Collegian (2016) xxx, xxx–xxx

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Enrolled nurses entering undergraduate studies at second year to become registered nurses — A mixed methods study on commencing perceptions of bioscience

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Received 19 July 2015; received in revised form 25 May 2016; accepted 27 May 2016

KEYWORDS
Registered nurses;
Nursing education;
Bioscience;
Undergraduate;
Clinical practice;
Enrolled nurses

Abstract Enrolled nurses who undertake the Bachelor of Nursing to qualify as registered nurses are usually offered advanced standing, awarding them credit for approximately one year of study. Bioscience subjects form an integral component of undergraduate nursing studies, yet being provided with credit means that these students study less bioscience than a standard-entry pathway. In this study, we examined the bioscience perceptions from enrolled nurses commencing at second year ($n = 49$), using a mixed methods approach. Quantitative data were analysed to determine between and within group differences with age and studies of science in secondary school. Qualitative data were organised into emerging themes, and integrated with quantitative results during analysis. Participants who had studied biology and other science in secondary school had significantly greater agreement with the importance of studying science prior to the Bachelor of Nursing. Main challenges anticipated by these students included bioscience terminology and insufficient prior science knowledge, and the volume and depth of bioscience, particularly in comparison with nursing subjects. Insufficient skills in concentrating and retaining information were also identified as concerns. Nonetheless, most participants were confident that they would learn sufficient bioscience to work as a registered nurse. Prior experience working as an enrolled nurse did not appear to confer an understanding of the importance

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http://dx.doi.org/10.1016/j.colegn.2016.05.002

Please cite this article in press as: Craft, J. A., et al. Enrolled nurses entering undergraduate studies at second year to become registered nurses — A mixed methods study on commencing perceptions of bioscience. *Collegian* (2016), http://dx.doi.org/10.1016/j.colegn.2016.05.002

of bioscience for the future role of the registered nurse. It is paramount that the undergraduate bioscience component is tailored towards the specific needs of this cohort in preparation for their role as registered nurses.

1. Introduction

Bioscience subjects are an integral component of undergraduate nursing studies, and provide fundamentals in anatomy, physiology, pathophysiology and pharmacology to complement nursing clinical subjects. However, bioscience subjects are challenging and cause anxiety for undergraduate nursing students, due to volume of content, lack of prior science knowledge, and bioscience content not perceived to have direct clinical relevance for their future roles as registered nurses (Craft, Hudson, Plenderleith, Wirihana, & Gordon, 2013; Davis, 2010; Friedel & Treagust, 2005; McKee, 2002). Teaching models which promote links between bioscience and nursing clinical practice are particularly beneficial in providing clinical relevance of bioscience for students (Gordon & Hughes, 2013; Larcombe & Dick, 2003).

Whilst, evidence suggests that there has been a blurring of the clinical activities undertaken by enrolled and registered nurses (Chaboyer et al., 2008), there are distinct educational differences. Broadly, enrolled and registered nurses have a two-tiered model of qualifications exists in many countries: (1) The nurse who provides nursing care to patients following one to two years of vocational training, and is referred to as an enrolled nurse (Australia and New Zealand), or licensed practical or vocational nurse (USA and Canada). Although training at this level no longer occurs in the UK, it remains in Australia, and from henceforth, we refer to this level as an enrolled nurse (EN); and (2) The nurse who has a broader scope of practice, including all levels of nursing assessment, patient care, education, and often supervision of ENs, with qualifications following three to four years of university in a bachelors degree. Internationally this nurse is usually referred to as a registered nurse.

In Australia, there are distinct differences in the qualifications to become an EN or a registered nurse. These include the minimum amount of clinical practice hours during their studies, as the EN undertakes 400 h whilst the registered nurse undertakes twice the amount of time in clinical placement with a minimum 800 h; the Australian Qualifications Framework is level 5 or 6 for the EN, and level 7 for the registered nurse (Australian Nursing and Midwifery Accreditation Council, 2012; Ryan, 2009). Although there is currently discussion comparing some similarity in roles between ENs and registered nurses in Australia (Jacob, Sellick, & McKenna, 2012; Jacob, McKenna, & D'Amore, 2016), overall the EN qualifies within a shorter timeframe with less clinical placement hours, and upon completion works under the direction and supervision of the registered nurse (Australian Nursing and Midwifery Council, 2016). Furthermore, workplace responsibilities which require higher patient acuity remain reliant on the registered nurse (Jacob et al., 2016).

Shortages in the nursing workforce internationally promote training of new registered nurses, including the pathway for the EN to qualify as a registered nurse. These ENs are usually given credit for approximately one year of the undergraduate course which encourages them to undertake this education to qualify as registered nurses (Ralph, Birks, Chapman, Muldoon, & McPherson, 2013). There are a multitude of reasons for ENs undertaking Bachelor of Nursing degrees, which includes students originally having insufficient understanding about the difference between ENs and registered nurses (Allan & McLafferty, 2001). Furthermore, after working as ENs, there is disillusionment with the EN role, and benefits for qualifying as a registered nurse include increased responsibilities and respect from colleagues in the workplace, job satisfaction, self-confidence, and improved motivation for clinical practice (Dearnley, 2006; Kenny & Duckett, 2005; Ralph et al., 2013; Webb, 1999). ENs are reported to have higher clinical proficiency than commencing first year students whilst at university (Hutchinson, Mitchell, & St John, 2011), which may offer them some workplace-relevant advantage. Despite this potential benefit, this prior clinical experience that has been gained by working as ENs does not improve their overall success (Rapley, Davidson, Nathan, & Dhaliwal, 2008). Furthermore, whilst studying to become registered nurses, ENs have concerns with their academic skills such as re-learning how to learn, and requiring guidance and support to achieve independence (Hylton, 2005; Melrose & Wishart, 2013; Ralph et al., 2013). Therefore, although ENs commence their Bachelor of Nursing with some clinical expertise, it is evident that their academic preparedness may be lacking.

Registered nurses would benefit from more bioscience having been taught within their studies, specifically providing stronger links with clinical practice (Davis, 2010). Moreover, the impact of the clinical relevance for students is such an important concern that enhanced bioscience-nursing connections decreases student anxiety (Gordon & Hughes, 2013). Interestingly, by being offered advanced standing, ENs entering the Bachelor of Nursing may study less bioscience within the entire degree, even though these subjects are scaffolded to provide the foundation for subsequent nursing clinical subjects; at this university, ENs enter the degree at second year. Almost half of the ENs investigated within a Bachelor of Nursing indicated that they felt unprepared from their vocational science education (Pryor, 2012), and less than 7% agreed that they had adequate science knowledge at the beginning of the course (Latham, Giffard, & Pollard, 2007). These two Australian studies that focused on ENs reported that during their Bachelor of Nursing, the ENs reflected that their science knowledge was insufficient.

2. Study aims and objectives

The aim of the study was to investigate EN's perceptions of bioscience, prior to their commencement of their Bachelor of Nursing. We contrasted the EN group with first year

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