Competence of newly-graduated nurses – a comparison of the perceptions of qualified nurses and students

Aim. This paper reports a study that compares opinions of final year nursing students, rating their own competence, with the opinions of experienced nurses on the competence of newly-graduated nurses.

Background. The transition of nursing preparation into higher education is regarded as positive, although it has led to differences in opinion about the competence of newly-graduated nurses and their readiness to enter the nursing profession. There are studies showing that newly-graduated nurses perceive themselves as holistically focused, professional practitioners, while other nurses are concerned that newly-graduated nurses do not have necessary skills.

Methods. A convenience sample of 106 nursing students in the final week of their course and 136 nurses who had experience of supervising nursing students completed a questionnaire. The data were collected in 2002.

Results. Own competence, in the form of ability to perform nursing care, was rated by nursing students to be good or strongly developed in most of the investigated areas of nursing care. Experienced nurses also estimated newly-graduated nurses’ competence to be good or strongly developed, although to a lesser extent. Nurses qualified within the previous 5 years rated newly-graduated nurses’ competence to be higher in comparison with those with less recent education.

Conclusions. Further studies are needed to broaden our understanding of why some areas of nursing care, such as ethical awareness, were rated very highly, while others, like informing and teaching of co-workers and planning and prioritizing interventions had the lowest rating.

Keywords: competence, graduate nurses, higher education, nurse education, nursing profession, questionnaire, survey
Introduction

Nursing education has been subject to many changes over the years, and one educational change that has been questioned is the move into universities. Has it really equipped newly-graduated nurses with the necessary knowledge, skills and confidence to function in contemporary healthcare settings? This issue has been discussed internationally (Maben & Macleod Clark 1998, Gerrish 2000, Greenwood 2000, The Swedish Board of Health and Welfare 2002).

Academic education has replaced vocational training and gradually a new curriculum is replacing the old one (Kapborg 1998, Pilhammar Andersson 1999). The academic demands on nursing education are, for example, that teaching should provide students with the ability to make critical judgements, solve problems and follow the development of knowledge within the field of teaching, and to develop students’ ability to exchange information on a scientific level. Nursing education must normally follow a state’s or country’s specific guidelines and in some cases international directives, such as those from the European Union (Department of Education 1992).

Background

Competence

Regulations for nursing education assume that nurses, at registration, have reached a standard prepared for autonomous practice and for which they can be held accountable. However, what establishes this standard of competence is not always defined (Bradshaw 1997). Discussion around the meaning of competence in nursing started in the United Kingdom (UK) in the late 1980s and continues internationally (Bradshaw 1997, 1998, Milligan 1998, McMullan et al. 2003). The key words or constructs within definitions of competence vary (Eraut 1988), although there is a general consensus that competence is based on a combination of components that reflect: (a) knowledge, understanding and judgement; (b) a range of skills – cognitive, technical or psychomotor and interpersonal; and (c) a range of personal attributes and attitudes (Redfern et al. 2002, Alexander & Runciman 2003). Even if the definition and use of the concept has led to confusion and contradiction, it is actively promoted and used (Girot 1993, While 1994, Milligan 1998). In the present study, competence was described in terms of learning outcomes and ability to perform nursing care (Alexander & Runciman 2003) through the integration of cognitive, affective and psychomotor skills (Girot 1993).

Perceptions of competence

Evaluation of competence in the transition process from university student to Registered Nurse was described three decades ago by Kramer, who saw this period as shock-like reactions to work situations for which graduates thought they were prepared (Kramer 1974).

Recent studies have shown that nurses today feel better prepared for their work. New graduates perceived themselves as professional practitioners with theoretical knowledge, both holistically focused, and research-oriented (Macleod Clark et al. 1997) and feelings of responsibility and accountability (Maben & Macleod Clark 1998). In their final clinical period, students and their supervisors assessed the students’ clinical performance well above the expected level (Glover et al. 1997). Gerrish (2000) found that newly qualified nurses have developed a more active style of learning and that they found the transition less stressful than nurses had done over a decade earlier. Overall, the move into higher education is regarded as positive. However, concerns were expressed that newly qualified nurses do not have the full range of necessary skills (Watson & Kiger 1994, Meerabeau 2001, The Swedish Board of Health and Welfare 2002). Nurses who had just completed their preregistration course found that they were not adequately prepared for what they were likely to encounter, and that there was lack of support (Gerrish 2000, Pigott 2001). They also expressed anxiety about making mistakes (Kelly 1998). Professional socialization, experienced as difficulties with ‘fitting in’ as quickly as possible and being acknowledged as competent by their more experienced colleagues was noted by Clare (1993), while Gray and Smith (1999) found that the process of professional socialization during the students’ final placement was facilitated by a mentor and the learning environment.

In Sweden, only one report has been published on the proficiency of newly-graduated nurses in relation to healthcare needs, and this indicated that they had insufficient management and technical skills (The Swedish Board of Health and Welfare 2002). The sparse number of studies, as well as the differences in opinions that have been highlighted in the literature, were the reasons for this study.

The study

Aim

The aim of this study was to compare final year student nurses’ views of their own competence with qualified nurses’ perceptions of newly-graduated nurses’ competence.
Design

A descriptive design using a questionnaire survey was adopted. The data were collected in 2002.

Participants

A convenience sample of students from two universities offering a 3-year Bachelor’s degree level nursing programme was chosen. The students were asked to participate during the final week of their course. Of a total of 127 students (61 and 66 respectively), 21 declined participation, and thus 106 were included in the study.

Two hundred experienced nurses were randomly selected from the nursing staff at two hospitals and asked to participate in the study. All nurses were working where students had been practising during their clinical education. The criterion for participation was to have had supervisory experience of nursing students on the Bachelor of Nursing programme. The response rate was 68% (n = 136).

Data collection

A questionnaire comprising 18 items was used. It was based on an evaluation form used previously in clinical nursing education (Löfmark & Thorell-Ekstrand 2000). One version of the questionnaire had questions for the students and one version was directed to the experienced nurses, although the questions were the same. The evaluation form had been systematically developed from documents, requirements and international guiding principles for nursing education (Department of Education 1992, SFS 1992, 1993, SOSFS 1993, 1995, ICN 1997, Salvage & Heijnen 1997) and had been in continuous use at both universities for 5 years. The 18 items in the questionnaire were almost identical with the factors in the evaluation form and were therefore familiar to both students and nurses (Table 2).

The questions formulated for final year students concerned evaluation of their competence, described as experience of their own ability to give nursing care. The experienced nurses were asked about their opinions of newly-graduated nurses’ competence in nursing care. Response alternatives for each item were rated as low ability, good ability and strongly developed ability.

The questionnaire included two items not occurring in the assessment form. One item concerned comparisons between the current newly-graduated nurses and nurses who graduated 5–10 years previously. The three response alternatives were: more competent, as competent or less competent. The second item concerned newly-graduated nurses’ competence in relation to nursing care, where the alternatives were very high, high, low and very low competence. Demographic data were also collected (Table 1).

For the two student groups, the questionnaires were distributed in the classroom. In one group, the questionnaire was filled in immediately, while in the other group the students were asked to return it in a few days time. No reminders were sent out.

In the experienced nurses group, coded questionnaires were handed out on each ward and then collected from the wards or sent back using the internal post. Reminders were sent out to the nurses after 3 weeks and this resulted in a further 51 questionnaires being returned, giving a total of 136.

Table 1 Characteristics of the groups included in the study

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Nursing students (n = 106)</th>
<th>Nurses (n = 136)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years ± sd)</td>
<td>29.3 ± 6.4</td>
<td>36.5 ± 10.0</td>
</tr>
<tr>
<td>Years since qualification (n)</td>
<td>–</td>
<td>9.1 ± 9.2</td>
</tr>
<tr>
<td>Nurse employment (years ± sd)</td>
<td>–</td>
<td>8.8 ± 9.0</td>
</tr>
<tr>
<td>Participated in post-basic nurse education (%)</td>
<td>–</td>
<td>67.6</td>
</tr>
</tbody>
</table>

Ethical considerations

The nursing director of each hospital, the head nurses of the actual wards, representatives of the nurses’ union and the heads of the education departments were contacted for permission to carry out the study. Both students and nurses were informed in writing about the aim of the study and the fact that their participation was voluntary. The student form was filled in anonymously. The nurses’ form had a code number, so that reminders could be sent to non-respondents. Confidentiality was assured.

Data analysis

The psychometric properties of the 18-item questionnaire were tested and considered to possess both good validity and reliability. A factor analysis with varimax rotation was performed to determine the construct validity of the assessment form and four factors were revealed from the analytic procedure. The items were summed into four factors and divided by the number of items included, after which Cronbach’s alpha co-efficient was calculated for evaluation of internal consistency. The possible range of scores for all 18 items was 1–3. The factors were called: (i) communication (five items, Cronbach’s α = 0.75); (ii) patient care (seven...
items, Cronbach’s  \( \alpha = 0.85 \); (iii) personality characteristics (four items, Cronbach’s  \( \alpha = 0.88 \)); and (iv) knowledge utilization (two items, Cronbach’s  \( \alpha = 0.57 \); Table 3). The strength of the intercorrelations indicated that the questionnaire possessed good reliability as three of the domains exceeded the 0.70 level. The only domain with an alpha co-efficient <0.70 was knowledge utilization. This might be because of the fact that only two items were included in this domain.

Descriptive data are presented as percentages, mean values and standard deviations. The response alternatives ‘good ability’ and ‘strongly developed ability’ in the questionnaire were grouped together (Table 2). Comparisons between groups were made using Student’s  \( t \)-test and chi-square-test. The level of significance was defined as  \( P < 0.05 \).

## Results

### Competence in newly-graduated nurses

Final year nursing students estimated their competence, rated as a higher ability to provide nursing care, in all 18 items compared with experienced nurses (Table 2). In 10 of the 18 items, 75% or more of the experienced nurses (\( n = 136 \)) rated the newly-graduated nurse as having a good or strongly developed ability to provide nursing care. Three items were rated by <50% of the experienced nurses (\( n = 136 \)) as good or strongly developed. When the 18 items were combined into the four factors revealed in the factor analysis, nursing students rated their competence to be higher in all factors compared with how experienced nurses rated the competence of newly-graduated nurses (Table 3).

Nurses who had graduated less than 5 years previously had slightly higher ratings than those having graduated more than 5 years previously but the difference was statistically significant only in one of four factors, that of patient care (Table 4).

### Competence of newly-graduated nurses compared with those who graduated more than 5 years previously

Eighteen percent of nursing students (\( n = 106 \)) and 11% of experienced nurses (\( n = 136 \)) reported that newly-graduated nurses were more competent than those who had graduated under the old curriculum (more than 5 years previously), but 30.9% of the nursing students (\( n = 106 \)) and 41.3% of experienced nurses (\( n = 136 \)) thought that they were less competent (\( \chi^2 = 3.58 \), d.f. = 2,  \( P = 0.17 \); Table 5).

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**Table 2** Percentage of students (\( n = 106 \)) rating their own competence (good or strongly developed ability) and nurses (\( n = 136 \)) rating the newly-graduated nurses’ competence (good or strongly developed ability)

<table>
<thead>
<tr>
<th>Items</th>
<th>Students (%)</th>
<th>Nurses (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethical awareness</td>
<td>100.0</td>
<td>90.4</td>
</tr>
<tr>
<td>Communication/interaction with patients</td>
<td>99.1</td>
<td>93.3</td>
</tr>
<tr>
<td>Ability to co-operate</td>
<td>99.0</td>
<td>97.1</td>
</tr>
<tr>
<td>Preparing for action and working speed</td>
<td>99.0</td>
<td>94.1</td>
</tr>
<tr>
<td>Self-knowledge</td>
<td>99.0</td>
<td>86.6</td>
</tr>
<tr>
<td>Administering drugs</td>
<td>98.1</td>
<td>88.1</td>
</tr>
<tr>
<td>Undertaking nursing interventions</td>
<td>97.2</td>
<td>86.0</td>
</tr>
<tr>
<td>Assessing patients’ needs for nursing care</td>
<td>93.4</td>
<td>74.8</td>
</tr>
<tr>
<td>Reporting, documenting, writing patient care records</td>
<td>89.5</td>
<td>83.6</td>
</tr>
<tr>
<td>Using theoretical knowledge</td>
<td>88.7</td>
<td>75.9</td>
</tr>
<tr>
<td>Re-assessing patient’s situation and nursing interventions</td>
<td>87.7</td>
<td>69.6</td>
</tr>
<tr>
<td>Informing and instructing patients and relatives</td>
<td>87.7</td>
<td>63.7</td>
</tr>
<tr>
<td>Planning, carrying out and delegating tasks</td>
<td>87.7</td>
<td>57.0</td>
</tr>
<tr>
<td>Assisting with/performing investigations and treatments</td>
<td>83.8</td>
<td>63.9</td>
</tr>
<tr>
<td>Accuracy and reliability</td>
<td>82.5</td>
<td>48.5</td>
</tr>
<tr>
<td>Using knowledge of research and developmental work</td>
<td>79.2</td>
<td>69.9</td>
</tr>
<tr>
<td>Planning the work and prioritizing nursing interventions</td>
<td>71.8</td>
<td>47.8</td>
</tr>
<tr>
<td>Informing and teaching co-workers and students</td>
<td>67.6</td>
<td>44.8</td>
</tr>
</tbody>
</table>

Maximum score 3.

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**Table 3** Mean values (±SD) in four factors of competence in newly-graduated nurses as rated by nursing students and nurses

<table>
<thead>
<tr>
<th>Factor</th>
<th>Students (( n = 106 ))</th>
<th>Nurses (( n = 136 ))</th>
<th>Statistics (d.f. = 234)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>2.11 ± 0.38</td>
<td>1.77 ± 0.35</td>
<td>( t = -6.98; P &lt; 0.0001 )</td>
</tr>
<tr>
<td>Patient care</td>
<td>2.17 ± 0.38</td>
<td>1.77 ± 0.36</td>
<td>( t = -8.23; P &lt; 0.0001 )</td>
</tr>
<tr>
<td>Personal characteristics</td>
<td>2.68 ± 0.34</td>
<td>2.11 ± 0.38</td>
<td>( t = -11.95; P &lt; 0.0001 )</td>
</tr>
<tr>
<td>Knowledge utilization</td>
<td>1.99 ± 0.45</td>
<td>1.82 ± 0.49</td>
<td>( t = -2.78; P &lt; 0.01 )</td>
</tr>
</tbody>
</table>
Table 4 Mean values (±SD) for nurses’ ratings of the competence of newly-graduated nurses, with reference to the time since their own graduation

<table>
<thead>
<tr>
<th>Factor</th>
<th>&lt;5 years since graduation (n=70)</th>
<th>&gt;5 years since graduation (n=60)</th>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>1.83 ± 0.34</td>
<td>1.72 ± 0.35</td>
<td>t = 1.81; d.f. = 128; P &lt; 0.08</td>
</tr>
<tr>
<td>Patient care</td>
<td>1.87 ± 0.37</td>
<td>1.65 ± 0.30</td>
<td>t = 3.75; d.f. = 128; P &lt; 0.001</td>
</tr>
<tr>
<td>Personal characteristics</td>
<td>2.16 ± 0.41</td>
<td>2.05 ± 0.34</td>
<td>t = 1.65; d.f. = 128; P &lt; 0.1</td>
</tr>
<tr>
<td>Knowledge utilization</td>
<td>1.87 ± 0.50</td>
<td>1.75 ± 0.48</td>
<td>t = 1.38; d.f. = 128; P &lt; 0.8</td>
</tr>
</tbody>
</table>

Maximum score = 3; missing answers = 6.

Table 5 Students’ and nurses’ ratings of competence in newly-graduated nurses compared with nurses who had graduated >5–10 years previously (%)

<table>
<thead>
<tr>
<th>How competent is the newly-graduated nurse when compared with those who graduated &gt;5–10 years previously?</th>
<th>Students</th>
<th>Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>More competent</td>
<td>18.0</td>
<td>11.1</td>
</tr>
<tr>
<td>As competent</td>
<td>51.1</td>
<td>47.6</td>
</tr>
<tr>
<td>Less competent</td>
<td>30.9</td>
<td>41.3</td>
</tr>
</tbody>
</table>

Table 6 Students’ and nurses’ ratings of competence in newly-graduated nurses in relation to the expected nursing role (%)

<table>
<thead>
<tr>
<th>Competence</th>
<th>Students</th>
<th>Nurses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very high</td>
<td>2.0</td>
<td>0.78</td>
</tr>
<tr>
<td>High</td>
<td>45.5</td>
<td>48.1</td>
</tr>
<tr>
<td>Low</td>
<td>50.5</td>
<td>48.8</td>
</tr>
<tr>
<td>Very low</td>
<td>2.0</td>
<td>2.3</td>
</tr>
</tbody>
</table>

A final item in the questionnaire dealt with competence in relation to the expected nursing role. About half of the students and experienced nurses rated competence as high or very high, while the other half of the group rated competence as low (Table 6).

Discussion

The main finding was that final year nursing students rated themselves as having a good or strongly developed ability to provide nursing care, and did so to a greater extent than judged by experienced nurses in the 18 investigated areas of nursing. Nursing students in their final week of education evaluated their ability as strongest in areas of ethical awareness, communication with patients, ability to co-operate, preparing for action and working speed, and self-knowledge. These areas were also assessed by experienced nurses as good or strongly developed among new graduates. Ability to co-operate and being prepared for action and working speed were estimated as the strongest in this group of nurses. Both groups considered competence to be good or strongly developed in more than half of the examined fields. These findings are congruent with those of studies of the readiness of newly-graduated nurses to enter the nursing profession as competent Registered Nurses (Clark et al. 1997, Gerrish 2000, Greenwood 2000).

These findings are of interest from both an educational and a professional point of view. In the academic curriculum more emphasis has been placed on teaching students to ‘learn how to learn’. The idea is to enable nurses without experience to follow the development in contemporary healthcare settings where the demands are constantly changing. Furthermore, nurses need to become lifelong learners. An idea put forward by Watkins (2000) is that nurses need this capability both for academic reward as well as to be competent in nursing care. This means that students must know how to keep learning and stay abreast of developments in nursing. Bradshaw (1997) considered educational policy in academic curricula to be directed more towards self-directed methods of learning. Students are assumed to be responsible for their own educational development. Areas where both students and experienced nurses rated ability as good or strongly developed were ethical awareness, ability to co-operate and preparation for action. All are examples of prominent aspects of nursing care and can be seen as crucial for development of the profession. Outcomes of the present study correspond with those of other studies that support newly-graduated nurses’ competence. An example is that newly-graduated nurses are holistically focused (Macleod et al. 1997) and that skills that are demanded in healthcare will increase in the future (Greenwood 2000).

The findings may also question the accuracy of final year nursing students’ self-assessments. James (1995) discussed the stereotyped images of nursing and proposed that the complex world could be seen as simple. Glover et al. (1997) pointed to the fact that students may have unrealistic expectations of their ability to function as nurses. Löfmark et al. (2001) questioned students’ self-assessments when they perceived themselves as being independent of supervision to a great extent.
extent, both at the beginning and end of their clinical nursing practice. For that reason, feedback from supervisors during clinical periods is essential to make students aware of their ability in different areas. Our findings cite support from experienced nurses for newly-graduated nurses’ competence when different areas were rated, although to a lower degree. There is therefore much variation of opinion as to whether nursing education prepares students for the demands of working in the nursing profession. Further study is therefore needed with relevance for both nursing education and the healthcare sector.

A second finding was that nurses with an academic nursing education and less than 5 years experience of nursing gave higher ratings in all four factors covered in the questionnaire (communication, patient care, personal characteristics and knowledge utilization), although only patient care differed statistically significantly. This result is possibly supported by the suggestion that nurses educated within the pre-academic system might have difficulties with coping with today’s academic demands in nurse education, and resistance to change may influence their opinion (Maben & Macleod Clark 1998, Wallin et al. 2003). Bradshaw (1997) concluded that reforms in nursing education have brought shifts in the standard of competence in recent years. Our results might also have been influenced by lack of awareness among experienced nurses, who trained according to the pre-academic curricula, of the intentions and content of the new curriculum. In the future this difference might be an interesting area for investigation.

The third aspect of our findings was the opinions of final year students and experienced nurses concerning competence among newly-graduated nurses and those who had graduated more than 5–10 years previously. These findings could be interpreted as suggesting that nursing education over the years has led to about the same level of competence. Nurses with work experience were more hesitant, and only 58% of them rated newly-graduated nurses as competent/more competent. Seventy percentage of nursing students rated newly-graduated nurses as competent or more competent. For nursing students this issue can only be a guess, but it is of interest as this issue is often debated.

The fourth area concerned competence in relation to expectations about the nursing role. About half of the participants in both groups regarded competence as low or very low for newly-graduated nurses. This result might reflect doubt about the demands of the nursing role in relation to expected competence. The workload of Registered Nurses seems to be continually increasing. They need not only to be competent in clinical and technical skills, but must also be competent in decision-making, priority setting, critical analysis, judgement and in research utilization (Macmillan 1999). These are all competencies that are emphasized in academic nursing education.

Connected to the move to academic nursing education, there has been a general critique that newly-graduated nurses are lacking in nursing skills (Meerabeau 2001). The only Swedish report on this also revealed limited management and technical skills (The Swedish Board of Health and Welfare 2002). An area that corresponded to management skills in the questionnaire was planning the work and distribution of tasks, which was also rated low by both groups and showed different ratings between the groups. A comparative study by Gerrish (2000) in the UK covering a 10-year period pointed out that newly-graduated nurses felt inadequately prepared for their new roles and that the transition process remained stressful. She highlighted that the transition from student to Registered Nurse is not always easy and straightforward. Even if students in some sense feel inadequately prepared for new responsibilities and expectations, their active learning style enables them to adapt to the new role and may also encourage them to manage the transition process better (Gerrish 2000, Pigott 2001). In order to counter criticism about the lack of nursing skills and of interprofessional education, specific training wards and simulation laboratories have been developed, enabling students to train in nursing care under supervision. Experiences from training wards in Sweden and the UK are very positive (Fallsberg & Wijmaa 1999, Freeth et al. 2001).

The area of nursing care rated as demonstrating the lowest ability by both final year students and experienced nurses was that of informing and teaching co-workers and students. This rating was lower than that for informing and teaching patients and relatives. It may be that informing other healthcare personnel and students is rarely dealt with during nursing education programmes (Table 2). When health care needs are changing because of an ageing population, modification of the healthcare delivery system and changing professional roles will follow suit. Ability to teach healthcare personnel as well as patients and relatives is highlighted as a goal in the guiding principles for nursing education, as well as in international guidelines for nursing education (SFS 1993, ICN 1997, Salvage & Heijnen 1997, Alexander & Runciman 2003). Looking towards the future, it is important that healthcare professionals incorporate learning with and from each other, but also able to inform and teach patients (Mcilfatrick 2004).

Planning and prioritizing nursing interventions was an area that was also rated low. In the development of team working this is an important ability (Fallsberg & Wijmaa 1999). Our results indicate that more effort has to be put into educating
What is already known about this topic

- The move of nursing education into universities is generally viewed as beneficial.
- There are differences in opinion as to whether current nursing education prepares nursing students for the demands of contemporary healthcare.

What this paper adds

- Final year nursing students rated themselves as competent and having good or strongly developed ability to perform nursing care in most of the investigated areas and this was confirmed by experienced nurses.
- Final year nursing students considered themselves to have a strongly developed competence in some areas, such as ethical awareness, while other areas, such as planning interventions and informing co-workers and students, were given a low rating.
- Final year nursing students were more likely than experienced nurses to consider that newly-graduated nurses are competent or more competent than those who had graduated 5–10 years previously.

students about teaching, planning and prioritizing because of increasing and changing healthcare demands.

Study limitations

Our respondents were final year students and experienced nurses. The nursing students evaluated their current situation, while the experienced nurses in some questions responded to issues that were not limited to the present time. The answers from the latter must therefore be interpreted with caution. Relying on memory is hazardous, although rating competence is probably a mixture of feelings and experiences, which Tulving and Thomson (1973) believe makes recall easier.

Conclusion

The findings highlight the importance of assessment of students during their clinical education, using adequate assessment tools, and incorporating student self-assessment. Most people agree that there are high demands on newly-graduated nurses in health care today. Educational reforms are constantly occurring and new curricula are called into question. University-based nursing education is more focused than previously on encouraging an active learning style and lifelong learning, which may help newly-graduated nurses in their transition process.

Author contributions

KW was responsible for the study conception and design. AL, BS and KW performed the data collection. KW performed the data analysis. AL, BS and KW drafted the manuscript. KW, BS and AL made critical revisions to the manuscript. KW provided statistical expertise.

References


