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

René van Leeuwen, Lucas J Tiesinga, Berrie Middel, Doeke Post and Henk Jochemsen

Aim. 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 for spiritual care is poor. For the assessment of competence, few or no explicit competency framework or assessment tools seemed to be used.

Design. Quasi-experimental crossover design (pre–post-test).

Method. The subjects were students from Christian nursing schools in the Netherlands ($n = 97$). The intervention consisted of a course in spiritual care. Competencies were measured with an assessment tool, the Spiritual Care Competence Scale. Data were analysed by *t*-test procedures (paired-samples *t*-test). At T_1 vignettes were added to assess the quality of the students' own analyses. These data were analysed by a Mann–Whitney test. Regression analyses were performed on the influence of student characteristics on the subscales of the assessment tool.

Results. Ninety-seven students participated in this study. Analysis showed statistically significant changes in scores on three subscales of the Spiritual Care Competence Scale between groups (T_1) and over time for the whole cohort of students on all subscales (T_2). Clinical placement showed as a negative predictor for three subscales of the Spiritual Care Competence Scale. Experience in spiritual care and a holistic vision of nursing both showed 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.

Conclusions. The outcomes raise questions about the content of education in spiritual care, the measurement of competencies and the factors that influence competency development.

Relevance to clinical practice. The results provide nurse educators with insight into the effects of education in spiritual care on students' competencies and help them consider a systematic place for spiritual care within the nursing curriculum.

Key words: competence, education, effectiveness, nurses, nursing, spiritual care

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Introduction

Relevant training seems necessary to enhance the quality of spiritual care delivered by healthcare workers. Within the scope of this study, spiritual care was defined as the care nurses provide to meet the spiritual needs and/or problems of patients. Nurses have to respond to the physical, emotional and spiritual needs of patients (Narayanasamy 2001), which should also be performed systematically (McSherry 2006). Within the context of this care and for the purposes of this study, a so-called functional definition of spirituality was used (van Leeuwen & Cusveller 2004). This definition describes spirituality as the religious and/or existential mode of human functioning, including experiences and questions of meaning and purpose (Jochemsen *et al.* 2002, p. 12). This definition implies that every person, in a way, is spiritual. This approach accords with an integral vision of human functioning implicit in the concept of holism. This fits with nursing models that make spirituality explicit (Neuman & Fawcett 2002, Watson 1999, Newman 1994, Parse 1995).

Studies consistently suggest that nurses' competencies related to spiritual care are underdeveloped because of poor role preparation in nursing education in this area (Greenstreet 1999, McSherry 2006, Ross 2006, van Leeuwen *et al.* 2006). There are different perspectives on spiritual care, which are articulated in the question of whether spirituality and spiritual care should be 'taught' to nurses or if they are rather something 'picked up'. Bradshaw (1997) is cautious about the teaching of spirituality because it could contribute to the fragmentation of the individual and defeat of the notion of holistic care. This author is of the view that spiritual awareness should be picked up through clinical experience and exposure. In this study the opinion of McSherry (2006) is used, who emphasises the importance of education in spiritual care because, when spirituality and spiritual care are only 'picked up', the danger is that spiritual awareness may not be generated or developed. Other authors also stress this need for education (Highfield *et al.* 2000, Narayanasamy 2001). Further research on the effects of education on the provision of spiritual care by nurses is needed and recommended (Ross 2006).

Various 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 years (Groër *et al.* 1996, Ross 1996, Narayanasamy 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 healthcare workers. These studies recognise different kinds of educational programmes. Some studies concern the placement of spirituality and spiritual care in the curriculum of first-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 healthcare 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 paid 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, Sandor *et al.* 2006, Lovanio & Wallace 2007, Wasner *et al.* 2005). Most studies involve nurses and nursing students. Two studies follow a multidisciplinary approach (Sandor *et al.* 2005, Wasner *et al.* 2005).

All these studies show some kind of effect on the spiritual competence of healthcare 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 they 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, it can be concluded 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 and spiritual well-being) (Pesut 2002, Meyer 2003, Sandor *et al.* 2005, Wasner *et al.* 2005, Lovanio & Wallace 2007). Although these studies show different effects on students' spiritual awareness and spiritual well-being, the overall effect of education on students' spirituality seems evident. Meyer (2003) concludes that the students' personal spirituality is the strongest predictor of the 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 competence are based on 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

Table 1 Studies into the effects of education in spirituality and spiritual care on students

Authors	Country of origin	Aim	Sample (n)	Educational method in spiritual care	Research method	Results
Highfield <i>et al.</i> (2000)	USA	Identify the formal and experiential spiritual care preparation of oncology and hospice nurses (ON/HN)	ON: 181 (26%) HN: 645 (55%)	Integrated in basic education Course during basic education Graduate coursework Continuing education Reading	Spiritual Care Perspective Scale	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 Usefulness for providing spiritual care <ul style="list-style-type: none"> • Clarifying theoretical concepts of spiritual care • 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
Shih <i>et al.</i> (2001)	Taiwan	Explore the usefulness of a teaching course for nurses to provide spiritual care in clinical settings	22 students MScN	18-week course Classroom lectures Field trips (religions) Clinical experience Presentation of case study	Analysis of narrative descriptions and case studies	<ul style="list-style-type: none"> • Self-disclosing own personal value systems and spiritual needs • Providing the symbolic meaning and impact of religious rituals
Pesut (2002)	USA	Understand baccalaureate students' perceived own spiritual well-being and spirituality and explore students' perceptions of spiritual care, and how they changed over 4 years of education	35 first year 18 fourth year Students at Christian university	Spiritual care throughout the curriculum Integrated model for integrating spirituality Journals, papers, conferences related to spiritual care Exploring personal beliefs and values Application in nursing practice	Spiritual-Well-being-Scale (1982) Additional questions: Define spirituality Spiritual care by nurses Talking with patients about own spiritual beliefs	<p>Spiritual well-being (120) (religious/existential/spiritual) First year: 56/53/109 to 4th year: 56/50/106</p> <p>Fourth-year students Write more about spiritually enduring growth Articulate difference between religion and spirituality Patient-centred approach in spiritual care (less emphasis on own agenda) Reciprocal nature of spiritual learning in nurse-patient relationship</p>

Table 1 (Continued)

Authors	Country of origin	Aim	Sample (n)	Educational method in spiritual care	Research method	Results
Hoover (2002)	UK	Evaluate the personal and professional impact of undertaking a 15-week degree-level module on nursing as human caring	25 part-time students	Module about human caring Transpersonal caring-healing model (1999) Empirical: concept caring related to spirituality and suffering Aesthetics: art, poetry, mosaics, literature concerning the human condition, observation nurse-patient interactions Personal knowing through reflective practice	4 focus groups before and after undertaking module	Personal impact Increased self-awareness connecting with self and others Finding purpose and meaning in life Clarification of values Professional impact Increased understanding of caring theory More holistic approach to care More committed to promoting healing in others; increased self-awareness
Meyer (2003)	USA	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) Students R/P: 90/190 Staff: 47/58	Content of spiritual care education not explained	Students Spirituality Assessment Scale Student Survey of Spiritual Care Additional questions Rating religious commitment Attention given to spirituality during nursing programme Faculty: four-item survey Emphasis on spirituality in nursing Content of classroom programme Clinical programme 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

Table 1 (Continued)

Authors	Country of origin	Aim	Sample (n)	Educational method in spiritual care	Research method	Results
Milligan (2004)	USA	Explore perceptions in providing spiritual care from qualified nurses undertaking a palliative care module as part of a postregistration degree course	59 students who had chosen to take a module on palliative care giving	Study programme: Palliative care Psychosocial perspective: Exploration of the concepts of spirituality and spiritual care	Questionnaire covering the following areas Perceptions of the nurse's role in spiritual care giving (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)	Nurses are responsible for spiritual care Identifying spiritual needs regarded as difficult Evenly divided over how easy or difficult they found giving spiritual care to patients
Wasner <i>et al.</i> (2005)	Germany	Investigating the effects of spiritual care training for professionals in palliative medicine	48 (76%) multidisciplinary participants in training course	Three and a half days training Active compassionate listening Recognising 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 (NRS) Changes as result of the course Rate single course contents Number of days off on sick leave	77% attitude towards coping improved through taking the palliative care course 35% coped better with loved ones of patient with severe illness 25% coped better with bereavement after training sick-leave days remained stable FACIT-Sp increased directly after training and maintained level after 6 months STS after training, not after 6 months IIR: no change over time FACIT-Sp and STS correlated Overall attitudinal score (numeric rating scales, NRS) correlated with FACIT-Sp and STS, not with IIR No differences between nurses and other professional groups

Table 1 (Continued)

Authors	Country of origin	Aim	Sample (<i>n</i>)	Educational method in spiritual care	Research method	Results
Sandor <i>et al.</i> (2006)	USA	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	122 nursing students 293 medical students	Course: Spirituality and Clinical Care for first year students Empirical research related to spirituality and health Attending to spiritual concerns of patients Taking a spiritual history Discussing clinical cases and personal experiences related to spirituality	Pre-post-test design Spiritual Experience Index Revised Scale Spiritual Importance Scale	Importance of spirituality/spiritual care: increased significance (females, nurses higher) Personal importance: increased significance (females higher) Spiritual support and spiritual openness: females score higher than males Less dogmatism over time: medical students show larger decline
Lovanio and Wallace (2007)	USA	Develop and test a spirituality-focused education project to enhance nursing students' knowledge and understanding of spiritual care	10 sophomores demonstrating interest in spiritual care	Course Half-day presentation of spirituality in nursing 10 clinical conferences: definitions, spiritual dimension of nursing, spiritual interventions, personal reflection, reviewing articles, care plan, chaplain Application in own practice	Pre-test/post-test design/ pilot Spirituality and Spiritual Care Rating Scale (SCCRS)	Significant differences on SCCRCS. Most substantial changes I believe spirituality is a unifying force which enables one to be at peace with oneself and the world (4.9/5.2) I believe spirituality involves personal friendships and relationships (4.4/4.9) I believe spirituality includes people's morals (3.9/4.6)

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 from 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 provide spiritual care. To do so, we formulated the following research questions:

- 1 What effect does an educational course in 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: personal spirituality, religious engagement, thinking about life questions, vision of holistic nursing care and personal experiences of spiritual care in practice?
- 3 In the assessment of students' analyses of vignettes, is there a significant difference between respondents in the intervention group and those in the control group after finishing a course on spiritual care?

Method

Design

The study has a quasi-experimental longitudinal observational crossover design (pre- and post-test) involving a cohort of 97 nursing students from two Christian nursing schools in the Netherlands. The religious affiliation of the students is comparable with the overall student population in both schools. The curriculum of these schools is comparable with the rest of the nursing schools in the Netherlands. The religious affiliation of students is not fully comparable with those of student populations in other schools.

At baseline, the students were assigned either to an intervention group or to a control group. Students on a

clinical placement were assigned to the intervention group, and the students following an educational programme at school were assigned to the control group. The intervention group followed an educational programme on spiritual care over a period of six weeks. At baseline and after six weeks, all the students completed a questionnaire that consisted of items listed in the Spiritual Care Competence Scale (SCCS). Fourteen weeks after baseline, the original control group also took the educational programme on spiritual care. When they finished the programme (20 weeks), 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, to control for results biased by socially desirable answers. Thus the items of the SCCS were inserted between questions about other general nursing competencies. The research design is shown in Fig. 1.

Subjects

The subjects of this study were two cohorts of students from two Bachelor's 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 their practical training plans during that year.

Intervention

The intervention in this study consisted of an educational course aimed at developing nursing competencies for spiritual care in student nurses. The course was based on a nursing competency profile for spiritual care described by van Leeuwen and Cusveller (2004). This competency profile was derived from an extensive literature study. In addition, theoretical sources were consulted for the content of an education in spiritual care (Groër *et al.* 1996, Ross 1996, Bush 1999, Greenstreet 1999, Narayanasamy 1999,

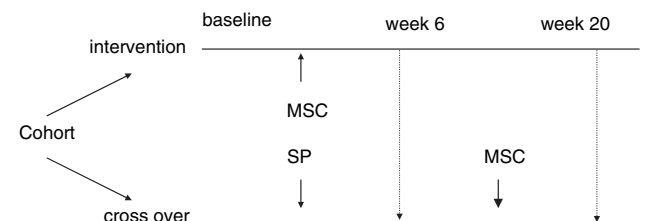


Figure 1 Research design. MSC, module spiritual care; SP, standard programme.

Catanzaro & McMullen 2001, Shih *et al.* 2001, Hoover 2002, Meyer 2003, Souter 2003, Callister *et al.* 2004). This resulted in a course with the following content:

- Three three-hour educational sessions: concepts of spirituality, spirituality in the nursing process and aspects of quality assurance of spiritual care at the institutional level. Students had to interview a hospital chaplain about aspects of spiritual care in healthcare and nursing as part of this section.
- 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 three-hour sessions spent reflecting on personal experiences related to aspects of spiritual care in nursing practice.

The course took six weeks. All the elements were presented by lecturers who were experts in reflection techniques and group dynamics, in training communication skills and in tutoring learning processes. They were all experienced nurses and also spiritually committed.

Measurements

For the purpose of this study, we developed a questionnaire that covered all the main nursing competencies generally expected to be present in advanced-beginner nurses in the Netherlands. The competences of spiritual care are measured with the SCCS, which was sufficiently psychometrically tested in a study among nursing students in the Netherlands (van Leeuwen *et al.* 2007) and added to a questionnaire also containing items concerning other nursing competencies. This was performed to permit the students to assess themselves so that they were not exclusively focussing on competencies regarding spiritual care. Some examples of items regarding competencies of spiritual care 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 (Cronbach's alpha 0.82);
- Professionalisation and improving quality of spiritual care (Cronbach's alpha 0.82);
- Personal support and counselling of patients (Cronbach's alpha 0.81);

- Referral to professionals (Cronbach's alpha 0.79);
- Attitude towards the patient's spirituality (Cronbach's alpha 0.56);
- Communication (Cronbach'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). The Cronbach's alpha tests showed that these scales were internally consistent. Although the 'attitude towards the patient's spirituality' showed a low Cronbach's alpha, the inter-item correlation (0.25) of that scale indicates a homogeneous scale.

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 on clinical placement when completing the questionnaire and their practical experience of spiritual care during clinical placements. Table 2 contains these additional questions.

Table 2 Additional questions in the questionnaire

<i>Student's own spirituality</i>
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 <i>et al.</i> 2002)
10-point scale: 1 (not spiritual) 10 (extremely spiritual)
<i>Influence belief/religion?</i>
To what degree is your daily life influenced by your belief system/religion?
10 point scale: 1 (no influence) 10 (totally influenced)
<i>Thinking about life questions</i>
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
<i>Vision of holistic care</i>
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)
<i>Are you in an internship at the moment:</i> yes no
<i>Experience of spiritual care</i>
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)

Vignettes

After six 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 showed 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 objective was to evaluate the students' competence in assessing spiritual needs. The first vignette had implicit spiritual content and the second vignette explicit religious content (Appendix).

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 using numerical qualifications ranging from one to five. The lecturers did not know to which group (intervention or control) a particular analysis belonged.

Procedure

The students were assigned to the intervention group and the control group according to their educational programme. Half of the students were on a clinical placement at the time and were assigned to the intervention group, as the course in 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 points during the period December 2005 to June 2006. Respondents independently completed the questionnaire in their classrooms under the supervision of field workers.

Ethical issues

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 by an ethics committee was unnecessary because the research method was not burdensome or risky. Students could withdraw from the study at any time. The students' emotional reactions during the course were monitored, particularly during the three-hour reflection sessions and additional personal support was available from lecturers when needed.

Analysis

To answer the first research question, scores on the subscales of the SCCS were analysed with *t*-test procedures. A comparison between the intervention and control groups was performed 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 (ESs) were calculated to measure the importance and magnitude of the observed effects. Middel *et al.* (2001) showed that the ES reflects relevance. Table 3 shows the explanation of the ESs.

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 the students' perceived spirituality, perceived religious engagement, thinking on life questions, vision of holistic nursing care, personal experience with spiritual care in practice and whether or not they were on a clinical placement at the time of assessment. To answer the third research question on the vignettes, the differences provided by lecturers on the numeric qualifications between the intervention and control groups were analysed by a non-parametric *t*-test (Mann-Whitney test) to assess whether they were significant ($p < 0.05$), as these qualifications were ordinal scales.

Results

Demographics

The 97 students (95 female and two 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 characterised as committed Christians with 99% members of a church or faith community; 94% attending church weekly, 85% reading the Bible on a daily basis, 93% praying every day and 74% being active in some religious discussion group or another. The students in the intervention group did their clinical placement in hospital (63%), mental healthcare (25%) or in community healthcare (4%). At baseline, the students ranked themselves on a scale of 1–10 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).

Table 3 Comparison between intervention group and control group after six weeks (T_1)

SCCS subscales	I/C	Mean (SD)	<i>t</i>	d.f.	Sig.	ES
Assessment and implementation of spiritual care	I	21.86 (3.05)	-1.27	48	0.11	
	C	22.04 (3.18)	-0.57	48	0.57	
Professionalisation and improving quality of spiritual care	I	20.35 (3.35)	-3.95	48	0.00	0.40
	C	19.40 (2.88)	-0.95	48	0.35	
Personal counselling and patient support	I	21.82 (3.03)	-0.68	48	0.50	
	C	21.43 (2.80)	0.59	48	0.56	
Referral to professionals	I	11.12 (1.52)	-3.53	47	0.00	0.40
	C	10.64 (1.89)	0.29	47	0.77	
Attitude towards the patient's spirituality	I	16.24 (1.49)	0.63	46	0.53	
	C	16.29 (1.60)	-2.24	47	0.03	0.16
Communication	I	8.35 (0.93)	-0.66	46	0.51	
	C	8.35 (0.70)	0.56	47	0.58	

I, intervention group, C, control group.

Significance (sig.): $p < 0.05$.

Effect size (ES): < 0.20 = no effect, $0.20-0.30$ = small effect, $> 0.50- < 0.80$ = moderate effect, > 0.80 = considerable effect.

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: 'professionalisation and improving spiritual care', 'referral to professionals' and 'attitude towards the patient's spirituality'. However, the magnitude of the difference in attitude towards the patient's spirituality has to be tagged as trivial ($ES < 0.20$). The size of statistically significant differences between controls and attendees of the educational programme on spiritual care is important according to Middel *et al.* (2001) ($ES > 0.20$; 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 (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 a clinical placement influences the scores on the subscales 'assessment and implementation of spiritual care' ($\beta = -0.351$; $p = 0.001$; $R^2 = 0.28$), 'professionalisation and improving quality of spiritual care' ($\beta = -0.224$; $p = 0.021$; $R^2 = 0.22$) and 'personal support and counselling of patients' ($\beta = -0.219$; $p = 0.031$;

Table 4 Comparison baseline (T_0) and after 20 weeks for the whole cohort (T_2)

Subscales SCCS	T_0-T_2	Mean (SD)	<i>t</i>	d.f.	Sig.	ES
Assessment and implementation of spiritual care	T_0	21.40 (3.24)	-5.21	96	< 0.00	0.47
	T_2	23.39 (3.09)				
Professionalisation and improving quality of spiritual care	T_0	18.71 (3.51)	-9.87	96	< 0.00	0.71
	T_2	22.59 (3.23)				
Personal counselling and support of patients	T_0	21.76 (2.44)	-6.10	96	< 0.00	0.53
	T_2	23.52 (2.54)				
Referral to professionals	T_0	10.42 (2.04)	-7.39	96	< 0.00	0.60
	T_2	12.13 (1.51)				
Attitude towards the patient's spirituality	T_0	16.05 (1.98)	-3.80	96	< 0.00	0.36
	T_2	16.85 (1.45)				
Communication	T_0	8.34 (0.93)	-2.16	96	0.033	0.22
	T_2	8.58 (0.89)				

Significance (sig.): $p < 0.05$.

Effect size (ES): < 0.20 = no effect; $0.20-0.50$ = small effect; $0.50-0.80$ = moderate effect; > 0.80 = considerable effect.

$R^2 = 0.23$). This means that interns had lower scores on these subscales compared to students without a clinical placement.

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' ($\beta = 0.252$; $p = 0.020$; $R^2 = 0.23$). To clarify, students with such experience scored higher on that subscale compared with students who did not have such experience. Students with a more holistic vision of nursing care scored higher on the competency 'referral to professionals' ($\beta = 0.237$; $p = 0.026$; $R^2 = 0.24$). Other factors such as the students' own spirituality, own religious engagement and own thinking about life questions showed no statistically significant prediction in the regression analyses. Age was also put into the regression model but it did not appear as a significant predictor.

Analyses of the vignettes

The analyses of the vignettes by a Mann–Whitney test showed that vignette 1, with its implicit spiritual content, had no significant ($p < 0.005$) 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 with those in the control group (Table 5).

Conclusion and discussion

The results of this study showed that, for these participants, the course had a particular effect on the planning and delivery of spiritual care, referrals to professionals and on professionalisation and quality assurance. These significant effects are apparent 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 after they had finished the course. This might be because the subject of

spiritual care needs to be considered longer before it becomes internalised.

There is little or no effect on the subscales 'attitude towards the patient's autonomy' and 'communication'. The reason could be that, 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 among 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 lends 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 of nursing (Table 1). The question is whether students are really competent if they perceive themselves as competent. The analyses of the vignettes must be viewed as an attempt to provide some objective insight into the students' actual competence. The student analyses of the vignettes can be seen both as a part of competence assessment and the implementation of spiritual care because the students were asked to analyse two patient-related cases. The students in the intervention group did not perform analyses significantly better than the control group when it came to the first vignette with implicit spiritual content. In contrast, the vignette with explicit spiritual content revealed a significant difference. This second vignette had a more religious perspective, which was probably more familiar to the students. This outcome raises questions about the interpretation of spirituality and spiritual care by students. Although the content of the course was not specifically focussed 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) emphasise 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) emphasises that students need to reconsider their values and personal spirituality through clinical experience.

Table 5 Analyses of vignette assessment between intervention group and control group

	<i>n</i>	Mean scores	Mann–Whitney <i>U</i>	<i>Z</i>	Sig.
Vignette 1 (implicit spiritual content)					
Intervention group	40	48.2	1107.5	−0.093	0.926
Control group	56	48.7			
Vignette Supply: 2 (explicit spiritual content)					
Intervention group	39	64.1	426.5	−4.97	< 0.00
Control group	55	35.8			

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 focussed 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 following 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 whether 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) reported that the students' personal spirituality was the strongest predictor of their perceived ability to provide spiritual care. This outcome, however, related to a study focussed 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 by 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 had a clinical placement or not influenced the scoring on three subscales. Interestingly, having a clinical placement led to lower scores in general compared with not having such a placement. The students with a clinical placement were probably confronted more often by their lack of competence, while students without that experience may have tended to give more socially desirable responses. In addition to this outcome, having experience in spiritual care 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 focusses on nursing interventions. Personal examples from practical experience seem important for recognising the aspects of spiritual care and improving the ability to provide such care. Catanzaro and McMullen (2001) states that clinical experience also improves spiritual sensitivity and

personal growth. In education, this clinical experience should be used to improve the 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 focussed 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 could also confirm the frequent ambiguity detected in nurses' sense of responsibility for spiritual care (McSherry 2006, 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 sometimes voluntarily incorporate spiritual care into their curriculum. The systematic position of spiritual care in nursing and its place in nursing education needs further, better organised 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 ESs than the original control group for 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 about the course and its content with each other.

With regard to control for contamination bias, students in the intervention group were assessed after the control group filled out their questionnaires, with a sufficiently large time

interval. The control group was not informed about the planned intervention. To reduce selection bias, intact groups participated in both study groups.

Relevance to clinical practice

The results of this study are relevant both to nursing education in particular and to nursing in general. The outcome gives nurse educators deeper insight into the content of education in spiritual care, the educational methods used and their possible effects on students' ability to provide spiritual care. It can help educators 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 clinical practice area of the nursing curriculum, it is presented to student nurses as theory.

Limitations of this study

The 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.

Contributions

Study design: RvL, LJT, HJ, DP; data collection and analysis: RvL, BM, LJT; manuscript preparation: RvL, LJT, BM, HJ, DP.

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Appendix

Vignette 1. Mr Buck (47) was admitted to hospital after he had a heart attack. After some days in the intensive care unit he was transferred to a medium care unit. He has to undergo bypass surgery because of the risk of another heart attack. His lifestyle also needs to be improved. Mr Buck is a manager

at a computer company. He comes across as a no-nonsense character. He asks the nurses when he can return to work and he asks his wife to bring his laptop to the hospital. After discussing this with the nurses she rejects his request. He was upset about this and said: 'I need my work and at my work they need me'. His wife expresses her concerns about her husband's situation to you as a nurse. She cannot hold back her tears. She says: 'He is very much involved with his work, but there is so much more. He has a family and he is the father of two children'. The last few days the nurses have noticed that he is complaining about sleeping problems. He reports that he is restless and worried. Often he just stares into the distance and he seems to have something on his mind.

Vignette 2. Six months ago, Mrs Cage (58) was diagnosed with breast cancer. She underwent breast surgery and is now undergoing a course of chemotherapy. Due to a complication in the previous week she had an emergency admission to the hospital. She had an epileptic fit. The EEG showed some abnormalities but further investigation is necessary to find the cause. To that end, an MRI scan will be performed today. Today you will take care of Mrs Cage. When you come to her, you observe that she has not touched her breakfast. She says that she has a headache and that she is thirsty. When you ask her why she did not eat her breakfast she says that she 'could not get a single morsel of bread down her throat'. After giving her a glass of water, you assist her with washing herself. You ask her how she is feeling. With tears in her eyes she says: 'it went so well after the surgery and now this. How will I overcome this? I prayed a lot for recovery, with my husband. It seems that God had answered my prayers. I have gone through so much in my life. Why does a human being get so much to carry?' She asks: 'Does God think I can cope with it? It is too much for me, I can't stand it any more'.