Competence development as perceived by degree and non-degree graduates in Japan: A longitudinal study ☆

Miyuki Takase [a,*], Yoko Nakayoshi [b], Masako Yamamoto [c], Sachiko Teraoka [d], Takiko Imai [e]

[a] Institute of Biomedical & Health Sciences, Hiroshima University, 1-2-3, Kasumi, Minami-ku, Hiroshima City, Hiroshima 734-8551, Japan
[b] School of Nursing, Hiroshima International University, Japan
[c] Department of Nursing, Hiroshima University Hospital, Japan
[d] School of Nursing, Kawasaki University of Medical Welfare, Japan
[e] School of Nursing, Prefectural University of Hiroshima, Japan

ARTICLE INFO

SUMMARY

Background: A degree programme is believed to prepare graduates with a higher level of competence than their diploma counterparts. However, there have been inconsistent findings reported as to whether or not degree-graduates outperformed those who take diplomas.
Objectives: This study aimed to identify graduates' perceptions of competence development in their first year of employment, and to compare the competence levels of graduates with different educational backgrounds.
Design: This study adopted a longitudinal design.
Settings: This study has been performed in five hospitals in Japan.
Participants: 122 Japanese graduates participated in this study.
Methods: The self-assessed competence of the graduates was collected in the 3rd, 6th, 9th, and 12th months of their employment using a survey method. The data were analysed using a linear mixed model.
Results: The results suggested that the graduates perceived their competence to be rapidly growing during the first half of the graduate year, and slowly later. The results also indicated that the graduates' perception of their competence showed a significant variation. The most striking finding of the study was that, on average, the non-degree graduates rated their competence higher than their degree counterparts.
Conclusions: The current university orientation on emphasising intellectual and theoretical components of education, with less focus on practical components might have led to the development of lower competence among the BN graduates. A fine balance between theoretical and practical components needs to be established in a university curriculum.

Introduction

Nursing is a profession that has several educational pathways leading to registration. The pathways to registration may vary from nation to nation. However, the educational dichotomy of diploma versus degree course is present in many countries. While a two-tier educational system allows the flexibility of choosing a suitable course for students in accordance with their academic performance, and the time and expenses that are allowed for study, it also has produced graduates with inconsistent competence and preparation for registration.

Nursing competence is the ability of a nurse to effectively demonstrate a set of attributes, and includes factors such as personal characteristics, values, attitudes, knowledge, and skills which are required to fulfil his/her professional responsibility (Takase and Teraoka, 2011). There has been a debate over what level of education or competence should be required for nurses (Wolff et al., 2010; Sportsman et al., 2012). Without reaching any concrete conclusion, a movement to transfer the pre-registration education to universities, which offer degree courses, has been occurring in several countries (Zabalegui and Cabrera, 2009; Natan and Ehrenfeld, 2011; Park et al., 2011). The reason behind this movement is that nurses with degrees are expected to perform better than their diploma counterparts (Robinson et al., 2003), as university education is believed to prepare graduates with broad generic and transferable skills that are necessary for a lifelong learning and professional development (Cowan et al., 2005). But, is there really an added value to degree education (Girot, 2000)? In other words, do degree graduates demonstrate a higher level of competence (or at least, do they have more confidence) than those with other educational qualifications? The answer to this question could guide the future direction of university education.

Background

Pre-registration Educational Systems in Japan

Japan offers one of the most diverse pre-registration nursing education systems in the world. Currently, there are five main educational pathways, upon the completion of which, the students are allowed to sit the national examination for Registered Nurse (RN) leading to registration (Japanese Nursing Association, 2011). These are i) a four-year bachelor of nursing course offered by a university, ii) a three-year associate degree course offered by a college, and iii) a three-year diploma course, iv) a five-year nursing diploma course, which integrates an educational programme for a licensed practical nurse (LPN) with three years of high school education, and offers an additional two-year period of RN education, and v) a two-year RN conversion course following the acquisition of a LPN license. The most popular pathway has been a three-year diploma course. However, the number of enrolments in the degree course has been approaching that of a diploma course (Ministry of Health Labour and Welfare, 2011). In all the schools, the required hours of study have been set jointly by the Ministry of Education, Culture, Sports, Science and Technology and the Ministry of Health, Labour and Welfare, and all students must pass the national examination to become RNs. However, these requirements were established to ensure a minimum level of competence as RNs. The actual levels of competence may vary among students/graduates, depending on their educational backgrounds.

The Effects of Different Educational Systems on Graduates' Competence

There have been a number of studies that have investigated the outcomes of different educational systems on graduate nurses. For instance, Shin et al. (2010) compared the clinical competence of degree and diploma graduate nurses, and found that supervisors were more satisfied with the competence levels of the degree graduates than with those of the diploma graduates. Chang et al. (2011) also compared the self-assessed competence levels of associate, bachelor's and master's degree graduates, and reported that the self-evaluated competence increased as their levels of educational qualification became higher. Fero et al. (2009), and Swindells and Willmott (2003) compared the critical thinking abilities of degree and diploma graduates. Their findings indicated that the critical thinking abilities of degree graduates were rated higher by their colleagues than those of the diploma nurses.

Whereas the above findings favoured the degree education, some inconsistent findings have been reported. Klein and Fowles (2009) found that diploma nurses rated their competence levels higher than degree nurses. Other investigators reported that the competence levels of degree and diploma graduates, either rated by themselves or others, did not differ from each other (Robinson et al., 2003; Clinton et al., 2005; Salonen et al., 2007; Park et al., 2011; Wangensteen et al., 2012). In addition, Bartlett et al. (2000) had mixed findings, in which degree graduates rated one aspect of competence higher than the diplomas, while diploma graduates rated another aspect higher than the degree graduates. Nonetheless, the competence levels of both the degree and diploma graduates were perceived to be equivalent by their mentors. Mixed findings were also reported by Koehn and Lehman (2008).

The above inconsistent findings may be attributed to the time at which graduates' competence levels were measured. For example, diploma courses are more oriented towards practical training than degree courses. Hence, the graduates from the former can 'walk into' practice and 'hit the floor running' by exhibiting higher levels of competence than their degree counterparts (Wolff et al., 2010). On the other hand, degree graduates may struggle in their practice at the beginning of employment. However, in their university education they are equipped with self-learning skills (i.e., they learn 'how to learn'), which enable them to develop their own competence (Lofmark et al., 2006; Grealish and Smale, 2011). Therefore, they may catch up with their diploma

counterparts, and eventually exceed their competence levels, during the first year of employment. It may be these different paces of development in diploma and degree graduates that caused the inconsistent findings, depending on when the graduate nurses' competence was evaluated. To investigate the effect of different educational systems on graduates' competence and to disentangle the confusing findings, it is important to capture the patterns of their competence development longitudinally, and then compare them.

Aim

The aim of this longitudinal study was to identify graduates' perceptions of their competence and its developmental pattern during the first year of their employment. Furthermore, this study aimed to compare the competence levels of graduates with different educational backgrounds, in order to examine the effect of the degree programme on graduates' competence development.

Methods

Study Design

This study adopted a quantitative longitudinal design. The study is part of a larger study, which investigated the effects of graduates' adjustment to work on their turnover intention (Takase et al., 2012).

Participants

Participants were recruited from five hospitals in western Japan. To enhance the sample representativeness, two university and three non-university hospitals were asked to participate in the study. A total of 279 graduates who fulfilled the following inclusion criteria were recruited from these hospitals. They were newly graduated nurses with no prior nursing experience (not even as an LPN), working as an RN at the time of the study, and involved in direct patient care. However, those working in outpatient departments were excluded from the study.

Data Collection

Data were collected from June, 2011 to March 2012. First, the heads of nursing departments in the five hospitals were asked to participate in the study. After receiving their consent, questionnaires were distributed to graduates in the 3rd, 6th, 9th and 12th months of employment, through the nursing departments. The graduates were asked to complete the questionnaires and return them using reply-paid envelopes provided. The graduates were also instructed to generate an ID number (based on their birthday, etc.) and write it down on the questionnaires, so that matching of the data collected at different time-points was possible. The questionnaires were distributed to all 279 graduates on the occasion of each data collection, and the graduates were allowed to decide whether or not to participate in the study each time.

Instruments

In addition to demographic questions, the questionnaire included the following scale.

Holistic Nursing Competence Scale

This instrument, developed by Takase and Teraoka (2011), was used to measure the self-assessed competence level of the graduate nurses. This scale was designed to measure behaviours/attitudes that sustain their professional practice and growth. The scale is not designed to measure proficiency in nursing skills. The scale consists of two sections. Section A contains seven items, which evaluate general aptitudes required of nurses (e.g., attributes such as being compassionate and being able to view a situation critically). The graduates were asked to rate how