The effectiveness of an educational programme for nursing students on developing competence in the provision of spiritual care


Submitted
Abstract

Aim. The aim of this study was to determine the effects of a course for nursing students on developing competence in spiritual care and the factors that might influence the effects.

Background. Studies suggest that role preparation in nursing on spiritual is poor. For the assessment of competence few or no explicit competency framework or assessment tools seemed to be used.

Method. This study had a quasi-experimental longitudinal observation design (pre - post test ). The subjects were students from nursing schools in the Netherlands (n = 97). The intervention consisted of a module on spiritual care. Competencies were measured by the Spiritual Care Competence Scale (SCCS). At T₁ vignettes were added with the purpose of assessing the quality of the students’ own analyses. Data were analysed by t-test procedures and regression analyses.

Results. Analysis showed statistically significant changes in scores on the subscales of the SCCS between groups (T₁) and over time for the whole cohort of students (T₂). Internship showed as a negative predictor for three subscales of the SCCS. Experience of spiritual care and a holistic vision of nursing showed both as positive predictors on certain competencies. A statistically significant difference was observed between groups in the student analysis of a vignette with explicit spiritual content.

Discussion. The outcomes raises questions about the content of education in spiritual care, the measurement of competencies and factors that are influencing competency development.

Relevance to practice
The results provide nurse educators insight into effects of education in spiritual care on students’ competencies and helps them to consider a systematic place for spiritual care within the nursing curriculum. The SCCS can be used as a valid and reliable tool to assess nurse competency.
Introduction

To enhance the quality of spiritual care delivered by health care workers relevant training seems necessary. Studies consistently suggest that nurses’ competencies related to spiritual care are impoverished because of poor role preparation in nursing education in this area (Greenstreet, 1999; McSherry, 2006; Ross, 2006; Leeuwen et al. 2006). Further research into the content and effects of this aspect of education are important recommendations in such studies. Different studies describe the possible content of teaching programmes in spiritual care, ranging from touching upon the subject of spirituality and spiritual care throughout the curriculum over the years (Ross, 1996; Groer et al. 1996; Narayamasamy, 1999; Lemmer, 2002; Pesut, 2003; Callister et al. 2004) to specific teaching strategies or programmes (Catanzaro & McMullen 2001; Souter, 2003; Mitchell et al. 2006).

Table 1 shows an overview of the studies that have investigated the effect of spiritual care aspects of education on the competencies of health care workers. These studies recognize different kinds of educational programmes. Some studies deal with the placement of spirituality and spiritual care in the curriculum of basic degree programmes and the impact these programmes have on students (Pesut, 2002; Meyer, 2003; Sandor et al. 2006; Lovanio & Wallace, 2007). Other studies focus on specific groups of postgraduate health care workers (Highfield et al. 2000; Shih et al. 2001; Hoover, 2002; Milligan, 2004; Wasner et al. 2005). The content of the educational programmes differs. Some studies focus on the attention given to spirituality throughout the entire curriculum (Pesut, 2002; Meyer, 2003) whereas other studies concentrate on the effects of specific courses on spiritual care (Shih et al., 2001; Hoover, 2002; Milligan, 2004; Wasner et al., 2005; Sandor et al., 2005; Lovanio & Wallace, 2007). Most studies involve nurses and nursing students. Two studies follow a multidisciplinary approach (Wasner et al. 2005; Sandor et al. 2005).
### Table 1: Studies into effects of education in spirituality and spiritual care on students

<table>
<thead>
<tr>
<th>Author(s)</th>
<th>Aim</th>
<th>Sample (n)</th>
<th>Educational method in spiritual care</th>
<th>Research method</th>
<th>Results</th>
</tr>
</thead>
</table>
| Highfield MEF, Johnston Taylor E, O'Rowe Amenta M, 2000 USA     | Identify the formal and experiential spiritual care preparation of oncology and hospice nurses (ON/HN) | ON: 181 (26%) HN: 645 (65%) | o integrated in basic education o course during basic education o graduate coursework o continuing education o reading | Spiritual Care Perspective Scale (SCPS) | - adequacy of preparation: HN 51%/ON 64%  
- patient's influence on nurse's spirituality: 96% / 67%  
- recover own spiritual past  
- discover new beliefs  
- uncover present beliefs/ issues                                                                 |
| Shih FJ, Gau HC, Mao HC, Chen CH, Kao Lo CH, 2001 Taiwan       | Explore the usefulness of a teaching course for nurses to provide spiritual care in clinical settings | 22 students MScN | 18 week course: o classroom lectures o field trips (religions) o clinical experience o presentation of case study | analysis of narrative descriptions and case studies | usefulness for providing spiritual care:  
o clarifying theoretical concepts of spiritual care  
o providing a culturally bonded spiritual care plan  
self-disclosing own personal value systems and spiritual needs  
clarifying the symbolic meaning and impact of religious rituals |
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<tbody>
<tr>
<td>Pesut B, 2002 USA</td>
<td>Understand baccalaureate students’ perceived own spiritual wellbeing and spirituality and explore students’ perceptions of spiritual care, and how they changed during 4 years of education</td>
<td>35 1st year students, 18 4th year students at Christian university</td>
<td>Spiritual care throughout the curriculum - o integrated model for integrating spirituality - o journals, papers, conferences related to spiritual care - o exploring personal beliefs and values - o application in nursing practice</td>
<td>Spiritual-Wellbeing-Scale (1982) Additional questions: - o define spirituality - o spiritual care by nurses - o talking with patients about own spiritual beliefs</td>
<td>Spiritual wellbeing (120) (Religious/Existential/Spiritual) 1st year: 56/53/109 - 4th year: 56/50/106 4th year students: - o write more about spiritually enduring growth - o articulate difference between religion and spirituality - o patient-centred approach in spiritual care (less emphasis on own agenda) - o reciprocal nature of spiritual learning in nurse-patient relationship</td>
</tr>
<tr>
<td>Hoover J, 2002 UK</td>
<td>Evaluate the personal and professional impact of undertaking a 15-week degree level module on nursing as human caring</td>
<td>25 part-time students</td>
<td>Module about human caring - o transpersonal caring healing model (1999) - o empirical: concept caring related to spirituality and suffering - o aesthetics: art, poetry, mosaics, literature concerning the human condition, observation nurse-patient interactions - o personal knowing through reflective practice</td>
<td>4 focus groups before and after undertaking module</td>
<td>Personal impact: - o increased self-awareness - o connecting with self and others - o finding purpose and meaning in life - o clarification of values Professional impact: - o increased understanding of caring theory - o more holistic approach to care - o more committed to promoting healing in others; increased self-awareness</td>
</tr>
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</tbody>
</table>
| Meyer CL, 2003  | Determine which student and environmental factors in nursing education contribute to the students' perceived ability to provide spiritual care | 12 nursing schools: 6 religious (R) 6 public (P) student R/P: 90/190 staff: 47/58 | Content of spiritual care education not explained                                                  | Students: Students' Spiritual Assessment Scale (SAS) Students: Spiritual Care Survey (SSSC)  <br> Student Questionnaire: exploration of the concepts of spirituality and spiritual care  <br> Faculty: four-item survey: emphasis spirituality in nursing programme content of classroom clinical programmes informal interactions | - Student's personal spirituality strongest predictor perceived ability to provide spiritual care  
- Emphasis on spirituality in nursing programme serves as most significant environmental predictor  
- Inadequately prepared for spiritual assessment and providing spiritual care  
- Significant differences with students from colleges with religious affiliation: spiritual care essential component of holistic care; interest in spirituality; spirituality may be discussed with the patient  
- Increased awareness through specific courses and integration throughout curriculum  
- Nurses are responsible for identifying spiritual needs  
- Emphasising spirituality regarded as difficult  
- Inability to address patient's spiritual needs openly  
- Factors affecting nurses' ability to provide spiritual care: lack of training (teaching and learning)  
- Students:  
  - Spirituality Assessment Scale (SAS)  
  - Student Survey of Spiritual Care (SSSC)  
  - Additional questions: rating religious commitment  
  - Attention given to spirituality during nursing programme  
- Faculty: four-item survey:  
  - Emphasis on spirituality in nursing programme  
  - Content of classroom programme  
  - Clinical programme  
  - Informal interactions  
- Students:  
  - Perceptions of the nurse's role in spiritual care (5-point Likert scale)  
  - Problems associated with identifying and meeting spiritual needs (open questions)  
  - Factors affecting the nurse's ability to provide spiritual care (answering options)  
- Student's personal spirituality strongest predictor perceived ability to provide spiritual care  
- Emphasis on spirituality in nursing programme serves as most significant environmental predictor  
- Inadequately prepared for spiritual assessment and providing spiritual care  
- Significant differences with students from colleges with religious affiliation: spiritual care essential component of holistic care; interest in spirituality; spirituality may be discussed with the patient  
- Increased awareness through specific courses and integration throughout curriculum  
- Nurses are responsible for identifying spiritual needs  
- Emphasising spirituality regarded as difficult  
- Inability to address patient's spiritual needs openly  
- Factors affecting nurses' ability to provide spiritual care: lack of training (teaching and learning)  |
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</tr>
</thead>
</table>
| Wasner M, Longaker C, Forgé M, Borsato O, Borasio GD | Investigating the effects of spiritual care training for palliative medicine | Three and a half day training:  
- active compassionate listening  
- recognizing and addressing causes of emotional and spiritual suffering  
- exercises to connect with impaired patients  
- dealing with unfinished business  
- supporting mourners  
- non-denominational spiritual practices (contemplation and meditation) | Multi-moment measurement (0-1-2):  
- Spiritual subscale of Functional Assessment of Chronic Illness Therapy (FACIT-Sp)  
- Self Transcendence Scale (STS)  
- Idler Index of Religiosity (IIR)  
- Additional questions:  
  - main problems in handling death/dying  
  - changes as result of the course  
  - number of days on sick leave |  
- 77% attitude towards coping improved through training in the palliative care setting  
- 35% coped better with died ones of patient with loved ones of patient with bereavement  
- 25% coped better after bereavement training  
- sick-leave days remained stable  
- FACIT-Sp increased directly after training and maintained level after six months  
- STS after training, not after six months  
- FACT-Sp and STS correlated  
- IIR: no change over time  
- overall attitude score (NRS) correlated with FACIT-Sp and STS, not with IIR  
- no differences between nurses and other professional groups |
<table>
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<th>Research method</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sandor MK, Sierpina VS, Vanderpool HV, Owen SV, 2006 USA</td>
<td>Identify and assess changes in spiritual experiences and perceived importance of spiritual issues in nursing and medical students taking part in a Spirituality and Clinical Care course</td>
<td>122 nursing students</td>
<td>Pre-test/post-test design/pilot</td>
<td>Significant differences on most substantive changes:</td>
<td></td>
</tr>
</tbody>
</table>
All these studies show some kind of effect on the spiritual competency of health care workers. In general they show that students develop enhanced spiritual awareness, a more client-centred (holistic) approach, more knowledge about spirituality and spiritual care, improved communication skills and experience some kind of personal impact. Hoover (2002) describes this as the professional and the personal impact of a course on the nurse. Based on these studies one may conclude that education tends to have a certain positive effect on the competency of nurses.

The educational effects can be divided into an impact on spirituality and an impact on professional competence in providing spiritual care. Different assessment tools are used to measure the effect of education on the spirituality of students (spiritual awareness, spiritual wellbeing) (Pesut, 2002; Meyer, 2003; Wasner et al., 2005; Sandor et al. 2005; Lovanio & Wallace, 2007). Although these studies show different effects on students’ spiritual awareness and spiritual wellbeing, the overall effect of education on students’ spirituality seems evident. Meyer (2003) concludes that the students’ personal spirituality is the strongest predictor of perceived ability to provide spiritual care.

No explicit competency framework or assessment tool is used to assess the effect of education on the ability to deliver spiritual care. Most of the described effects on spiritual care competency are based upon student-driven descriptions obtained through open-ended questioning. This raises questions about the specific competencies of nurses regarding spiritual care and how they can be measured. From a professional perspective, nursing competencies in this area and the relevant assessment methodology should be clarified.

In methodological terms, some studies shown in Table 1 employed a pre-post test design that showed some effect. A control group, however, is absent in all of the studies. The investigations into the effects of special courses on spiritual care, in particular, employed small convenience samples. Most respondents participated voluntarily which implies that they were already spiritually committed. This raises questions about the possible influence of selection bias on the results. The studies investigating the effect of nursing programmes in total student populations seem to show stronger evidence (Pesut, 2002; Meyer, 2003).
These observations with regard to spiritual care, competency, education and methodological issues are taken into consideration in this study, which investigates the impact of a special course on spiritual care on the competency of Dutch nursing students to deliver spiritual care. The aim is to determine both the factors influencing the effects and the effects themselves of this course in spiritual care on nursing students’ capability to deliver spiritual care. In order to do so we formulated the following research questions:

1. What effect does an educational course on spiritual care have on nursing students’ self-perceived competency in spiritual care?
2. What influence do the following student-related factors have on this self-perceived competency: own spirituality, religious engagement, thinking about questions of life, vision of holistic nursing care and own experiences of spiritual care in practice?
3. In the assessment of students’ analysis of vignettes is there a significant difference between respondents in the intervention group and those of the control group after finishing a course on spiritual care?

Method

Design
The study has a quasi-experimental longitudinal observational design (pre-test and post-test) involving a cohort of 97 nursing students in total. At baseline the students were divided into an intervention group and a control group. The intervention group followed the educational programme on spiritual care over a period of six weeks. At baseline and after six weeks all students completed a questionnaire that consisted of items listed in the Spiritual Care Competence Scale. Fourteen weeks after baseline the original control group also took the educational programme on spiritual care. When they finished the programme (20 weeks post baseline) the whole cohort of students completed the questionnaire a third time. The participants were not told that the questionnaire was related specifically to the educational programme on spiritual care, in order to control for results biased by socially desirable answers. Thus the items of the Spiritual Care Competence Scale were inserted between broader questions about nursing competencies in general.
The research design is shown in Figure 1.

**Figure 1** Research design

Subjects

The subjects of this study were two cohorts of students from two bachelor degree nursing schools in the Netherlands (n = 97), who were in the third year of their educational programme. The students were participating in 12 educational groups. At the start of the study the groups were assigned to the control or intervention group on the basis of the plans for their practical training during that year.

Intervention

The intervention in this study consisted of an educational module aimed at developing nursing competencies for spiritual care in student nurses. Development of the module was based on the competency profile for spiritual care (Leeuwen and Cusveller, 2004). In addition, theoretical sources were consulted for the content of an education in spiritual care (Ross, 1996; Groer et al. 1996; Greenstreet, 1999; Narayanasamy, 1999; Bush, 1999; Shih et al. 2001; Catanzaro, 2001; Hoover, 2002; Meyer, 2003; Souter, 2003; Callister et al. 2004). This resulted in a module with the following content:
The effectiveness of an educational programme for nursing students on developing competence in the provision of spiritual care

- Three educational sessions of three-hour duration on the concept of spirituality, spirituality in the nursing process and aspects of quality assurance of spiritual care at the institutional level;
- Three two-hour training sessions in communication skills with respect to spiritual care within the context of the nurse-patient relationship (spiritual assessment and spiritual support) and the multidisciplinary team;
- Four sessions of three hours spent reflecting on personal experiences related to aspects of spiritual care in nursing practice.

The course took six weeks. All elements of the module were presented by expert teachers.

**Measurements**

For the purpose of this study we developed a questionnaire that covered all the main nursing competencies that are generally expected to be present in advanced-beginner nurses in the Netherlands. The items regarding the competencies of spiritual care were taken from the Spiritual Care Competence Scale (Van Leeuwen et al. 2007) and added to a broader questionnaire. Some examples of items are:

- ‘I am open to a patient’s spiritual/religious beliefs, even if they differ from my own’;
- ‘I can tailor care to a patient’s spiritual needs/problems in consultation with the patient’;
- ‘I can tend to a patient’s spirituality during daily care (e.g. physical care)’.

A five-point Likert scale was used (1 = strongly disagree/5 = strongly agree) for the answers to the questionnaire.

The SCCS contains the following subscales:

- Assessment and implementation of spiritual care (Crohnbach’s Alpha 0.82);
- Professionalization and improving quality of spiritual care (Crohnbach’s Alpha 0.82);
- Personal support and counselling of patients (Crohnbach’s Alpha 0.81);
- Referral to professionals (Crohnbach’s Alpha 0.79);
- Attitude towards patient’s spirituality (Crohnbach’s Alpha 0.56);
- Communication (Crohnbach’s Alpha 0.71).

Psychometric testing of the SCCS has shown that it is a valid and reliable scale for measuring nurse competency in spiritual care (Van Leeuwen et al. 2007).
Additional questions

To analyse student-related factors with regard to their self-perceived competency in spiritual care, the questionnaire posed additional questions concerned with the students’ own spirituality, religious engagement, thoughts about life questions, vision of holistic nursing care, whether or not they were interns when completing the questionnaire and their practical experience of spiritual care during internship. Table 2 contains these additional questions.

<table>
<thead>
<tr>
<th>Table 2</th>
<th>Additional questions in the questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student’s own spirituality</td>
<td>How spiritual would you rate yourself in terms of the following definition: ‘Spirituality means the religious or existential mode of human functioning, including experiences and questions of meaning and purpose’ (Jochemsen et al., 2002) 10 point scale: 1 (not spiritual) - 10 (extremely spiritual)</td>
</tr>
<tr>
<td>Influence belief/religion?</td>
<td>To what degree is your daily life influenced by your belief system/religion? 10 point scale: 1 (no influence) - 10 (totally influenced)</td>
</tr>
<tr>
<td>Thinking about questions of life</td>
<td>Do you ever think about life questions (e.g. the meaning of life, meaning of illness/suffering, life perspective, the end of life): often - sometimes - never</td>
</tr>
<tr>
<td>Vision of holistic care</td>
<td>• In nursing care I think a nurse should tend to the physical, psychological, social and spiritual aspects of a patient (holistic) • I think the holistic approach is a basic assumption in nursing 5-point Likert scale (1: strongly disagree - 5: strongly agree)</td>
</tr>
<tr>
<td>Are you in an internship at the moment: yes - no</td>
<td></td>
</tr>
<tr>
<td>Experience of spiritual care</td>
<td>• During my practical periods I have had moments of giving spiritual care • During my practical periods my ideals about the nursing profession are being confirmed • During my practical periods I feel that enough attention is devoted to the spiritual care of patients 5-point Likert scale (1: strongly disagree - 5: strongly agree)</td>
</tr>
</tbody>
</table>
Vignettes

After 6 weeks, by which time the original intervention group had finished the course, the questionnaire contained two vignettes whose purpose was to assess whether respondents in both the intervention group and the control group would show any significant differences in the quality of their analysis of the vignettes. The respondents were asked to formulate the needs or problems of the patients described in the vignettes and describe the nursing care they would provide. The first vignette had implicit spiritual content and focused on questions about a patient’s future and meaning of life after having had a heart attack. The second vignette had explicit religious content and was about an angry patient who was questioning God after coming out of remission.

The students’ analyses of the vignettes were assessed by two senior nursing lecturers who were experts in the subject of spiritual care. Lecturer 1 assessed all the analyses of vignette 1 and lecturer 2 assessed the analyses of vignette 2. Both vignettes were evaluated with numeric qualification (ranging from one to five). The lecturers did not know to which group (intervention or control) a particular analysis belonged (see Appendix).

Procedure

The students were assigned to the intervention group and the control group according to their educational programme. Half of the students were on an internship at the time and were assigned to the intervention group since the course on spiritual care required experience and application in nursing practice. The other students were following another programme at school and were therefore assigned to the control group. Data were collected at three moments during the period December 2005 to June 2006. Respondents independently completed the questionnaire in their classrooms under the supervision of field workers. Permission to conduct the study in the nursing schools was obtained from the schools’ management teams. Students received written information about the study prior to participation and gave written informed consent. Approval from an ethics committee was unnecessary because the research method was not burdensome or risky. Students could withdraw from the study at any time.
Analysis

To answer the first research question, scores on the subscales of the Spiritual Care Competence Scale (SCCS) were analysed with t-test procedures. A comparison between the intervention and control groups was made at baseline and after six weeks. At baseline a t-test for equality of means was used to determine whether both groups had the same starting point. After six weeks a t-test for paired samples was used to assess whether there were any intervention-related differences between the two groups. After 20 weeks another t-test for paired samples was used to measure the change over time effect for the whole cohort of students. Effect sizes (ES) were calculated to measure the importance and magnitude of the observed effects. Middel et al. (2001) showed that the ES reflects relevance. An ES of 0.20 indicates ‘no effect’, an ES > 0.20 but < 0.50 indicates a ‘small effect’, while an ES > 0.50 but < 0.80 indicates a ‘moderate effect’, and an ES > 0.80 indicates a ‘considerable effect’.

Multiple regression analysis on the sample data was performed to answer the second research question, concerning the influence of six student-related characteristics scored on subscales of the SCCS. These characteristics were students’ perceived spirituality, perceived religious engagement, thinking on questions of life, their vision of holistic nursing care, personal experience with spiritual care in practice and whether or not they were on an internship at the time of assessment. To answer the third research question on the vignettes, the differences given by lecturers with regard to the numeric qualifications between the intervention and control groups were analysed by a non-parametric t-test (Mann-Whitney test) to assess if they were significant (p < 0.05).

Results

Demographics

The 97 students (95 female and 2 male) participating in this study returned the questionnaire at all three measurement moments (intervention group n = 49; control group n = 48). The mean age of the respondents was 19.1 (SD 1.03, min. 19, max. 25). The students can be characterized as committed Christians with 99% being members of a church or faith community; 94% attend church weekly, 85%
read the Bible on a daily basis, 93% pray every day and 74% are active in some religious discussion group or another. The students in the intervention group did their internship in hospital (63%), mental health care (25%) or in community health care (4%).

At baseline the students ranked themselves on a scale of one to ten on how spiritual they thought they were (mean 7.32, SD 1.48) and how important religion was to them in daily life (mean 7.78, SD 1.34).

**Effects of the course on spiritual care**

At baseline, both the intervention and control groups showed no statistically significant differences in self-assessed competencies in spiritual care across the subscales of the SCCS. After six weeks students in the control group differed in their self-perceived competencies from those following the educational programme in three subscales: ‘professionalization and improving spiritual care’, ‘referral to professionals’ and ‘attitude towards patients’ spirituality’. However, the magnitude of difference in attitude towards patients’ spirituality has to be tagged as trivial (ES < 0.20). The size of statistically significant differences between controls and attendants of the educational programme on spiritual care is important according to Middel et al. (2001) (ES > 0.20) (see Table 3).

After collapsing both samples into the group exposed to the educational programme on spiritual care, statistically significant (p < 0.05) and important (ES > 0.20) changes over time were found across all the subscales (see Table 4).

**Predictors of competencies for spiritual care**

Multiple regression analysis showed statistically significant results between the dependent variable (competencies for spiritual care) and some independent variables. It shows that having or not having an internship influences the scores on the subscales ‘assessment and implementation of spiritual care’ (β = -0.351; p = 0.001; R² = 0.28), ‘professionalization and improving quality of spiritual care’ (β = -0.224; p = 0.021; R² = 0.22), and ‘personal support and counselling of patients’ (β = -0.219; p = 0.031; R² = 0.23). This means that interns had lower scores on these subscales compared to students without an internship.
### Table 3  Comparison between intervention group and control group after 6 weeks (T₁)

<table>
<thead>
<tr>
<th>SCCS subscales</th>
<th>I/C</th>
<th>mean (SD)</th>
<th>t</th>
<th>df</th>
<th>sig.</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment and implementation of spiritual care</td>
<td>I</td>
<td>21.86 (3.05)</td>
<td>-1.27</td>
<td>48</td>
<td>.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>22.04 (3.18)</td>
<td>-0.57</td>
<td>48</td>
<td>.57</td>
<td></td>
</tr>
<tr>
<td>Professionalization and improving quality of spiritual care</td>
<td>I</td>
<td>20.35 (3.35)</td>
<td>-3.95</td>
<td>48</td>
<td>.00</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>19.40 (2.88)</td>
<td>-0.95</td>
<td>48</td>
<td>.35</td>
<td></td>
</tr>
<tr>
<td>Personal counselling and patient support</td>
<td>I</td>
<td>21.82 (3.03)</td>
<td>-0.68</td>
<td>48</td>
<td>.50</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>21.43 (2.80)</td>
<td>-0.59</td>
<td>48</td>
<td>.56</td>
<td></td>
</tr>
<tr>
<td>Referral to professionals</td>
<td>I</td>
<td>11.12 (1.52)</td>
<td>-3.53</td>
<td>47</td>
<td>.00</td>
<td>0.40</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>10.64 (1.89)</td>
<td>-2.94</td>
<td>47</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>Attitude towards patient’ s spirituality</td>
<td>I</td>
<td>16.24 (1.49)</td>
<td>-2.54</td>
<td>46</td>
<td>.01</td>
<td>0.16</td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>16.29 (1.60)</td>
<td>-2.24</td>
<td>47</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>I</td>
<td>8.35 (0.93)</td>
<td>-0.66</td>
<td>46</td>
<td>.51</td>
<td></td>
</tr>
<tr>
<td></td>
<td>C</td>
<td>8.35 (0.70)</td>
<td>-0.56</td>
<td>47</td>
<td>.58</td>
<td></td>
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</tbody>
</table>

I = intervention group, C = control group  Significance (sign.) = p < 0.05  
Effect size (ES) <0.20 = no effect; 0.20-0.50 = small effect; 0.50-0.80 = moderate effect; >0.80 = considerable effect

### Table 4  Comparison baseline (T₀) and after 20 weeks for the whole cohort (T₂)

<table>
<thead>
<tr>
<th>Subscales SCCS</th>
<th>T₀</th>
<th>mean (SD)</th>
<th>t</th>
<th>df</th>
<th>sig.</th>
<th>ES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assessment and implementation of spiritual care</td>
<td>T₀</td>
<td>21.40 (3.24)</td>
<td>-5.21</td>
<td>96</td>
<td>.000</td>
<td>0.47</td>
</tr>
<tr>
<td></td>
<td>T₂</td>
<td>23.39 (3.09)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professionalization and improving quality of spiritual care</td>
<td>T₀</td>
<td>18.71 (3.51)</td>
<td>-9.87</td>
<td>96</td>
<td>.000</td>
<td>0.71</td>
</tr>
<tr>
<td></td>
<td>T₂</td>
<td>22.59 (3.23)</td>
<td></td>
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</tr>
<tr>
<td>Personal counselling and patient support</td>
<td>T₀</td>
<td>21.76 (2.44)</td>
<td>-6.10</td>
<td>96</td>
<td>.000</td>
<td>0.53</td>
</tr>
<tr>
<td></td>
<td>T₂</td>
<td>23.52 (2.54)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Referral to professionals</td>
<td>T₀</td>
<td>10.42 (2.04)</td>
<td>-7.39</td>
<td>96</td>
<td>.000</td>
<td>0.60</td>
</tr>
<tr>
<td></td>
<td>T₂</td>
<td>12.13 (1.51)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attitude towards patient’s spirituality</td>
<td>T₀</td>
<td>16.05 (1.98)</td>
<td>-3.80</td>
<td>96</td>
<td>.000</td>
<td>0.36</td>
</tr>
<tr>
<td></td>
<td>T₂</td>
<td>16.85 (1.45)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Communication</td>
<td>T₀</td>
<td>8.34 (0.93)</td>
<td>-2.16</td>
<td>96</td>
<td>.033</td>
<td>0.22</td>
</tr>
<tr>
<td></td>
<td>T₂</td>
<td>8.58 (0.89)</td>
<td></td>
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</table>

Significance (sign.) = p < 0.05  
Effect size (ES) <0.20 = no effect; 0.20-0.50 = small effect; 0.50-0.80 = moderate effect; >0.80 = considerable effect
The regression analysis also showed that the students’ own experiences of spiritual care in practice statistically significantly explained the variance in the subscale ‘personal support and counselling of patients’ ($r^2 = .25^2$; $p = .020$; $R^2 = .23$). To clarify, students with such experience scored higher on that subscale compared to students who did not have such experience. Students with a more holistic vision of nursing care scored higher on the competency ‘referral to professionals’ ($r^2 = .237$; $p = .026$; $R^2 = .24$). Other factors such as the students’ own spirituality, own religious engagement and own thinking about questions of life showed no statistically significant prediction in the regression analyses. Age was also put in the regression model, but it did not appear as a significant predictor.

Analyses of the vignettes
The analyses of the vignettes showed that vignette 1, with its implicit spiritual content, had no significant ($p < .005$) differences in the given qualifications of the intervention group and the control group. Vignette 2, with its explicit spiritual content, showed significantly higher scores for students in the intervention group compared to those in the control group (see table 5).

<table>
<thead>
<tr>
<th>Table 5</th>
<th>Analyses of vignette assessment between intervention group and control group</th>
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<tbody>
<tr>
<td></td>
<td>N</td>
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<tr>
<td>Vignette 1</td>
<td>intervention group</td>
</tr>
<tr>
<td>Implicit spiritual content</td>
<td>control group</td>
</tr>
<tr>
<td>Vignette 2</td>
<td>intervention group</td>
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<tr>
<td>Explicit spiritual content</td>
<td>control group</td>
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</tbody>
</table>

The effectiveness of an educational programme for nursing students on developing competence in the provision of spiritual care
Conclusion and discussion

The results of this study showed that the course on spiritual care seems to have a particular effect on the planning and delivery of spiritual care, referrals to professionals and on professionalization and quality assurance. These significant effects are especially clear in the longer term. The students who started off as the intervention group at baseline perceived themselves after four months as more competent than immediately they had finished the course. This might be because the subject of spiritual care needs to be considered longer before it becomes internalized.

There is little or no effect on the subscales ‘attitude towards patients’ autonomy’ and ‘communication’. That might be because in student education there is already much emphasis on the attitudinal and communicative aspects of nursing care so that students already tended to score themselves highly in these subscales at baseline. In a comparative study between first and fourth-year baccalaureate students, Pesut (2002) found that fourth-year students wrote more about spirituality during their progression through the four-year educational programme and that they developed the more patient-centred approach important to spiritual care. This growth occurred during the standard educational programme and not because of any courses dealing specifically with spiritual care. Meyer (2003) also mentions the heightened spiritual awareness throughout the curriculum. This raises questions about the content of specific courses on spiritual care. Our study gives support to the opinion that a limited course should focus on the professional aspects of spiritual care and that attitudinal and communicative aspects should be integrated into the entire curriculum.

The use of the self-assessment method with regard to the ability to provide spiritual care is common in current studies in nursing (see Table 1). The question to ask is, if students perceive themselves as competent are they indeed really competent? The analyses of the vignettes must be seen as an attempt to give some objective insight into the students’ actual competence. The student analyses of the vignettes can be seen as both a part of competence assessment and the implementation of spiritual care, because they were asked to analyse two patient-related cases. The students in the intervention group showed no significantly better analyses than
those from the control group when it came to the first vignette with implicit spiritual content. In contrast, the vignette with explicit spiritual content showed a significant difference. This second vignette had a more religious perspective, which was probably more familiar to the students. That outcome raises questions about the interpretation of spirituality and spiritual care by students. Although the content of the course was not specifically focused on the religious aspects of spirituality, the students still interpreted the vignettes in those terms. It seems that they were biased by their personal, strongly religiously driven spirituality. Shih et al. (2001) emphasize the importance of detecting personal values. Hoover (2002) states that students need to know the patient’s world to adapt their caring approach and adopt strategies to overcome constraints in themselves. Meyer (2003) emphasizes that students need to reconsider their values and personal spirituality through clinical experience. Sandor et al. (2006) mention the fact that students have to deal with their preoccupations with religious or spiritual matters.

The reflection sessions that formed part of the course in this study focused on these matters. They dealt with the students’ personal experiences of aspects of spiritual care in nursing practice. Callister et al. (2004) report on student reflections in a reflective method called journaling. Students showed a growing self-awareness of values and beliefs and appreciation of how spirituality affects patients. Follow-up research into student reflections would be worthwhile to see if and how the content and process of these types of reflection sessions should be modified.

The students’ personal spirituality did not change over time in our study and it was also not a predictor for their scoring on the subscales. This outcome shows no similarity with outcomes from other studies (Wasner et al. 2005; Sandor et al. 2006) that report a growing spiritual awareness and growth. Meyer (2003) reports that the students’ personal spirituality was the strongest predictor of their perceived ability to provide spiritual care. This outcome, however, related to a study focused on factors in the whole curriculum of nursing schools and not on a specific course on spiritual care. Chung et al. (2007) also found that self-awareness (the self) had a significant relationship with the understanding of spiritual care and the practice of spiritual care of nursing students. Why the students’ personal spirituality did not show as a significant factor (no personal spiritual growth and no predictor for perceived competencies) can be linked to the fact that the great majority scored
themselves highly on spirituality and religiosity at the start of the study; there was less differentiation in these scores over time.

Our study shows the predictors that influenced the scoring of students on some subscales. Firstly, whether they have an internship or not influenced the scoring on three subscales. Interestingly, having an internship led to lower scores in general compared to not having an internship. The interns were probably confronted more often by their lack of competence, while students without internships may have tended to give more socially desirable responses. In addition to this outcome, having experience in spiritual care during the internship led to higher scoring on the subscale ‘personal support and counselling of patients’. This shows the importance of specific practical experience with regard to spiritual care. This subscale focuses on nursing interventions. Personal examples from practical experience seem important for recognizing aspects of spiritual care and improving the ability to provide such care. Catanzaro & McMullen (2001) states that clinical experience also improves spiritual sensitivity and personal growth. In education this clinical experience should be used to improve competency in providing spiritual care. Mitchell et al. (2006) suggest using care mapping for this purpose, a dynamic and interactive method of linking theory and practice. The authors report that clinical environments offer a rich experience for students to explore the spiritual domain. The reflections in our study were focused on such clinical experience. We recommend further research into the effect of similar specific educational methods.

Secondly, the students’ vision of holistic nursing care influenced their scoring on the subscale ‘referral to professionals’. This outcome suggests that students think spiritual care must first be addressed by pastors and hospital chaplains and when nurses assess a patient’s spiritual problem or needs, they should refer the patient to an expert and not provide the care themselves. This outcome might also confirm the frequent ambiguity detected in nurses’ sense of responsibility for spiritual care (McSherry, 2000; Van Leeuwen et al. 2006), which has led to a lack of clarity about the position of the subject of spirituality within nursing curricula. Several studies confirm that spiritual care does not have a systematic place within curricula as do subjects dealing with physical, psychological and social aspects (Highfield et al. 2000; Catanzaro & McMullen, 2001; Meyer, 2003; Callister et al. 2004). Evidently
education does enhance competence in providing spiritual care in individual nursing students. It appears that nursing schools may voluntarily incorporate spiritual care into their curriculum. The systematic position of spiritual care in nursing and its place in nursing education needs further, better organized debate.

The use of the crossover design appeared appropriate for answering the research questions. The fact that the original control group also undertook the course made the effect of the course become more evident over time. The original intervention group showed higher effect sizes than the original control group on three of the six subscales. On the other hand, the original control group showed more significant change immediately after finishing the course than did the original intervention group at the same time ($T_1$). With regard to the subscale ‘attitude towards the patient’s spiritual autonomy’ the original intervention group showed no significant change at any measured moment. The original control group showed a significant change in that subscale at both $T_1$ and $T_2$. Perhaps a certain carry-over effect from the original intervention group to the original control group occurred over time because students were able to meet and share views of the course and its content with each other.

Relevance to practice

The results of this study are relevant to both nursing education in particular and nursing in general. The outcome gives nurse educators deeper insight into the content of education in spiritual care, the educational methods used and the possible effects on students’ ability to provide spiritual care. It can help educators to consider a more systematic place for spiritual care within the nursing curriculum. The SCCS can also be used as a valid and reliable tool to assess nurse competency (at group level), which can give direction to the specific content of educational programmes and methods.

For nursing in general this study contributes to the need for a debate on the real place of spiritual care and the required competencies that student nurses need to develop. Education does have an impact on the development of competencies in spiritual care, but spiritual care does not yet have a systematic place in the practice of the nursing curriculum; it is presented to student nurses as theory.
Limitation of this study

This results of this study may be limited in that they could be biased by the religious background (Christian) of the students involved. Follow-up research could clarify this issue if it also includes students from other spiritual and secular backgrounds.

Contribution to the manuscript
Study design: RvL, LJT, DP, HJ
Data collection: RvL
Statistical analyses: BM, RvL, LJT
Manuscript preparation: RvL, LJT, BM, DP, HJ

This study is part of the research programme of the Ethics of Care Research Group of the Ede Christian University headed by Henk Jochemsen.
References


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