into an EPA within nurses' professional capacity.

4.7. Identification of antecedents and consequences

Concept analysis of EPAs involves identification of antecedents and consequences. Antecedents [6] are activities that must happen prior to the manifestation of a concept while consequences are activities that happen as a result of it. Antecedents in this study are a holistic and integrated assessment approach. On the other hand, EPAs' consequences are a learner's mastery of core competencies.

A holistic and integrated assessment approach means the focus has moved from fragmentation to the whole where all of the competencies are combined together and evaluated for an activity. The approach to integration as an ability to analyze competencies as a whole includes the recognition of essential interrelationships between milestones/sub-competencies and major professional activities. These relationships should be considered as a part of the process by which trainees can be entrusted to execute clinical activities without supervision [29].

EPAs' consequences in this concept analysis are the learner's mastery of core competencies. The core competency profile for the nursing profession contains basic behavioral attributes and clinical skills. Fukada [30] defined seven core competencies for the nursing profession including: “1) applying knowledge; 2) building intra-personal relationships; 3) providing nursing care; 4) practicing ethically; 5) collaborating with other professionals; 6) expanding their professional capacity; and 7) ensuring the delivery of high-quality nursing”. Milestones should be constructed in a way that specify what the progress toward mastery of core competencies might look like [29,31]. Mastery of core competencies to perform entrustable professional activities increases the level of autonomy and decreases the level of supervision.

4.8. Empirical referents

The final step in the concept analysis of EPAs is the identification of the empirical referents which refer to the processes by which the concept of EPAs can be measured [6].

Competencies and milestone elements make EPAs measurable. EPAs incorporate multiple competencies from several core competencies, such as knowledge, communication, professionalism, critical thinking [31]. Each competence has milestones that represent behavioral markers or a reference for measuring the progress of students. Multiple competencies are nested within each entrustable activity, with multiple activities fitting into each larger EPA, and so on [32]. Take for example the EPA of history-taking;

among other competencies, history-taking includes knowledge application and communication. History-taking is part of the larger EPA of health assessment. The EPA of health assessment is part of the larger EPA of patient care, and so on.

In order to decide which EPAs should be analyzed, this paper follows [33] categorization. Researchers [33] assume that low risk routine tasks such as morning care and vital signs will be mastered from learning by doing in everyday practice. Meanwhile, Scheele and colleagues [33] defined EPAs which require attention as any task that is of high importance or/and high risk task.

EPAs have the potential to enhance patient safety in clinical practice through offering transparent assessment of what a nursing student can and cannot do safely with patients [3]. EPAs provide the opportunity for the trainee to have immediate feedback [32], and mapping the core competencies with EPAs in a matrix allows identification of which competencies a student must achieve before ‘entrustment decisions’ can be made [31]. Researchers in the medical field have considered EPAs as a potential approach for improving the quality and safety of care [34].

5. Operational definition

An operational definition of EPA-based assessment was proposed from the defining attributes, antecedents and consequences and their related connotations within the context of nursing education. The proposed definition that reduces the ambiguity of this concept to better apply it in nursing practice is as follows:

- EPA provides a comprehensive assessment framework.
- EPA measures real time performance.
- EPA supports day-to-day observations of the students against behavioral markers or referents.
- EPA contributes in improving patient safety by ensuring that students cannot perform a task independently unless they are competent.
- EPA encourages educators to focus on the outcomes and the process of training.
- EPA contributes in improving students' autonomy by mastering of core competencies.

A diagram illustrating the conceptual framework of entrustment for clinical training is available in Fig. 2.

6. Discussion

The clinical environment is complex and unpredictable. To better prepare nursing students to meet the real working environment, nursing educators must ensure that students have the sufficient skills, knowledge and attitude prior to their graduation. Graduates need to know their professional tasks and responsibilities in day-to-day practice, and they must display multiple competencies from several domains in their relevant professional tasks.

Competency-based assessment is still the applied system regulating nursing practice. However, there are ongoing concerns relating to the effectiveness of competency assessment as a tool to assess nursing students in clinical practice [1]. The system has been criticized for being too theoretical to be useful for assessment in daily practice [3]. EPAs were proposed to overcome the gap between education and practice by facilitating the translation of competencies into clinical practice. EPAs need multiple competencies of an integrative and holistic nature. EPAs per se cannot substitute the competencies. Competencies are the attributes of a nurse – for example, “The ability to communicate effectively”. Meanwhile, activities are the essential components of professional

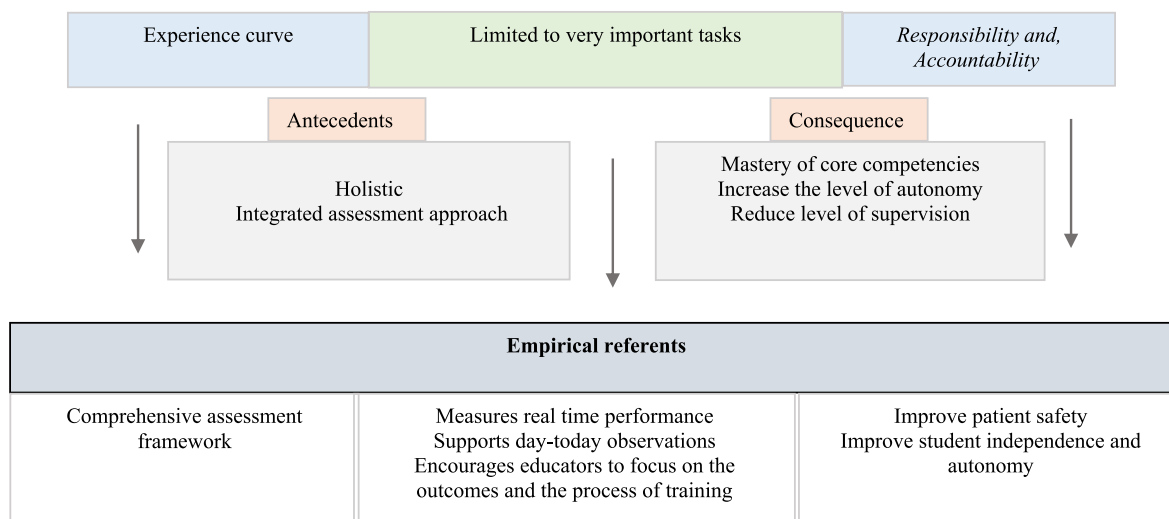


Fig. 2. Conceptual framework of entrustment for clinical training.

practice – for example, “Perform health assessment”.

An EPAs framework assesses students' competencies during their actual performance throughout a range of clinical situations [35]. EPAs have become a reality in undergraduate medical education. In medical and nursing literature, abundant studies have been published to evaluate the feasibility of using EPAs to build competency-based clinical workplace assessment [36]. In these studies, EPAs were found as a practical approach to integrate competencies into practice [3] and a potential approach for evaluating the competence of health professionals [34].

7. Implications for nursing education and research

To better include EPAs in the competency-based assessment in nursing practice and to better apply EPA-based assessment, a precise definition of the concept of EPAs is required. This paper attempts to clarify the meaning of EPA-based assessment and identify its components and uses to contribute to the body of knowledge relating to EPAs and reduce the uncertainty of this concept. Clarification makes it possible to understand how it can be applied in training and practice. However, the concept analysis process has specific steps and the result is always uncertain, which can be considered as a limitation of the study. Further studies are recommended.

8. Conclusion

The analysis of the concept of EPAs represents the first step toward its understanding. Identification of EPAs' attributes, its antecedents and consequences contributes in proposing an operational definition of entrustment. It also makes it possible for nursing educators to apply the concept in clinical practice and perhaps to better assess nursing students' progression and transition in clinical practice. However, the integration of EPAs in nursing education is still in its infancy and is in need of further research.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.ijnss.2020.06.009>.

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