Student Outcomes of the Healing Web: Evaluation of a Transformative Model for Nursing Education

Margot L. Nelson, RN, PhD; Jacquelyn K. Howell, RN, PhD; June C. Larson, RN, MS; and Kathryn L. Karpiuk, RN, MNE

ABSTRACT

The Healing Web is a transformative nursing model, bridging gaps between nursing education and practice, baccalaureate and associate degree education, and public and private educational institutions. It is an educational prototype in which nursing students experience collaborative clinical practice in a differentiated practice model. Based on the Healing Web framework, it was hypothesized that the educational partnership model would influence specific student competencies (i.e., caring abilities, leadership skills, assertiveness, and professional nursing behaviors). Students in the Healing Web program scored higher in caring knowing, caring courage, leadership, and assertiveness than their counterparts who participated in traditional clinical experiences. Students identified collaboration, partnership with students and staff, and learning to value different nursing roles as primary benefits of the experience. Findings support the contribution of Healing Web experiences to selected student outcomes, but the research is limited by instrumentation, small numbers, and the question of adequate “dosage.” Future research will emphasize qualitative methods to explicate significant concepts more completely.

The Healing Web is a transformative nursing model that addresses the need for nursing education and nursing service to “share worlds” and for nursing education programs to prepare students for differing and complementary roles. The Healing Web collaborative partnership began in 1990, bridging traditional gaps between nursing education and practice, baccalaureate and associate degree nursing education, and public and private institutions. Participants were from a private baccalaureate degree (BSN) program, a public associate degree (AD) program, and a tertiary medical center located in the same community in the midwestern United States.

Newman’s (1986) theory of health as expanding consciousness, selected Native American traditions, and Watson’s (1988) description of caring as the essence of nursing informed the conceptual framework of the Healing Web. The spider web is a Native American symbol for creative transformation. The acronym Healing Web represents essential concepts for transformative nursing education and practice:

- Harmony.
- Expanding consciousness.
- Authenticity.
- Lifestyle.
- Integration.
- Network.
- Generativity.
- Wholeness.
- Empowerment.
- Boundaries.

Five “caring capacities” represent nursing practice competencies (Bunkers, 1992):

- Sensing into self.
- Disciplined presence.

Dr. Nelson is Professor and Chair, and Dr. Howell is Associate Professor, Department of Nursing, Augustana College, Sioux Falls; Ms. Larson is Chair, Department of Nursing, University of South Dakota, Vermillion; and Ms. Karpiuk is Nursing Education Specialist, Sioux Valley Hospital and USD Medical Center, Sioux Falls, South Dakota.

Address correspondence to Margot L. Nelson, RN, PhD, 1517 South Park Avenue, Sioux Falls, SD 57105.
- Pattern recognition.
- Therapeutic alliance.
- Creative tension.

The Healing Web educational model was developed to provide AD and BSN students with collaborative clinical experiences in differentiated nursing practice (Koerner & Karpfork, 1994). Students from the two programs assumed differing but collaborative roles in the care of patients according to the medical center's differentiated practice nursing model. The creative and transformative elements of the model lie in the genuine partnerships developed among students, between students and faculty, between students and nursing staff, and between faculty and nursing staff. The most foundational values of the Healing Web were mutual valuing and open dialogue, whereby contributions of all participants in the patients' care and the people making those contributions in varying roles were honored and valued equally (Bunkers, 1992; Fosbinder, Ashton, & Koerner, 1997; Larson, 1992).

During each two-semester clinical experience, BSN students gradually moved into a primary nurse role with emphasis on interdisciplinary collaboration, family and client education, and continuity of care within and across settings. The AD students increasingly assumed aspects of the associate nurse role, providing direct nursing care to clients for the time period of a single shift. The primary nurse and associate nurse student roles were derived from the differentiated nursing practice model in place in the tertiary care institution where the clinical experiences occurred. The shared clinical experiences also included joint seminars on differentiated nursing practice, shared clinical conferences, and shared care responsibilities for the same patients (i.e., responsibilities differentiated by the two nursing roles defined in the differentiated practice model).

The Healing Web model exemplifies a new and potentially effective approach to preparing nurses for collegial practice in which they honor the contributions of other members of the health care team and comfortably collaborate in the delivery of care to clients. Partnerships between nursing education and practice entities have been promoted in many arenas (Buchtel, Davidhizar, Tiller, & Quinn, 1999; Johnson, 1998; O'Neil, 1993), but successful models are scarce in the nursing literature. The Healing Web model makes a contribution by demonstrating a viable and effective partnership. The caring capacities emphasized and experienced in the Healing Web (i.e., sensing into self, disciplined presence, pattern recognition, therapeutic alliance, creative tension) have relevance for the quality of nursing education, the quality of nursing care, and the ultimate acknowledgment of clients as viable partners in health care provision.

The intent of this research was to evaluate the impact of the model on selected student behaviors. Based on the Healing Web framework, it was hypothesized that the following student behaviors would be influenced positively by the educational partnership model:

- Caring abilities.
- Leadership skills.
- Assertiveness abilities.
- Professional nursing behaviors.

Therefore, research questions were of two forms:
- Changes over time (i.e., do the selected student behaviors increase from the beginning of the Healing Web experience to graduation?).
- Between group comparisons (i.e., is there a difference in scores on the selected measures between students in the Healing Web and students experiencing traditional clinical experiences, or between BSN and AD students?).

METHOD

Data collection instruments were administered initially to students in both programs at the beginning of each academic year, starting in the fall of 1991. Associate degree students were beginning their program of study and Baccalaureate degree students were beginning their senior year. The same tools were re-administered at program completion.

An analysis of change from the beginning of students' clinical experiences to program completion was conducted through repeated measures ANOVA and t-test comparisons of dependent matched pairs. Differences in scores between Healing Web students and those assigned to traditional clinical experiences and differences between students in the two educational programs were evaluated by repeated measures ANOVA and appropriate post-hoc analyses. Subscale reliabilities were evaluated by Cronbach's alpha (i.e., a measure of internal consistency). Factor analysis was performed to identify potential subscales for selected instruments.

Written and verbal student evaluations, gathered at the conclusion of each semester, were analyzed for overall themes, as described by Morse (1994), through an iterative, dialogical process of comprehension and synthesis based on narrative evaluation data. Written evaluations were obtained from individual students, and verbal evaluations were taken from focus groups conducted by the nurse manager on the clinical unit that served as a setting for Healing Web student experiences.

INSTRUMENTS

Caring Abilities

The Caring Abilities Inventory was used to measure students' abilities to care in interactions with others. It is a 37-item self-report instrument developed by Nkongho (1990), based on Mayeroff's (1971) critical elements of caring, on which respondents rate themselves on a scale of 1 (strongly disagree) to 7 (strongly agree), with negatively stated items reverse scored.

Nkongho (1990) identified three subscales by factor analysis:

December 2001, Vol. 40, No. 9
For each statement, decide how well it reflects your thoughts and feelings about other people in general. Using the response scale, from 1 to 7, circle the degree to which you agree or disagree with each statement.

<table>
<thead>
<tr>
<th>KNOWING</th>
<th>Strongly Disagree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>7. I understand people easily.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>22. I find meaning in every situation.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>COURAGE (THIS SCALE REVERSE SCORED)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. There is very little I can do for a person who is helpless.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>23. I am afraid to let go of those I care for because I am afraid of what might happen to them.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>PATIENCE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. I believe that learning takes time.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
<tr>
<td>18. I believe it is important to accept and respect the attitudes and feelings of others.</td>
<td>1 2 3 4 5 6 7</td>
<td></td>
</tr>
</tbody>
</table>

Figure 1. Sample Caring Abilities Inventory items.

Sample items for each subscale are included in Figure 1. The knowing subscale reflects awareness and ability to understand needs, resources, and meanings of others, and is congruent with the Healing Web caring capacities of pattern recognition and therapeutic alliance. The courage subscale measures sensitivity and openness to uncertainty and unknown outcomes, reflecting the caring capacity of disciplined presence, as well as tolerance of ambiguity. The patience subscale reflects persistence in the face of confusion and disorganization.

In the original study (Nkongho, 1990), subscale internal consistencies ranged from .71 to .80, with .84 for the total scale and a test-retest reliability of .64 to .80. Subscale internal consistencies for the current study were .68 to .83 and .83 for the total scale. Nkongho's finding of gender differences in scores was not found in the current study.

Leadership

The Self-Assessment Leadership Inventory (Smola, 1988) measures leadership self-perceptions with 40 items rated on a 5-point behavioral frequency scale (4 = almost always to 0 = usually not). Content and construct validity were established through a panel of judges and comparison of contrasting groups, respectively. In the current study, four subscales were found by grouping conceptually related variables in a cluster analysis (Nunnally, 1978). Examples of subscale items are included in Figure 2. Cronbach's alpha reliabilities were the following:

- .83 for critical thinking (10 items).
- .70 for understanding self and others (8 items).
- .85 for initiative and influence (10 items).

Figure 2. Sample Self-assessment Leadership Inventory items.

Assertiveness

Because many “assertive” behaviors can be reframed as authentic communication, a concept congruent with the Healing Web conceptual framework, evaluation of assertiveness was deemed relevant and was measured with the Assertiveness Behavior Inventory Tool (Adams & Freeman, 1988). As adapted with permission, the instrument has two subscales, one reflecting behaviors at school (10 items) and the other reflecting general assertive behaviors (14 items). Minor modifications were made to translate behaviors from a work to an educational setting (e.g., changing the word “coworkers” to “classmates”). Respondents indicated the frequency with which they engaged in each behavior on a 5-point scale (4 = almost always to 1 = almost never, 0 = don’t know).

Content validity was established by expert judges. Test-retest reliability of .78 was established by administration of the tool to 45 participants at 2-week intervals. Reliability was .72 to .88 for the subscales and .84 to .88 for the total in the current study. Sample items are included in Figure 3.

Professional Nursing Role Functions

The Nursing Modus Operandi Scale (Torres, 1988) measures the New York Nurses' Association's professional nursing functions and was adapted with permission to reflect the participating tertiary care institution's nursing role terminology. Frequency of direct care and collaborative nursing behaviors are self-reported on a 5-point scale (4 = always to 1 = almost never, 0 = don’t know). Staff and super-
Select the response that most clearly describes how frequently you exhibit each of the following behaviors.

<table>
<thead>
<tr>
<th>Almost always</th>
<th>Often</th>
<th>Seldom</th>
<th>Almost never</th>
<th>Don't know</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

ASSERTIVENESS AT SCHOOL
3. I tell classmates when I disagree with their opinions in a calm, reasonable way. 4 3 2 1 0
9. I ask my classmates to help in a very direct way. 4 3 2 1 0

GENERAL ASSERTIVENESS BEHAVIORS
14. I can speak up in a line at the store and indicate I am next to be waited on. 4 3 2 1 0
19. I have confidence in my judgments about everyday life. 4 3 2 1 0

Figure 3. Sample Assertiveness Behavior Inventory Tool items.

Indicate on a scale of 1 to 5 the number that best reflects reality for you—what you actually think about or do in each case (regardless of what you think nurses should do).

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rarely</td>
<td>Occasionally</td>
<td>Frequently</td>
<td>Usually</td>
<td>Almost always</td>
</tr>
</tbody>
</table>

ITEMS ABOUT PROVIDING CARE TO PATIENTS
4. In developing a care plan, I try to anticipate the range of things that can happen in the treatment of the client's actual and potential health problems. 1 2 3 4 5
8. I decide what elements of the nursing care plan are most important and carry out the plan of care accordingly. 1 2 3 4 5

ITEMS ABOUT COOPERATIVE INTERRELATIONSHIPS
2. I work at establishing and keeping a rapport with health team members that permits me to maintain a collaborative role with them. 1 2 3 4 5
4. While I decide what needs to be done for the client on the basis of careful thinking, my nursing care plans are developed in collaboration with nursing colleagues. 1 2 3 4 5
8. After teaching clients, I check in various ways to make sure they have learned what they need to know. 1 2 3 4 5

Figure 4. Sample Nursing Mocus Operandi Scale items.

Data analysis is reported for the first 4 years of student experiences in the Healing Web. As shown in Table 1, age and gender were similar for Healing Web and traditional groups. Baccalaureate degree students were more likely to have had previous nursing and differentiated practice experience, including summer internships (Koerner & Karpf, 1994) and less likely to have had previous college education than AD students. Findings for each variable are presented according to research questions regarding changes from preclinical to postclinical data collection and differences between student groups (Healing Web versus traditional, and BSN versus AD).

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>BSN Healing Web</th>
<th>BSN Traditional Web</th>
<th>AD Healing Web</th>
<th>AD Traditional</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean)</td>
<td>26.25</td>
<td>27.39</td>
<td>29.64</td>
<td>27.74</td>
</tr>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>53</td>
<td>68</td>
<td>42</td>
<td>258</td>
</tr>
<tr>
<td>Female</td>
<td>44</td>
<td>56</td>
<td>36</td>
<td>217</td>
</tr>
<tr>
<td>Previous experience in nursing*</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing Assistant</td>
<td>74%</td>
<td>65%</td>
<td>42%</td>
<td>61%</td>
</tr>
<tr>
<td>Summer E† or Internship</td>
<td>50%</td>
<td>56%</td>
<td>2%</td>
<td>2%</td>
</tr>
<tr>
<td>Technician</td>
<td>13%</td>
<td>5%</td>
<td>14%</td>
<td>8%</td>
</tr>
<tr>
<td>LPN</td>
<td>1%</td>
<td>1%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous experience in differentiated practice</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>40%</td>
<td>40%</td>
<td>23%</td>
<td>21%</td>
</tr>
<tr>
<td>No</td>
<td>26%</td>
<td>32%</td>
<td>62%</td>
<td>50%</td>
</tr>
<tr>
<td>Don't know</td>
<td>34%</td>
<td>28%</td>
<td>15%</td>
<td>27%</td>
</tr>
<tr>
<td>Educational background</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No previous college</td>
<td>47%</td>
<td>67%</td>
<td>21%</td>
<td>26%</td>
</tr>
<tr>
<td>Previous nursing courses</td>
<td>3%</td>
<td>2%</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>in another program</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous college, did not graduate</td>
<td>29%</td>
<td>11%</td>
<td>43%</td>
<td>53%</td>
</tr>
<tr>
<td>Academic degree earned</td>
<td>21%</td>
<td>21%</td>
<td>31%</td>
<td>16%</td>
</tr>
<tr>
<td>Year in Healing Web</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1991 to 1992</td>
<td>8</td>
<td>33</td>
<td>12</td>
<td>78</td>
</tr>
<tr>
<td>1992 to 1993</td>
<td>16</td>
<td>17</td>
<td>10</td>
<td>93</td>
</tr>
<tr>
<td>1993 to 1994</td>
<td>9</td>
<td>5</td>
<td>10</td>
<td>49</td>
</tr>
<tr>
<td>1994 to 1995</td>
<td>20</td>
<td>16</td>
<td>10</td>
<td>52</td>
</tr>
</tbody>
</table>

* Some students had experience in more than one role. Thus, column totals may equal more than 100%. Some columns do not add up to exactly 100% due to rounding.
‘† Summer E experiences are designed specifically for nursing students and provide selected mentorship experience to enrich their education.

Do students’ caring abilities, as measured by scores on the Caring Abilities Inventory, increase from the beginning of clinical experiences to graduation?

Baccalaureate group scores increased significantly on the knowing subscale of Nkongho’s (1990) Caring Abilities Inventory from preclinical to postclinical experience for BSN students (p = .011 for the Healing Web group and p < .001 for the traditional clinical group by paired t tests) (Figure 5). The increased scores over time for the Healing
Web group are congruent with a growing understanding of themselves and others in caring relationships. Caring courage subscale scores of AD students in the Healing Web group increased (p = .001) (Figure 6), whereas scores of their traditional group counterparts decreased, perhaps reflecting growth in self-confidence and tolerance of ambiguity by AD students participating in the Healing Web.

Patience subscale scores were found to decrease significantly in the repeated measures analysis (Table 2), and total caring scores decreased for AD students (p = .008). This finding may reflect an initial naiveté and idealism on the part of beginning AD students prior to actual experience with caring skills and abilities.

**Is there a difference in mean caring scores between Healing Web students and students with traditional clinical experiences, and between BSN and AD students?**

Differences between BSN and AD group scores on the knowing subscale were significant on the first administration of the Caring Abilities Inventory, with AD students scoring higher (p < .001). The repeated measures analysis by program continued to be significant at the end of students’ clinical experiences, with AD student scores decreasing and BSN student scores increasing. As mentioned above, AD students’ initial expectations may have been unrealistic, and their perceptions of caring and expectations of themselves may have become more realistic with 2 years of clinical experience.

There was significant interaction (p = .02) on the repeated measures analysis of the courage subscale scores, with a greater difference among AD clinical groups than BSN student groups. Scores increased slightly for the AD students in the Healing Web group, whereas scores for the AD traditional group decreased more than any other group (Figure 6). This finding suggests an increased tolerance of uncertainty and ambiguity related to participation in the Healing Web, where students encounter ongoing change and uncertainty. Although the necessity to manage ambiguity in this complex teaching-learning environment may serve as a benefit for AD students, this benefit may be offset for BSN students by the challenge of shifting roles and priorities as they assume a new role as student primary nurse.

Repeated measures comparisons for total caring scores were significant by program (p = .014), with AD student scores decreasing and BSN student scores increasing slightly (Table 2 and Figure 7).

**Do students’ leadership abilities, as measured by the Self-Assessment Leadership Inventory,**
increase from the beginning of the Healing Web experience to graduation?

Leadership scores increased significantly for BSN students from the first to the second administration for both the total leadership score, as well as for the newly identified subscales. The increase in total leadership scores was significant at \( p < .001 \) for the Healing Web group and \( p = .01 \) for the traditional group (Figure 8). These findings suggest growth in leadership for BSN students, regardless of their participation in the Healing Web.

Is there a difference in mean leadership scores between students in the Healing Web and students with traditional clinical experiences, and between BSN and AD students?

Increases in total leadership scores were significantly greater for BSN students (\( p < .001 \)), probably reflecting the leadership emphasis in the BSN curriculum and the expectations of the primary nurse role. Generally, Healing Web group scores on the newly defined subscales increased more than traditional group scores, perhaps reflecting the Healing Web’s emphasis on collaboration, mutual valuing, and relational skills.

The specific significant findings in analyses of subscale scores follow. Overall, scores increased significantly from pretest to postclinical experience on the first three subscales (i.e., critical thinking, understanding self and others, using initiative and influence). Healing Web scores increased more than traditional group scores (Table 3).
In the repeated measures analysis for the facilitating group interaction subscale (Table 3), the overall pretest to postclinical experience change was not significant, but the significant unit factor and interaction reflect an increase in scores for the BSN Healing Web students and a decrease for the AD Healing Web students (Figure 9).

Do students’ assertiveness abilities, as measured by the Assertiveness Behavior Inventory, increase from the beginning of clinical experiences to graduation?

Assertiveness scores at school increased significantly for both groups of BSN students ($p < .001$ for Healing Web students, $p = .02$ for traditional students) and for AD students in the traditional group ($p = .005$) (Figure 10). General assertiveness scores increased significantly only for BSN student groups ($p = .01$ for Healing Web students, $p = .002$ for traditional students by paired t tests) (Figure 11). The pretest to postclinical contrast for general assertiveness scores was also significant by repeated measures for both subscales ($p < .001$ for assertiveness at school, $p = .003$ for general assertiveness). These findings probably are related to the curricular emphasis and senior level of the baccalaureate degree students.

Is there a difference in mean assertiveness scores between Healing Web students and students with traditional clinical experiences, and between BSN and AD students?

The Healing Web students, as a group, scored higher in assertiveness at school prior to their participation and continued to score higher. Differences in postexperience general assertiveness scores were also significant according to both Healing Web participation and the program. Scores of BSN students were higher than scores of AD students ($p = .007$). This finding suggests that the Healing Web experience may affective (authentic) behavior beyond the context of school and supports the conclusion that BSN students in both clinical groups experienced greater growth than their AD counterparts.

Is there a difference in care provision and cooperative relationship scores, as measured by nursing professionalism scores on the Nursing Modus Operandi Scale, between students in the Healing Web and students with traditional clinical experiences, and between BSN and AD students?

The Nursing Modus Operandi Scale (Torres, 1988) was administered only at the conclusion of clinical experiences because students had no frame of reference for responding prior to clinical experiences. There were no significant differences among groups for the care provision (associate nurse role) scale by ANOVA, but BSN students scored higher on the scale reflecting cooperative interrelationships (primary nurse role), which probably was related to the differing roles of the two student groups. There were no significant differences among groups for the total scores (Table 4).

**NARRATIVE EVALUATION**

Students’ perceptions of the Healing Web experiences were ascertained through written evaluations.
and focus groups each semester. Through both mechanisms, students were asked to reflect on the strengths and opportunities they perceived in the Healing Web clinical experience, problems and concerns that arose, and recommendations they would make for improvement of student experiences.

Primary strength and opportunity themes were:
- Greater understanding of collaboration and a broader perspective about nursing and health care through partnership with staff nurses and students in another nursing program.
- Greater willingness to ask questions and seek assistance.
- Increased collaboration and negotiation skills.
- Greater self-confidence.
- Valuing of different nursing roles.

The support group function of the clinical groupings and the opportunity to witness each other’s growth were important themes in the first year evaluations. Omission of this theme in later evaluative data may reflect changes in student numbers. There were only 8 students in each clinical group the first year (2 BSN students and 6 AD students), compared to 10 and 12 total students in subsequent years. The smaller group size may have provided more opportunity for interaction and for establishing closer relationships.

Baccalaureate degree students viewed participation in the project as an opportunity to improve their leadership skills and focus on continuity of care. Associate degree students identified the benefit of a knowledgeable, experienced, and nonthreatening student partner.

Although students initially wondered if being assigned to the same unit for an entire year would limit their learning, this continuity was evaluated as an advantage by the conclusion of the experience. Students reported feeling comfortable with and accepted by the nursing staff and experiencing a sense of competence and decreased anxiety, which freed up more energy for learning and trying new roles.

Among problems and concerns, a major theme in the first year of the project was the high patient acuity on the unit, particularly for beginning AD students. During that first year, one BSN student was partnered with three AD students, each of whom was assigned to one patient. Given the complexity of the patients encountered on the unit, student concerns were recognized as realistic. The following year, a student team consisting of one student from each program was assigned to the care of two patients. This was a more appropriate assignment configuration.

Students initially complained that their roles and expectations were too vague. As the faculty became clearer about the objectives and better able to articulate their expectations, students’ uncertainty decreased. To prepare students for the necessary ambiguities, the challenge to be flexible was discussed openly during orientation to the project, explaining that roles and responsibilities would change and that renegotiation would be essential and ongoing. Ambiguity was highlighted as a dimension of real world nursing practice and tolerance of ambiguity as a skill to be cultivated.

In the second year, BSN students were assigned randomly to clinical groups. Students pointed out their lack of informed consent to participate in an “experimental” educational experience. All students subsequently have been informed about the project and given opportunity to express a preference regarding participation. Recommendations from students have been taken seriously. First year recommendations that were addressed the following year included:
- Holding a mid-year evaluation conference.
- Having BSN students spend a day with a staff primary nurse.
- Articulating student expectations more clearly.
- Assigning fewer patients to the BSN students.
- Conducting a student conference after morning report on the unit.

The initial recommendations to consider student preferences for Healing Web participation, have joint student presentations during seminars, and provide for more continuity in clinical schedules also were implemented. For BSN students, the first-semester clinical schedule was modified from 1 to 2 days per week for fewer weeks and 2 days per week for 2 consecutive weeks for the second semester as students moved further into the primary nurse role.

<table>
<thead>
<tr>
<th>Scores</th>
<th>BSN Healing Web (n = 37)</th>
<th>BSN traditional (n = 50)</th>
<th>AD Healing Web (n = 24)</th>
<th>AD traditional (n = 123)</th>
<th>p value of ANOVA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Care Provision</td>
<td>52.27</td>
<td>51.18</td>
<td>50.96</td>
<td>51.97</td>
<td>NS</td>
</tr>
<tr>
<td>Cooperative IPR</td>
<td>84.76</td>
<td>81.39</td>
<td>78.83</td>
<td>78.73</td>
<td>NS</td>
</tr>
<tr>
<td>Total</td>
<td>137.03</td>
<td>132.57</td>
<td>129.75</td>
<td>130.70</td>
<td>NS</td>
</tr>
</tbody>
</table>

* Group means do not match Table 1 due to incomplete data collection on this instrument at end of program.
† This was the only significant difference.
Note: IPR = Interpersonal Relationships. NS = not significant.
Narrative feedback from students underscored collaboration, an experience-based understanding of partnership with students and staff, and learning to value colleagues in different nursing roles as the primary student benefits of the Healing Web experience. Primary concerns were that assignment to only one clinical unit would limit learning opportunities and that clinical time for joint experiences was limited by differing school schedules. Many student recommendations have been addressed, but ongoing attention is needed to:

- Clarify roles and expectations of students under constantly changing circumstances.
- Address the disparity in time commitment between the Healing Web and traditional clinical experiences (e.g., more time required of the Healing Web students for orientation and evaluation).
- Make the benefits of the Healing Web available to more students.

CONCLUSIONS AND IMPLICATIONS

The findings discussed above support the contribution of the Healing Web educational experience to the selected student outcomes. There were increases in caring abilities, leadership, and assertiveness among students from the beginning of student clinical experiences to graduation. Healing Web students scored higher than those with traditional clinical experiences in caring knowing, caring courage, leadership, and assertiveness.

The current research is limited by the selected instruments, initially small numbers of students, BSN and AD students at different stages in their programs of study, and questionable adequacy of "dosage." Dosage is conceptualized as the proportional intensity of this experience related to the students' total curricular experiences. In addition, the tools available did not completely capture the changes evident in the unit culture nor the real essence of what transpired in interactions among students, faculty, nursing staff, clients, and families. Qualitative data more clearly identified the essential attributes of the Healing Web experience.

Because AD students were in the first year of their program of study and BSN students were in their last year, the full application of differentiated nursing practice roles was not possible. A more genuine application of the model would occur with senior students in both programs. However, the postclinical administration of data collection instruments occurred at the time of students' graduation from their respective programs.

The number of students in each Healing Web group has been small, beginning with 5 students and progressing to 12. Therefore, it has taken several years to accrue enough participants for meaningful data analysis. In that time, changes in the composition of the student groups have occurred, somewhat limiting the comparability of student experiences across the 4 years of the project. However, the quantitative findings and primary themes from student evaluations and focus groups have been consistent.

Regarding dosing, the Healing Web framework (Bunkers, 1992) has permeated the curricula of both nursing programs and the practice culture at the participating tertiary medical center, altering values, expectations, and communication patterns of faculty, students, and nursing staff. Therefore, students who are not officially part of the Healing Web experience many aspects of the model. Furthermore, the proportion of students' time in the Healing Web clinical experience is small, compared to the totality of their education (approximately one sixth of the total clinical experience for the BSN students and one quarter of the total for AD students). All of these factors raise questions about whether involvement in the Healing Web could be expected to have a discernible effect on the variables chosen for evaluation. In this light, the significant findings become even stronger.

Therefore, future research will emphasize the use of qualitative methods to explicate significant concepts more completely. Research emphases may include clarifying the nature of mutual valuing, describing tolerance of ambiguity, and exploring interactions that characterize the caring capacities and partnering relationships. Clinical experiences also are being developed to expand students' opportunities for collaborative learning in other courses and clinical settings.

REFERENCES


---

**Nursing Department Chair - Shepherd College**

... seeks an outstanding leader to direct the Department of Nursing Education, comprised of Bachelor of Science and Associate of Science nursing programs. The Department of Nursing Education enrolls over 150 students in the fully accredited generic ASN, generic BSN, LPN to RN and RN to BSN programs. There are currently 10 full-time and 10 part-time faculty members committed to student success. Shepherd College is an accredited, four-year, state supported college. The campus located in historic Shepherdstown in the Eastern Panhandle of West Virginia is in close proximity to Maryland, Virginia, and Pennsylvania and is located 70 miles from Washington, DC and Baltimore, Maryland. Desired characteristics for the Department of Nursing Education Chairperson include: a visionary leader, skilled manager, effective decision maker and communicator who values open communication, shared governance and will work to maintain and strengthen relationships with community agencies; a Masters Degree in Nursing and an earned doctorate in nursing or a related field; a demonstrated record of effective academic and administrative leadership with the ability to work with students, staff, faculty and administrators; and a demonstrated record of theory and clinical teaching.

**Applicants should submit the following information for consideration:**
- letter of application addressing the qualifications stated above.
- statement of teaching and administration philosophies, curriculum vitae, and the names, addresses, telephone numbers and e-mail addresses of three professional references. Applicants should know that Shepherd College will not contact any of the references provided without the candidate's prior consent.

**Applications should be sent to**
Director of Human Resources  
Shepherd College  
P. O. Box 3210  
Shepherdstown, WV 25443.

The successful candidate will assume the position on August 1, 2002. Men and minorities are encouraged to apply. AA/EOE.