

EVALUATION OF AN ONLINE LEARNING RESOURCE FOR NURSING STUDENTS PREPARING FOR AN EMERGENCY DEPARTMENT CLINICAL PLACEMENT USING KIRKPATRICK'S MODEL

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Abstract

Clinical placements in the Emergency Department (ED) can offer nursing students a unique learning experience to develop their knowledge and skills in managing the critical care patient. However, the complexity of this clinical placement can be daunting leading to increased stress and anxiety. This can have implications for student learning and clinical performance creating feelings of unpreparedness for the challenges of emergency nursing. Analysis of students' concerns was obtained through an explanatory sequential mixed methods study identifying key areas. Following this, an online learning resource "Are you PreparED" was developed. This educational resource is a repository of useful information relevant to the role of the nursing student in the ED and is focused on the key areas of concern identified by the students.

Evaluation of the online learning resource was structured using the first two stages of Kirkpatrick's model. Following completion of an online survey, students provided feedback on several aspects including: design, usability, relevance and accuracy of information. In addition, comments were obtained regarding their perceived learning, knowledge acquisition and intent to apply to the clinical setting. Perceived levels of preparedness following use of the online learning resource was also explored.

The goal of this study was to provide a valuable online learning resource for nursing students attending a clinical placement in the ED. Evaluation of the resource was paramount to assess quality and establish that learning had occurred, and educational goals met. Suggestions offered by the students provided a valuable source of information for further improvements to this online resource.

Keywords: *Online resource, evaluations, student nurses, emergency department, preparedness.*

1. Introduction

This paper will explore the evaluation of an online learning resource developed to assist nursing students in their preparedness for a clinical placement in the Emergency Department (ED). Following the development of the ARE YOU PREPARED website, student evaluations were undertaken using the Kirkpatrick's Model of Evaluation Framework to identify learner satisfaction and perceived learning and preparedness.

2. Background

The ED clinical placement provides nursing students with a unique opportunity to link theory to practice in a critical care setting. Students are faced with a number of new challenges in the context of a busy, fast-paced and rapidly changing acute care environment. Patient care is increasingly complex and unpredictable with increased patient acuity and high patient turnover. Holbury and Newcombe (2016) acknowledge that the ED is an unpredictable and often highly emotive environment. They note that some nurses thrive on this type of clinical setting and need to be expert in the assessment, recognition and management of patients across the lifespan with life-threatening illness or injury. In addition, nurses are required to process large amounts of information in order to facilitate clinical decision making in this time-pressured environment.

Therefore, the ED clinical placement offers nursing students the opportunity to have exposure to a wealth of learning opportunities, many of which they may not have experienced while on previous clinical placements (Williams & Palmer, 2014). Nursing students are able to engage with the multidisciplinary ED clinical team in order to build confidence in their theoretical knowledge and clinical skills in the care and management of the acutely unwell patient. The aim of this unique clinical placement is for students to develop a specialised skill set in the areas of patient assessment, fast decision making, prioritisation of care and responding to the deteriorating patient (Purling & King 2012; Williams & Palmer, 2014).

However, for some nursing students the anticipation of practicing in this acute care environment can be intimidating, anxiety provoking and stressful. The literature suggests that students often form preconceived ideas about what to expect from a clinical placement in the ED. This can lead to students questioning their abilities with a perceived lack of preparedness (Morrell & Ridgeway 2014). Areas of concern are wide ranging and include: knowledge and clinical skill deficits, fear of making mistakes, ineffective communication, feelings of inadequacy, fitting into the team, level of support and mentorship, dealing with conflict and having the inability to recognise and respond effectively to a deteriorating patient. Studies show that educational preparation of nursing students in this acute care area is becoming increasingly challenging with many nursing students failing to meet industry expectations (Purling & King, 2012).

Students allocated a clinical placement in the ED are generally in the latter stages of their nurse education, and therefore under pressure to demonstrate sound knowledge and clinical competence (Porter, Morphet, Missen & Raymond 2013). The expectation from both academic faculty and healthcare industry is that students will be adequately prepared for the challenges of working in an acute care clinical area and able to respond effectively to critical care incidents. The overarching expectation is that nursing students will be well prepared for the realities of practicing as a graduate nurse in an increasing complex healthcare environment (Dimitriadou et al 2015; Watt & Pascoe 2013). Despite this, it is evident from the nursing literature that this is not necessarily the case with students often floundering when faced with the challenges of working in an acute care setting. The evidence suggests that students are lacking confidence in their knowledge and clinical abilities and experience difficulty in making sound clinical judgements in the management of the acutely unwell patient (Doody, Tuohy & Deasy 2012; Duchscher 2009; Woods et al 2014). This has far reaching consequences, as these negative experiences may influence decisions about whether to pursue a career in emergency nursing. Future projections indicate an increased need for critical care nurses both nationally and internationally due to a diminishing workforce (Halcomb, Salamonson, Raymond, & Knox, 2012). Together with the ageing population, unprecedented population growth and declining nursing workforce there is a need to recruit and retain nurses with critical care expertise.

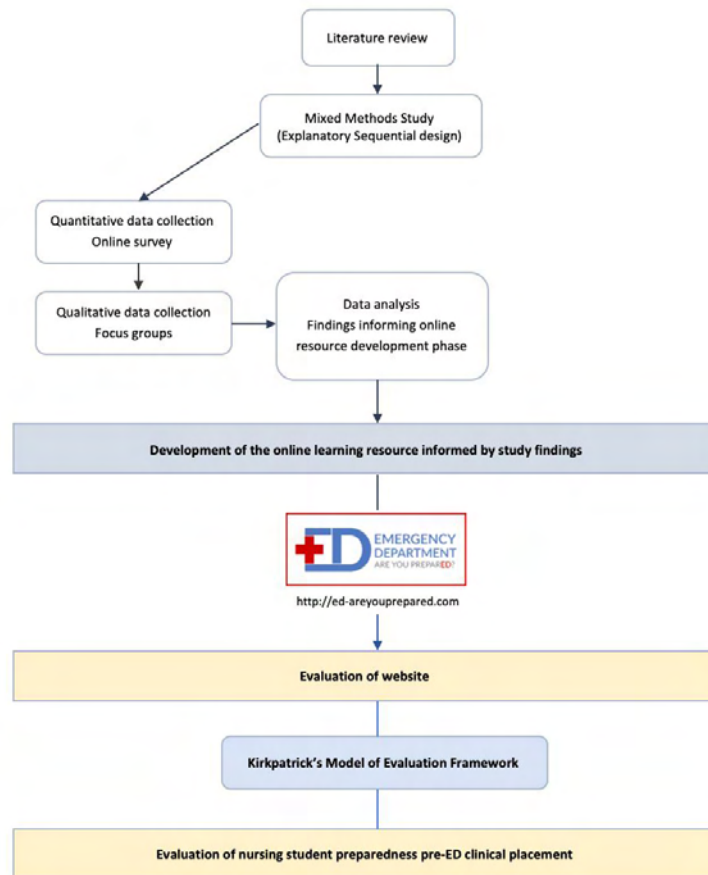
In light of this, it is clear that undergraduate nursing education needs to take heed and find innovative ways to adequately prepare students for acute care clinical placements and the realities of their future professional role. While this issue is without doubt complex and multidimensional, it is generally agreed that nursing student unpreparedness may have far reaching consequences when it comes to providing high quality patient care, especially in specialised areas such as the ED (Halcomb et al, 2012; Williams & Palmer, 2014).

To address the issue of preparedness, an explanatory sequential mixed methods design study was undertaken to identify areas of concern by nursing students in attending a clinical placement in the ED (Creswell & Plano-Clark 2018). Both the quantitative and qualitative findings from this study provided a platform for the development, implementation and evaluation of an online learning resource titled '**ARE YOU PREPARED**'. Whilst there are a number of useful online learning resources available for healthcare students globally. The focus of these resources is largely aimed at medical students and has an emphasising on specialised clinical skills. Examples include electrocardiogram (ECG) interpretation, patient history taking, clinical assessment and laboratory data interpretation. While some of this information is extremely important, these resources are somewhat limited for nursing students. In addition, the notion of preparing students for their clinical placement appears to be lacking. Levett-Jones et al (2015) suggest that nursing students' clinical placement experiences can be a critical turning point and may even affect their professional aspirations. It is this lack of online resources specifically aimed at preparing nursing students for clinical practice in the ED that has facilitated the development of this website. Following development of the online resource, student evaluation is essential in order to ensure learning effectiveness, knowledge acquisition and intent to apply to the clinical setting (Maycock et al 2012).

3. Design and development of the website

As previously identified, the development of the **ARE YOU PREPARED** online learning resource was based on the need to increase student preparedness prior to attending a clinical placement in the ED. Analysis of both qualitative and quantitative data from students at 3 universities in Western Australia informed the structure and content base of the website (figure 1).

Figure 1. Website development and evaluation process.



Following a successful grant application, an expert web designer was engaged to create and develop a visually appealing and easy to navigate site (Maycock et al 2012). It was essential to ensure that the website was clear, easily understood, relevant and up to date (Ng, Archbold, Mayer and Mulla 2015). The website homepage contains an introductory video and instructions on how to navigate the site. The content was structured using a modular format located within four broad topics: 'Orientation to the ED', 'Patient Care', 'Clinical Skills' and 'Professional Issues'. As suggested by Elkman (2018) the content is predominantly text-based and included photographs, videos, helpful tips, nursing blogs, links to external websites and self-directed learning. Students are given the opportunity to engage with the material and acquire meaningful knowledge contextualised to nursing practice in the ED. Trademarking of the **ARE YOU PREPARED** was obtained to protect copyright of the website.

4. Evaluation

When looking at evaluating a website it is essential to identify what is being evaluated, how it is expected to work and how the evaluation results will improve the resource. Cook and Elleway (2015) suggest that evaluation can be seen as the process of judging the value of something, they also note that this can also include theoretical dimensions. In the context of the **ARE YOU PREPARED** website, it was essential to firstly evaluate the design, usability, relevance and accuracy of information offered. An expert panel consisting of senior academic staff members, researchers and experienced ED clinical staff to assess the online learning resource for content and construct validity. This involved critical appraisal of the site

and constructive feedback in relation to visual appeal, ease of navigation, currency, relevance and accuracy of content and perceived usefulness (Ng et al 2015). The expert panel were also asked to provide suggestions for improvements so that modifications could be made. Following this, the website was launched and all final year nursing students across the three universities were asked for feedback using an online survey. The theoretical framework used to guide the evaluation of the online resource was Kirkpatrick's Model of Evaluation.

4.1. Kirkpatrick's model of evaluation

Kirkpatrick's Model of Evaluation has been utilised for well over forty years, and this model has gained an overwhelming popularity for use as a framework to support systematic evaluation. Primarily used within the business sector, the model provides strategies for evaluating organisational training programs. However, use of the model has expanded and been adapted into other disciplines including tertiary education and clinical practice as a means for assessing and appraising education outcomes and intervention studies (Praslova 2010; Smidt, Balandin, Sigafoos & Reed 2009).

The model presents four sequential levels which measure impact of the educational intervention. The 1st level 'reaction' refers to learner satisfaction with the intervention. Evaluation at this level can generate valuable information about relevance of content, perceived usefulness, learning tools and modes of delivery. This can provide an insight into how participants perceive their level of motivation and desire to engage. While this information may be useful for the purpose of modifying material, this information is subjective and does not guarantee learning.

At level 2, 'learning' emphasis is on determining if the educational intervention has met the learning outcomes and the extent to which users perceived learning has occurred. This can include increased knowledge, skills, confidence and commitment to apply into practice

Level 3 'behaviour' and level 4 'results' then move beyond individual satisfaction and learning. The focus moves to organisational change through positive behaviour and transfer of learning into the workplace. The ultimate goal of levels 3 and 4 is to achieve a level of workplace performance that has met individual learning needs, as well as the goals of the organisation (Moreau 2017; Reio, Rocco, Smith & Chang 2017; Rouse 2011). In relation to the online learning resource evaluation was limited to levels 1 and 2 of Kirkpatrick's model.

5. Conclusion

Attending a clinical placement in the ED can be an overwhelming and daunting experience for nursing students. This paper has explored the development of the website **ARE YOU PREPARED**, an online resource to assist nursing students with their preparedness for attending a clinical placement in the ED. Effective evaluation of the resource was undertaken to ensure the design, usability, relevance and accuracy of information. In addition, evaluation of the resource using the Kirkpatrick's Model of Evaluation framework assisted in identifying not only learner satisfaction with the resource, but how the students perceived their knowledge skills and confidence after using this online learning resource. Furthermore, students perceived levels of preparedness were appraised. While primarily designed for nursing students, this online learning resource has the potential to be of benefit in preparing other healthcare professionals for a clinical placement in the ED.

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