

ORIGINAL RESEARCH

METHODOLOGICAL COMPLEXITIES ASSOCIATED WITH SYSTEMATIC REVIEW OF HEALING RELATIONSHIPS

Barbara Findlay, RN, BSN; Katherine Smith, MPH; Cindy C. Crawford, BA; Ian Coulter, PhD; Raheleh Khorsan, MA; Wayne B. Jonas, MD

Background/Context • There is growing recognition within the field of medicine that healing and healing relationships are important and that developing evidence-based medicine approaches to healing should be an important aspect of this emerging field, including the use of systematic reviews. Health care leaders charged with developing healing initiatives in hospitals often are frustrated in their attempts to find rigorous reviews of the literature to support their programs.

Objective • The objective of this project was to conduct a systematic review that asked, “What is the return on investment to hospitals that implement programs aimed at enhancing healing relationships?”

Methods • A comprehensive literature search using several electronic databases was conducted to locate studies that evaluated hospital-based programs involving “healing relationships.” All studies found were evaluated as to their relevance to the

study and screened for methodological quality.

Results • Research investigators found broad heterogeneity across the 80 included studies with regard to stated aims, target populations, outcomes measured, measurement tools employed, and evaluation methods used. Only 10 articles were categorized as being methodologically strong.

Conclusions • Results of the systematic review highlighted challenges in synthesizing knowledge about healing that included absence of widely accepted definitions and language around “healing,” locating literature published across many different disciplines, and absence of standards for conducting rigorous program evaluations in hospitals. A less formal qualitative review of included studies also revealed themes in the literature that provide clues about the professional, social, cultural, and historical influences that have helped to shape the evidence base to date. (*Altern Ther Health Med*. 2010;16(5):46-57.)

Barbara Findlay, RN, BSN, is a consultant with the Samuelli Institute, Alexandria, Virginia, and executive director of OmniHealth, British Columbia, Canada. **Katherine Smith, MPH**, is a program officer, **Cindy C. Crawford, BA**, is a research associate, and **Wayne B. Jonas, MD**, is president and chief executive officer, all at the Samuelli Institute. **Ian Coulter, PhD**, is a professor at the University of California Los Angeles, California; RAND/Samuelli Chair for Integrative Medicine and Senior Health Policy Researcher at RAND Corp, Santa Monica, California; and on the research faculty at Southern California University of Health Sciences, Whittier. **Raheleh Khorsan, MA**, is a research associate at the Samuelli Institute, Corona del Mar, California.

Corresponding Author: Wayne B. Jonas, MD
E-mail: wjonas@siib.org

Authors' note: The views, opinions and/or findings contained in this article are those of the author(s) and should not be construed as an official Department of the Army position, policy or decision unless so designated by other documentation.

There is growing recognition within the field of medicine that healing and healing relationships are important. A recent issue of the *Annals of Family Medicine* had a series of articles on healing exploring models and research on healing.^{1,3} The development of evidence-based medicine (EBM) approaches to healing should be an important aspect of this emerging field and can be promoted by using systematic review (SR) methods.^{4,5} Standards of care in hospitals are also ideally established by applying the concept of evidence-based practice to proposed interventions.⁶ This is an expectation whether the interventions are considered to be “high-tech” (such as an invasive cardiac intervention) or “high-touch” (such as an education program to enhance patient-provider communication).^{7,8(p316)}

A systematic review, by definition, includes a comprehensive, exhaustive search for studies on a focused clinical question, selection of studies using clear and reproducible eligibility criteria, critical appraisal of studies for quality, and synthesis of results according to a predetermined and explicit method.⁹ As a means of consolidating what is known about high-tech interventions that have been evaluated through large clinical trials, systematic review is an effective methodology for bridging the research-practice gap.

However, professionals charged with developing high-touch healing initiatives in hospitals often are frustrated in their attempts to find equally rigorous reviews of the literature to establish the evidence base for their programs.¹⁰ This raises the question of whether there is simply a dearth of quality research conducted on initiatives designed to enhance “healing relationships” (the subject of our review) or whether systematic review might be less effective in answering questions and assembling knowledge on social constructs such as healing if they are not clearly defined.^{11,12}

In this article, we address these and other questions by describing our experience and the findings from our systematic review. The research question driving this review was, “What is the return on investment to hospitals that implement programs aimed at enhancing healing relationships?”

BACKGROUND

In 2002, the term *Optimal Healing Environment* (OHE) was proposed by the Samuelli Institute to provide a framework for reconceiving the way health care is provided.¹³ Whether applied to the way an individual manages self-care or the way health care systems deliver services, the framework identifies seven broad domains of care that when implemented support and stimulate healing. They include (1) developing healing intention, (2) experiencing personal wholeness, (3) cultivating healing relationships, (4) practicing healthy lifestyles, (5) applying collaborative health care, (6) creating healing organizations, and (7) building healing spaces. Scientists, clinicians, and patients who contributed to the development of this framework hypothesize that healing, when explored fully as a scientific construct, will be a key to the future management of chronic illness and the basis of sustainable health care.¹⁴ In 2006, the Samuelli Institute began to summarize the state of the science on the effects of relationship on healing. As part of this goal and in conjunction with a funded study, we initiated a systematic review of the literature to synthesize information on the effectiveness of interventions that addressed the act of “cultivating healing relationships” and that were conducted and evaluated in a hospital setting or as part of a hospital program. We defined an effectiveness measure as any health outcome; psychosocial state (such as depression, anxiety, or feeling understood and supported); or business or economic outcome (related to patient and staff satisfaction, safety, quality, and cost).

Conducting the Review: Challenges With Language

In emerging fields of study, concepts, language, and definitions may not be widely recognized or even agreed upon. For example, a “healing initiative” in the language of holistic nursing becomes a “consumer-focused initiative” in the language of hospital executives. The act of isolating search terms to find relevant literature becomes an exercise in interpretation and translation between and across professional disciplines. For this reason, we assembled a multidisciplinary research team of investigators to conduct this review to ensure that the widest possible range of language and search terms was considered.

For the purpose of the systematic review, the Samuelli

Institute research team investigators used the following definitions to guide its work. It should be noted that these definitions, with the exception of “program evaluation,” were developed by the Samuelli Institute in collaboration with the same scientists, clinicians, and patients who helped develop the previously mentioned OHE Framework.

Healing: The process of recovery, repair, and the return to wholeness, in contrast with “curing” which focuses on the eradication of disease.

OHE: An environment that supports and stimulates patient healing by combining one or more of the following approaches: developing healing intention, experiencing personal wholeness, cultivating healing relationships, practicing healthy lifestyles, applying collaborative health care, creating healing organizations, and building healing spaces.

Healing relationship: Any relationship that enhances the process of recovery, repair, and return to wholeness through characteristics such as communication, caring, compassion, empathy, rapport, and support.

Program evaluation: a systematic method for collecting, analyzing, and using information to answer basic questions about projects, policies, and programs.¹⁵

METHODS

We conducted a comprehensive literature search selecting studies that evaluated programs involving “healing relationships” in hospital settings or that were part of hospital programs. Acceptable articles had to meet the following inclusion and exclusion criteria.

- All studies had to be randomized controlled trials, observational studies, or descriptive studies of program evaluations on initiatives that involved healing relationships published from 1960 to present.
- All studies had to be based on a hospital or hospital-run clinic or program or a clinician preparatory program.
- All studies had to involve one or more of the following types of relationships: provider-patient, provider-family, provider-provider, provider-administration, patient-patient, patient-family, patient-administration, family-family, family-administration, relationship with self.
- All studies had to address an aspect of healing relationships in the intervention as described in the definition.
- To avoid any misinterpretation, we excluded reports in languages other than English.
- Any literature presenting data on a conventional psychological or psychiatric treatment or therapy, or programs provided by a psychologist, psychiatrist, trained counsellor, or any other traditional mental health provider for a specific diagnostic condition was excluded. This was done to differentiate between practitioner skills, attitudes, and behaviors acquired through basic professional preparation and the continuing education and ongoing professional development of hospital staff.

- In order to establish a common context for interpreting results, only studies from hospitals where Western/bio-medicine is the dominant system were included.

PubMed, the Cochrane Library, EMBASE, BIOSIS, CINAHL, PsycINFO, MANTIS, AMED, SciSearch, ProQuest, and the NLM catalog were searched using the following keywords: “Program Evaluation [MeSH] and relations* and hospital and (communication or caring or compassion or empathy or social support or serve or mindfulness or presence or transform* or empower).” The term *healing relationship* was not used, as it was not a defined search term or part of a defined search string in the search engines that were used.

Two additional keywords, business plan* or business case*, using PubMed, Wilson Business Periodicals Abstracts, ABI/Inform, Business and Management, CINAHL, Lexis/Nexis, and Periodicals Abstracts, were added to capture the business literature on healing relationships. Reference lists of identified articles and related reviews were searched for additional relevant literature that was not captured through standard searches. Gray literature was also searched by using Google Scholar, looking online for relevant dissertations, and searching conference proceedings of key conferences/meetings.

Phase 1 Screening

References obtained from database and literature initial searches (n=402) were first independently examined at the title/abstract level by two content experts (Findlay and Smith) with divergences resolved by consensus and then, if potentially pertinent, retrieved as complete articles (n=167, Kappa near 100%).

These two reviewers developed a screening tool, *Systematic Review of Healing Relationships—Screening Tool* (Appendix A), based on the study selection criteria to be used for Phase 2 of the screening process.

Phase 2 Screening

A third reviewer with extensive knowledge in systematic review methodology was added to this phase of the screening process, and two of three reviewers (Ader, Findlay, or Smith) independently assessed each article for study compliance to selection criteria using the *Systematic Review of Healing Relationships—Screening Tool*. Disagreements were resolved by consensus or by the third reviewer when consensus could not be reached (Kappa score of 97%). A total of 80 articles passed phase 2 of screening and were chosen for inclusion.

Data Extraction

Investigators found broad heterogeneity across the 80 included studies with regards to stated aims, target populations, outcomes measured, measurement tools employed, and evaluation methods used. Most lacked rigor in their methods of program evaluation. Some did not discuss intended aims or report outcomes of the intervention. This lack of homogeneity combined with poor quality program evaluations and language challenges made it

impossible to assess their quality through a strict scoring methodology. Therefore, we were unable to conduct a meta-analysis and aggregate an effect size for all included studies. It became clear to the investigators at this point, that it would not be possible to answer our original question about “return on investment” because of these methodological problems. We were working in the absence of widely accepted definitions, and it had become very clear that the term *healing relationships* could mean different things to different people practicing in different settings at different periods in time. We realized that we had been overly ambitious in trying to group together papers from several disciplines including nursing, medicine, and social work and from settings that ranged from neonatal intensive care to inpatient psychiatry and from the emergency department to palliative care and hospice.

In an attempt to salvage as much useful information from our review efforts as possible, the reviewer with a strong background in systematic review methodology (Ader) globally classified the included studies as methodologically strong, moderate, or weak (as defined below) and created an outcomes table (Table 1) illustrating findings from the 10 strongest studies.

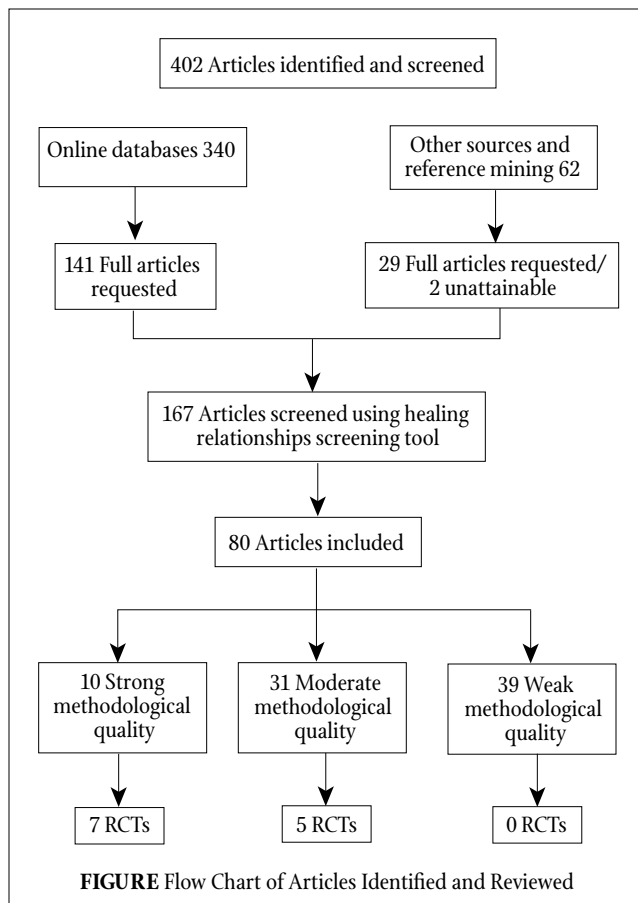
Strong studies were defined as randomized controlled trials (RCTs) using established reliable and valid measurement tools. Moderately strong studies lacked true randomization, relied on measures of low or unestablished validity and reliability, or were not fully or adequately controlled. Weak studies were characterized by one or more of the following: used an uncontrolled, observational design; used measurement tools with low or unestablished validity and reliability; contained only purely qualitative and/or subjective data; included an inadequate description of the program and its evaluation.

RESULTS

Using the criteria above and described in more detail in Appendix B and Table 1,¹⁶⁻¹⁸ 80 articles were deemed relevant. Ten were categorized as methodologically “strong,” 31 were categorized as “moderately strong,” and the rest were marked as “low” quality. Twelve of the 80 articles were RCTs. Not all of the RCTs were categorized as strong. See Figure 1 for a visual summary of the process. See Appendix B for a bibliographic list of all included studies as well as studies classified into 4 categories: RCTs, strong, moderate, and low methodological quality. See Appendix C for a full description of strong, moderately strong, and low methodological quality studies.

Interestingly, the 10 articles categorized as methodologically strong did not necessarily provide the most useful or relevant information pertinent to program development such as a description of implementation strategies, a discussion of operational challenges, or comments on cost. As each of the 10 articles described quite a different initiative with unique aims, measures, and terminology, any comparison between these articles did not seem useful, and in the end, we determined that each was best taken at its own merit.

While not one of our initial study aims, we also carried out a less formal qualitative review of included studies to look for themes in the literature that might provide clues as to which pro-



professional disciplines (as limited by our inclusion criteria) had explored the concept of healing relationships most thoroughly to date and what other social, cultural, and historical influences have helped shape this component of the “science of healing.” We found several areas of health care in which the concept of “cultivating healing relationships” has been applied and studied. These included the following:

- organ donation programs with a focus on provider sensitivity to families (provider-family relationship);
- nurse preceptorship programs with a focus on seasoned nurses mentoring and supporting new ones (provider-provider relationship);
- end-of-life care (bereavement) and care for patients with a high risk of dying (eg, oncology patients) and a focus on the nurse/doctor interaction with patients (provider-patient relationship);
- care in emergency room settings and intensive care units with a focus on improving communication between providers and patients as well as the patient’s family members (provider-patient and provider-family relationship);
- programs in hospitals’ neonatal intensive care units (NICUs), primarily for parents and families and often focused on families giving support to one another (family-family relationship); and

- programs for pregnant teenagers and their mothers or grandmothers with a focus on the patient-family relationship.

Many of these interventions involved nurses, which is not surprising as nursing is currently on the forefront of patient-centered and holistic care. A majority of programs attempted to improve clinician communication skills, often through training in empathy, good listening, and an ability to involve/empower patients.

DISCUSSION

Limiting search terms at the outset of the review was the first hurdle the investigators faced. To begin with, MeSH headings were not always well matched with current practitioner language around healing or with the language used in the Samueli Institute’s OHE framework. This made it somewhat problematic to use the OHE framework to guide the review and yet the framework provided needed structure in the absence of any other widely accepted model that defined elements of a healing relationship. Choosing the search terms became a complicated exercise in translation and in some cases, highlighted the biomedical bias in using MeSH headings. For example, while “healing presence” and “therapeutic relationship” both refer to a similar characteristic of the patient-provider relationship, we debated whether the meanings were really interchangeable. There was a danger that results of a systematic review using one term over the other could be interpreted differently by different disciplines. In comparison, systematic reviews of cardiac intervention studies can focus on reviewing the interventions themselves without struggling to describe congestive heart failure—a well-defined, commonly accepted biomedical concept.

Due to the issues of language and seemingly synonymous search terms, the investigators eventually found it more productive to locate literature by following bibliographic threads from the included studies than to rely on a traditional literature search strategy using defined search terms. Also, by identifying themes in the literature that was found, investigators were able to expand their search and locate additional pockets of profession-specific or issue-specific literature that was missed using the traditional search strategies. For example, we identified a fairly large body of literature on preceptorship of new nurses that fit our inclusion criteria but was not necessarily picked up by search terms. Another example was the body of literature on NICU programs that facilitate family-to-family support for parents of premature infants, which also met our inclusion criteria but not all of which was picked up by our search terms.

Another observation made by the investigators was that the more recent the study, the more likely it was to identify specific aims and measure outcomes that were directly related to cultivating healing relationships. The older the studies, the greater the likelihood that elements of a healing relationship were only noted in the discussion section of the papers as unanticipated outcomes or interesting findings that called for further research. This observation supports the argument that in emerging fields of science, language and concepts also emerge, moving from mere afterthoughts to thoughtful observations to well-crafted specific aims. When analyzing

TABLE Systematic Review of Healing Relationship Strong Methodological Quality Studies Outcomes*

Author	N Enrolled	n Completed Study	Description of Participants	Type of Healing Relationship	Focus of Intervention	Type of Study	Program Being Evaluated	Duration/Follow-up Duration
Hart 2006	38 residents; 94 parents	28 residents; 92 parents	Pediatric and internal medicine/ pediatric residents and parents of children (0-8 yrs) seen in ambulatory practices	Provider-family	Communication	Within subjects repeated measures	1-1.5-hour intervention to increase the use of effective communication skills with patients' families	Residents videotaped 2-3 wks prior to intervention with a patient and family and then 2-3 wks following intervention with two different families than at baseline
Ahrens 2003	151	151? (See comments)	Patients attending an end of life intensive care unit at high risk for dying	Provider-patient and provider-family	Communication	Controlled trial	Communication team of physicians and nurse specialists	Daily communication with patient and family as a "team," sometimes twice a day, depending on family's need
Stevenson 2002	69/81 (See comments)	69/81 (See comments)	Mental health patients admitted to a ward in hospital and attending nurses	Provider-patient	Support	Pretest/ Posttest design pilot study	The Tidal Nursing Model	6 months pre- to posttest data collected
Fallowfield 2002	160 oncologists; 2407 patients	141 clinicians	Oncologists involved in course work and participating patients	Provider-patient	Communication	RCT	Written feedback followed by course; course only; written feedback only; or control	After initial assessment doctors in groups assigned courses attended the course for 3 days and then filming and assessments 3 months later
Garcia de Lucio 2000	91	61	Nurses and nurses' aides	Provider-family	Communication	RCT	Training program on communication and self-control skills for nurses	Training was 25 hrs, in 5 weekly sessions of 5 hrs each. Not stated when follow-up occurred
Haddock 1997	60	60	Patients scheduled for surgery who are smokers	Provider-patient	Smoking cessation program using empathy, communication, and support	Pilot RCT	Health promotion program for smoking cessation	20-40-minute face-to-face intervention with the nurse in a private room
Razavi 1993	72	68	Oncology nurses	Provider-patient	Communication and support	RCT	Psychological training program (PTP)	8 weekly sessions of 3 hrs each Wait list could take the class 4 months later Assessment 1 wk prior to session, 1 wk after the training and 2 months later
Affleck 1989	100	94	Mothers of infants treated in intensive care unit	Provider-family	Social support	RCT	Hospital-to-home transitional consultation support program (TCP)	Program began with initial consultation few days prior to discharge and then weekly home visits were made (2 hrs each) for a period of 15 wks.
LaMonica 1987	656 cancer clients; 109 registered nurses	656 cancer clients; 109 registered nurses	Nurses in a cancer center belonging to medical and surgical units	Provider-patient	Communication and empathy	RCT	Empathy training program for staff development	Three phases, each of which lasted 4 wks, phases 1 and 3 being data collection and phase 2 being the empathy and control training
Robbins 1979	51	51? (See comments)	House officers in internal medicine residency	Provider-patient	Communication and empathy	RCT pretest/ posttest	Videotape feedback of interactions, modification of interpersonal process recall	Two-month rotation with testing before and after

*RIAS indicates Roter's Interaction Analysis System; RCT, randomized controlled trial; STAI, State-Trait Anxiety Inventory; HAM, Health Action Model.

TABLE, continued

Outcome Measure	Type of Control Evaluation	Statistical Significance Level	Comments
Roter's Interaction Analysis System (RIAS)	Pre-post comparison	RIAS: interpersonal communication increased over time, $P = .03$. residents scored highly on communication scales before as well as after intervention as well as patient satisfaction with care	Families seemed pleased with residents prior to intervention, which made it difficult to calculate a change after intervention. Communication did increase just after a short intervention though
Length of stay and costs	Standard care from attending physician	Intervention group shorter stay in intensive care unit (6.1 vs 9.5 days) and hospital (11.3 vs 16.4 days) and had lower fixed (\$15 559 vs \$24 080) and variable (\$5087 vs \$8035 costs)	Program was catered to each individual and so hard to compare effectiveness overall. There was no description of withdrawal or dropouts or who the family consisted of and how many there were
Exploration of the outcomes measured and evaluation of the impact of the evaluation in practice	Pre-post comparison	Significant difference in length of stay at post test ($P < .08$)	Development of the program using the tidal nursing model. Still exploratory and no real description of program and how structured for patients. 69 patients assessed preintervention and 81 different patients assessed postintervention
Medical interactions process system; improvements after the intervention in key communication skills	Participants who did not attend the course	Course attendance significantly improved key outcomes. Higher rates of use of focused questions (difference between attenders and nonattenders 34% ($P = .003$), focused and open questions 27% $P = .005$; expressions of empathy 69% $P = .003$)	Little evidence for effectiveness of written feedback
STAI scale for anxiety and communication skills assessed through role play (0-10 scale)	Waitlist control for 6 months	No difference between groups for STAI; scores for communication skills increased in the experimental group more than control for listening, empathizing, interrupting, coping, and on the overall scale	Researchers performed the roles of the relatives. Randomization took part prior to agreement of participation, hence the large dropout rate. Scale was not validated scale for measuring communication
HAM assessment questionnaire and leaflet on smoking risks	Routine information about smoking cessation	50% in control group reduced or stopped smoking; 7% smoked more and the rest stayed the same; 80% in treatment group reduced/stopped smoking; 10% smoked more; and the rest stayed the same.	This study is actually an RCT and the main intent of the study is not around healing relationships but a program to encourage smoking cessation
Attitudes based on semantic differential questionnaire; occupational stress on Nursing Stress Scale; communications skills by role playing	Waitlist period	Significant training effect on attitudes ($P = .05$), especially for self concept ($P = .004$), level of occupational stress related to inadequate prep ($P = .02$)	Limited changes found for communication skills; 24-hr PTP assessed was effective, would be good to have post training exercises
Need for support score (Arizona social support intervention schedule), ways of coping checklist, medical severity score, emotional well-being	Control group only visited for data collection post discharge	As mothers need for support increased above the low level of need for support, the effect of TCP on mother's sense of control was increasingly positive. With increasing medical severity, TCP mothers reported increasingly positive mood but with decreasing medical severity, the mothers' mood decreased	No description of the randomization process Mothers needing only a low level of support had a negative effect on the program. Multiple regression analysis conducted
Multiple Affect Adjective Checklist (MAACL) and LaMonica/Oberst Patient Satisfaction Scale (LOPSS) and Empathy Construct Rating Scale (ECRS)	Experimental pre-post tested, experimental post tested only, control pre-post tested, and control post tested only	For anxiety and hostility, the posttreatment means differed significantly from pretreatment means ($\alpha = 0.004$); other measures moved in the positive direction but no significance noted	Empathy training did not seem to increase nurse- or client-rated empathy
Three independent ratings of videotapes of first visit interviews Pre-post attitudinal measures, pre-post assessment of empathy	Pre-post comparison and control group which participated in a didactic program on psychosocial issues for outpatients	Significant increase in experimental group but not in control groups for affect sensitivity scale; interview behavior ratings should significant differences between experimental and control groups	No difference for personality and attitudinal data. Marked improvement in interpersonal skills when residents devoted more time, were more affected by emotionally charged material and more empathetic. Number completed unclear; says "over 90%"

ing results of a systematic review, paying attention to the date range of literature reviewed can provide important context regarding social and political influences on the evolution of the concept. For example, in this systematic review, it may have been more appropriate to focus on studies that have been conducted in the past 15 to 20 years, as this period coincides with the social movement toward more holistic, humanistic, integrative approaches to health care delivery and likely yields increasingly homogeneous results.

More than half of the articles that met the initial screening criteria because they described programs designed to impact the healing relationship were not included in the review because they did not conduct or report some form of program evaluation, and among those that were evaluated, few were evaluated with any rigor. Unless these details are carefully considered there is a risk that a systematic review will reflect the “ideal” rather than common practice so that an end user does not glean information about innovative trends or emerging best practices from nonevaluated or poorly evaluated initiatives. Until hospitals develop stronger evaluation cultures, cultivate leaders who value research and attribute appropriate resources toward rigorous program evaluation, and publish the results in peer-reviewed journals that are indexed in databases, systematic reviews will not be a useful methodology to consolidate “state of practice” knowledge on healing. Also, unlike RCTs, the term *program evaluation* is subject to wide interpretation and application by hospital programs, despite being a well-defined MeSH term. Heterogeneity across definitions, quality, and methods of program evaluation was one of the challenges we faced in conducting this review, making it impossible to “compare apples to apples.”

CONCLUSION

Systematic review can be a powerful methodology for consolidating knowledge for established fields in health care. However, using systematic review methods to synthesize the evidence base for less established or emerging fields such as the “science of healing” is less useful, especially in the absence of widely agreed upon definitions, language, and standards for evaluation and measurement. There is a risk that by prematurely applying systematic review in emerging areas investigators will rigorously exclude so much of the available literature that trends, observations, and documentation of emerging best practices, so vital to the evolution of health care, will go unrecognized. Health care leaders and clinicians should be aware of the limitations of using systematic review under these circumstances and be cautious about relying too heavily on results to guide the development of innovative programs or decide conclusively what “works” and what doesn’t in emerging fields.

It is also important to remember that the main purpose for conducting health research is to answer the questions that arise from practice. Going forward, recommendations to facilitate more effective and informative systematic reviews in emerging fields of health care such as “cultivating healing relationships” might include the following:

1. Adopt or create a framework (such as the Samuelli Institute OHE framework) to provide a common language across disciplines for conducting and interpreting the review and ultimately

2. lay the foundation for new and emerging lexicons;
2. Adopt or develop definitions that fit within the chosen framework, recognizing that settling for ill-fitting but well-defined terms may not serve to expand understanding;
3. Conduct a qualitative assessment of included studies to identify emerging themes and uncover illusive pockets of literature;
4. Promote rigorous evaluation of innovative health care initiatives by endorsing an evaluation culture for all health care organizations; and
5. Assemble multidisciplinary teams to conduct systematic reviews and diversify search strategies to include the “language of practice.”

ACKNOWLEDGMENTS

The authors would like to thank the staff of the James A. Zimble Learning Resource Center at the Uniformed Services University of the Health Sciences for their help with retrieving some of the articles for us to review. We would also like to acknowledge Sherry Lovelless for administrative assistance and Deborah Ader for sharing her expertise in quantitative evaluation, assisting in phase II of the literature review, and articulating the criteria and judging the methodological rigor of included studies. This work is supported by the US Army Medical Research and Materiel Command under Award No. W81XWH-07-2-0076 and the Samuelli Institute.

REFERENCES

1. Hsu C, Phillips WR, Sherman KJ, Hawkes R, Cherkin DC. Healing in primary care: a vision shared by patients, physicians, nurses, and clinical staff. *Ann Fam Med*. 2008;6(4):307-314.
2. Meza JP, Fahoome GF. The development of an instrument for measuring healing. *Ann Fam Med*. 2008;6(4):355-360.
3. Scott JG, Cohen D, DiCicco-Bloom B, Miller WL, Stange KC, Crabtree BF. Understanding healing relationships in primary care. *Ann Fam Med*. 2008;6(4):315-322.
4. Melnyk BM. Integrating levels of evidence into clinical decision making. *Pediatr Nurs*. 2004;30(4):323-325.
5. Stevens KR. Systematic reviews: the heart of evidence-based practice. *AACN Clin Issues*. 2001;12(4):529-538.
6. Dawes M, Summerskill W, Glasziou P, et al; Second International Conference of Evidence-Based Health Care Teachers and Developers. Sicily statement on evidence-based practice. *BMC Med Educ*. 2005;5(1):1.
7. Christianson JB, Finch MD, Findlay B, Jonas WB, Choate CG. *Reinventing the Patient Experience: Strategies for Hospital Leaders*. Chicago, IL: Health Administration Press; 2007.
8. Greenhalgh T, Glenn R, Bate P, MacFarlane F, Kyriakidou O. *Diffusion of Innovation in Health Service Organisations: A Systematic Literature Review*. New York, NY: Wiley, John & Sons, Inc; 2007.
9. Pai M, McCulloch M, Gorman JD, et al. Systematic reviews and meta-analyses: an illustrated, step-by-step guide. *Natl Med J India*. 2004;17(2):86-95.
10. Mauksch LB, Dugdale DC, Dodson S, Epstein R. Relationship, communication, and efficiency in the medical encounter: creating a clinical model from a literature review. *Arch Intern Med*. 2008;168(13):1387-1395.
11. Oakley A, Gough D, Oliver S, Thomas J. The politics of evidence and methodology: lessons from the EPPI-Centre. *Evid Policy J Res Debate Pract*. 2005;1(1):5-32.
12. Jonas WB. The evidence house: how to build an inclusive base for complementary medicine. *West J Med*. 2001;175(2):79-80.
13. Jonas WB, Chez RA, Duffy B, Strand D. Investigating the impact of optimal healing environments. *Altern Ther Health Med*. 2003;9(6):36-40.
14. Jonas WB, Chez RA. Toward optimal healing environments in health care. *J Altern Complement Med*. 2004;10 Suppl 1:S1-S6.
15. Administration for Children and Families. Early Childhood Learning & Knowledge Center. The Program Manager’s Guide to Evaluation. Chapter 2: What is program evaluation? Available at: http://eclkc.ohs.acf.hhs.gov/hslc/Program%20Design%20and%20Management/Management%20and%20Administration/Communication/Performance%20Management/manage_pub_00021a_072905.html. Accessed July 14, 2010.
16. No authors listed. How to read clinical journals: V. To distinguish useful from useless or even harmful therapy. *Can Med Assoc J*. 1981;124(9):1156-1162.
17. No authors listed. How to read clinical journals: IV. To determine etiology or causation. *Can Med Assoc J*. 1981;124(8):985-990.
18. Maher BA. A reader’s, writer’s, and reviewer’s guide to assessing research reports in clinical psychology. *J Consult Clin Psychol*. 1978;46(4):835-838.

APPENDIX A: Systematic Review of Healing Relationships—Screening Tool

Article Author/Date of Publication: _____

Type of article: Study Trial Evaluation

Setting: Hospital Hospital Clinic Hospital Program Clinician Preparatory Program

Type of relationship:

- | | | |
|--|---|---|
| <input type="checkbox"/> Provider-Patient | <input type="checkbox"/> Patient-Patient | <input type="checkbox"/> Family-Family |
| <input type="checkbox"/> Provider-Family | <input type="checkbox"/> Patient-Family | <input type="checkbox"/> Family-Administration |
| <input type="checkbox"/> Provider-Provider | <input type="checkbox"/> Patient-Administration | <input type="checkbox"/> Relationship with self |
| <input type="checkbox"/> Provider-Administration | | |

Skills/characteristics associated with healing relationships:

- | | | |
|--|--|--|
| <input type="checkbox"/> Care/Caring | <input type="checkbox"/> Interdisciplinary | <input type="checkbox"/> Self-care |
| <input type="checkbox"/> Collaboration | <input type="checkbox"/> Interpersonal communication | <input type="checkbox"/> Sensitivity (cultural or other) |
| <input type="checkbox"/> Communication | <input type="checkbox"/> Intrapersonal | <input type="checkbox"/> Serve/service |
| <input type="checkbox"/> Compassion | <input type="checkbox"/> Love | <input type="checkbox"/> Social support |
| <input type="checkbox"/> Empathy | <input type="checkbox"/> Mindfulness | <input type="checkbox"/> Support |
| <input type="checkbox"/> Empower/empowerment | <input type="checkbox"/> Personal growth | <input type="checkbox"/> Team/teamwork |
| <input type="checkbox"/> Family-centered | <input type="checkbox"/> Person-centered | <input type="checkbox"/> Transform/Transformative |
| <input type="checkbox"/> Holistic | <input type="checkbox"/> Presence | <input type="checkbox"/> Transpersonal communication |
| <input type="checkbox"/> Integrated | <input type="checkbox"/> Relationship-centered | <input type="checkbox"/> Understanding |

Conventional psychological/psychiatric treatment or program provided by mental health provider?

- Yes No

International? (other than countries with western biomedical delivery system-Australia, Canada, UK, W. Europe)

- Yes _____ (list country) No

Comments:

References:

Initials: _____

Date: _____

Include Exclude

APPENDIX B: Systematic Review of Healing Relationships—Bibliography

ARTICLES IDENTIFIED AS RCTs (12)

1. Fallowfield L, Jenkins V, Farewell V, Saul J, Duffy A, Eves R. Efficacy of a Cancer Research UK communication skills training model for oncologists: a randomised controlled trial. *Lancet*. Feb 23 2002;359(9307):650-656.
2. Garcia de Lucio L, Garcia Lopez FJ, Marin Lopez MT, Mas Hesse B, Caamano Vaz MD. Training programme in techniques of self-control and communication skills to improve nurses' relationships with relatives of seriously ill patients: a randomized controlled study. *J Adv Nurs*. Aug 2000;32(2):425-431.
3. Haddock J, Burrows C. The role of the nurse in health promotion: an evaluation of a smoking cessation programme in surgical pre-admission clinics. *J Adv Nurs*. Dec 1997;26(6):1098-1110.
4. Razavi D, Delvaux N, Marchal S, Bredart A, Farvacques C, Paesmans M. The effects of a 24-h psychological training program on attitudes, communication skills and occupational stress in oncology: a randomised study. *Eur J Cancer*. 1993;29A(13):1858-1863.
5. Affleck G, Tennen H, Rowe J, Roscher B, Walker L. Effects of formal support on mothers' adaptation to the hospital-to-home transition of high-risk infants: the benefits and costs of helping. *Child Dev*. Apr 1989;60(2):488-501.
6. La Monica EL, Wolf RM, Madea AR, Oberst MT. Empathy and nursing care outcomes. *Sch Inq Nurs Pract*. Fall 1987;1(3):197-213.
7. Robbins AS, Kauss DR, Heinrich R, Abrass I, Dreyer J, Clyman B. Interpersonal skills training: evaluation in an internal medicine residency. *J Med Educ*. Nov 1979;54(11):885-894.
8. Cohen-Katz J, Wiley S, Capuano T, Baker DM, Deitrick L, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout: a qualitative and quantitative study, part III. *Holist Nurs Pract*. Mar-Apr 2005;19(2):78.
9. Cohen-Katz J, Wiley SD, Capuano T, Baker DM, Kimmel S, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout, Part II: A quantitative and qualitative study. *Holist Nurs Pract*. Jan-Feb 2005;19(1):26-35.
10. Lautrette A, Darmon M, Megarbane B, et al. A communication strategy and brochure for relatives of patients dying in the ICU. *N Engl J Med*. Feb 1 2007;356(5):469-478.
11. Majumdar B, Browne G, Roberts J, Carpio B. Effects of cultural sensitivity training on health care provider attitudes and patient outcomes. *J Nurs Scholarsh*. 2004;36(2):161-166.
12. LaMonica EL, Carew DK, Winder AE, Haase AM, Blanchard KH. Empathy training as the major thrust of a staff development program. *Nurs Res*. Nov-Dec 1976;25(6):447-451.
13. LaMonica EL, Carew DK, Winder AE, Haase AM, Blanchard KH. Empathy training as the major thrust of a staff development program. *Nurs Res*. Nov-Dec 1976;25(6):447-451.
14. Lautrette A, Darmon M, Megarbane B, et al. A communication strategy and brochure for relatives of patients dying in the ICU. *N Engl J Med*. Feb 1 2007;356(5):469-478.
15. Linyear AS, Tartaglia A. Family communication coordination: a program to increase organ donation. *Journal of Transplant Coordination*. Sep 1999;9(3):165-174.
16. Macnab AJ, Richards J, Green G. Family-oriented care during pediatric inter-hospital transport. *Patient Educ Couns*. Mar 1999;36(3):247-257.
17. Majumdar B, Browne G, Roberts J, Carpio B. Effects of cultural sensitivity training on health care provider attitudes and patient outcomes. *J Nurs Scholarsh*. 2004;36(2):161-166.
18. Malkin KF. Patients' perceptions of a pre-admission clinic. *J Nurs Manag*. Mar 2000;8(2):107-113.
19. Mangone N, King J, Croft T, Church J. Group debriefing: an approach to psychosocial support for new graduate registered nurses and trainee enrolled nurses. *Contemporary Nurse*. Dec 2005;20(2):248-257.
20. Minde K, Shosenberg N, Marton P, Thompson J, Ripley J, Burns S. Self-help groups in a premature nursery—a controlled evaluation. *J Pediatr*. May 1980;96(5):933-940.
21. Preyde M, Ardal F. Effectiveness of a parent "buddy" program for mothers of very preterm infants in a neonatal intensive care unit. *Cmaj*. Apr 15 2003;168(8):969-973.
22. Roman LA, Lindsay JK, Boger RP, et al. Parent-to-parent support initiated in the neonatal intensive care unit. *Res Nurs Health*. Oct 1995;18(5):385-394.
23. Roye CF, Balk SJ. Evaluation of an intergenerational program for pregnant and parenting adolescents. *Maternal-Child Nursing Journal*. Jan-Mar 1996;24(1):32-40.
24. Schroeder C, Maeve MK. Nursing care partnerships at the Denver Nursing Project in Human Caring: an application and extension of caring theory in practice. *ANS Adv Nurs Sci*. Dec 1992;15(2):25-38.
25. Sliva JA, Makoul G, Betts H. Rehabilitation-specific communication skills training: improving the physician-patient relationship. *Am J Phys Med Rehabil*. Feb 2002;81(2):126-132.
26. Teasdale K, Brocklehurst N, Thom N. Clinical supervision and support for nurses: an evaluation study. *J Adv Nurs*. Jan 2001;33(2):216-224.
27. Trummer UF, Mueller UO, Nowak P, Stidl T, Pelikan JM. Does physician-patient communication that aims at empowering patients improve clinical outcome? A case study. *Patient Educ Couns*. May 2006;61(2):299-306.
28. van Dulmen AM, Holl RA. Effects of continuing paediatric education in interpersonal communication skills. *Eur J Pediatr*. Jul 2000;159(7):489-495.
29. Wilkinson S, Bailey K, Aldridge J, Roberts A. A longitudinal evaluation of a communication skills programme. *Palliat Med*. Jul 1999;13(4):341-348.
30. Wilkinson S, Roberts A, Aldridge J. Nurse-patient communication in palliative care: an evaluation of a communication skills programme. *Palliat Med*. Jan 1998;12(1):13-22.
31. Wilkinson SM, Leliopoulou C, Gambles M, Roberts A. Can intensive three-day programmes improve nurses' communication skills in cancer care? *Psychooncology*. Dec 2003;12(8):747-759.

ARTICLES IDENTIFIED AS STRONG METHODOLOGICAL QUALITY PROGRAM EVALUATIONS (10)

1. Affleck G, Tennen H, Rowe J, Roscher B, Walker L. Effects of formal support on mothers' adaptation to the hospital-to-home transition of high-risk infants: the benefits and costs of helping. *Child Dev*. Apr 1989;60(2):488-501.
2. Ahrens T, Yancey V, Kollef M. Improving family communications at the end of life: implications for length of stay in the intensive care unit and resource use. *American Journal of Critical Care*. Jul 2003;12(4):317-323.
3. Fallowfield L, Jenkins V, Farewell V, Saul J, Duffy A, Eves R. Efficacy of a Cancer Research UK communication skills training model for oncologists: a randomised controlled trial. *Lancet*. Feb 23 2002;359(9307):650-656.
4. Garcia de Lucio L, Garcia Lopez FJ, Marin Lopez MT, Mas Hesse B, Caamano Vaz MD. Training programme in techniques of self-control and communication skills to improve nurses' relationships with relatives of seriously ill patients: a randomized controlled study. *J Adv Nurs*. Aug 2000;32(2):425-431.
5. Haddock J, Burrows C. The role of the nurse in health promotion: an evaluation of a smoking cessation programme in surgical pre-admission clinics. *J Adv Nurs*. Dec 1997;26(6):1098-1110.
6. Hart CN, Drotar D, Gori A, Lewin L. Enhancing parent-provider communication in ambulatory pediatric practice. *Patient Educ Couns*. Oct 2006;63(1-2):38-46.
7. La Monica EL, Wolf RM, Madea AR, Oberst MT. Empathy and nursing care outcomes. *Sch Inq Nurs Pract*. Fall 1987;1(3):197-213.
8. Razavi D, Delvaux N, Marchal S, Bredart A, Farvacques C, Paesmans M. The effects of a 24-h psychological training program on attitudes, communication skills and occupational stress in oncology: a randomised study. *Eur J Cancer*. 1993;29A(13):1858-1863.
9. Robbins AS, Kauss DR, Heinrich R, Abrass I, Dreyer J, Clyman B. Interpersonal skills training: evaluation in an internal medicine residency. *J Med Educ*. Nov 1979;54(11):885-894.
10. Stevenson C, Barker P, Fletcher E. Judgement days: developing an evaluation for an innovative nursing model. *J Psychiatr Ment Health Nurs*. Jun 2002;9(3):271-276.

ARTICLES IDENTIFIED AS MODERATE METHODOLOGICAL QUALITY PROGRAM EVALUATIONS (31)

1. Adamowski K, Dickinson G, Weitzman B, Roessler C, Carter-Snell C. Sudden unexpected death in the emergency department: caring for the survivors. *Cmaj*. Nov 15 1993;149(10):1445-1451.
2. Appleyard ME, Gavaghan SR, Gonzalez C, Ananian L, Tyrell R, Carroll DL. Nurse-coached intervention for the families of patients in critical care units. *Crit Care Nurse*. Jun 2000;20(3):40-48.
3. Arranz P, Ulla SM, Ramos JL, Del Rincon C, Lopez-Fando T. Evaluation of a counseling training program for nursing staff. *Patient Educ Couns*. Feb 2005;56(2):233-239.
4. Broom BL. Assessing the value of the follow-through family project for students and families. *J Nurs Educ*. Feb 2001;40(2):79-85.
5. Cilliers F, Terblanche L. Facilitation skills for nurses. *Curationis*. Dec 2000;23(4):90-97.
6. Cohen-Katz J, Wiley S, Capuano T, Baker DM, Deitrick L, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout: a qualitative and quantitative study, part III. *Holist Nurs Pract*. Mar-Apr 2005;19(2):78-86.
7. Cohen-Katz J, Wiley SD, Capuano T, Baker DM, Kimmel S, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout, Part II: A quantitative and qualitative study. *Holist Nurs Pract*. Jan-Feb 2005;19(1):26-35.
8. Dingman SK, Williams M, Fosbinder D, Warnick M. Implementing a caring model to improve patient satisfaction. *J Nurs Adm*. Dec 1999;29(12):30-37.
9. Fallowfield L, Saul J, Gilligan B. Teaching senior nurses how to teach communication skills in oncology. *Cancer Nurs*. Jun 2001;24(3):185-191.
10. Greenberg LW, Ochsenschlager D, O'Donnell R, Mastruserio J, Cohen GJ. Communicating bad news: a pediatric department's evaluation of a simulated intervention. *Pediatrics*. Jun 1999;103(6 Pt 1):1210-1217.
11. Herbek T, Yammarino F. Empathy training for hospital staff nurses. *Group and Organization Studies*. 1990;15:279-295.
12. Horak BJ, Pauig J, Keidan B, Kerns J. Patient safety: a case study in team building and interdisciplinary collaboration. *Journal for Healthcare Quality*. Mar-Apr 2004;26(2):6-13, 60.
13. LaMonica EL, Carew DK, Winder AE, Haase AM, Blanchard KH. Empathy training as the major thrust of a staff development program. *Nurs Res*. Nov-Dec 1976;25(6):447-451.
14. Lautrette A, Darmon M, Megarbane B, et al. A communication strategy and brochure for relatives of patients dying in the ICU. *N Engl J Med*. Feb 1 2007;356(5):469-478.
15. Linyear AS, Tartaglia A. Family communication coordination: a program to increase organ donation. *Journal of Transplant Coordination*. Sep 1999;9(3):165-174.
16. Macnab AJ, Richards J, Green G. Family-oriented care during pediatric inter-hospital transport. *Patient Educ Couns*. Mar 1999;36(3):247-257.
17. Majumdar B, Browne G, Roberts J, Carpio B. Effects of cultural sensitivity training on health care provider attitudes and patient outcomes. *J Nurs Scholarsh*. 2004;36(2):161-166.
18. Malkin KF. Patients' perceptions of a pre-admission clinic. *J Nurs Manag*. Mar 2000;8(2):107-113.
19. Mangone N, King J, Croft T, Church J. Group debriefing: an approach to psychosocial support for new graduate registered nurses and trainee enrolled nurses. *Contemporary Nurse*. Dec 2005;20(2):248-257.
20. Minde K, Shosenberg N, Marton P, Thompson J, Ripley J, Burns S. Self-help groups in a premature nursery—a controlled evaluation. *J Pediatr*. May 1980;96(5):933-940.
21. Preyde M, Ardal F. Effectiveness of a parent "buddy" program for mothers of very preterm infants in a neonatal intensive care unit. *Cmaj*. Apr 15 2003;168(8):969-973.
22. Roman LA, Lindsay JK, Boger RP, et al. Parent-to-parent support initiated in the neonatal intensive care unit. *Res Nurs Health*. Oct 1995;18(5):385-394.
23. Roye CF, Balk SJ. Evaluation of an intergenerational program for pregnant and parenting adolescents. *Maternal-Child Nursing Journal*. Jan-Mar 1996;24(1):32-40.
24. Schroeder C, Maeve MK. Nursing care partnerships at the Denver Nursing Project in Human Caring: an application and extension of caring theory in practice. *ANS Adv Nurs Sci*. Dec 1992;15(2):25-38.
25. Sliva JA, Makoul G, Betts H. Rehabilitation-specific communication skills training: improving the physician-patient relationship. *Am J Phys Med Rehabil*. Feb 2002;81(2):126-132.
26. Teasdale K, Brocklehurst N, Thom N. Clinical supervision and support for nurses: an evaluation study. *J Adv Nurs*. Jan 2001;33(2):216-224.
27. Trummer UF, Mueller UO, Nowak P, Stidl T, Pelikan JM. Does physician-patient communication that aims at empowering patients improve clinical outcome? A case study. *Patient Educ Couns*. May 2006;61(2):299-306.
28. van Dulmen AM, Holl RA. Effects of continuing paediatric education in interpersonal communication skills. *Eur J Pediatr*. Jul 2000;159(7):489-495.
29. Wilkinson S, Bailey K, Aldridge J, Roberts A. A longitudinal evaluation of a communication skills programme. *Palliat Med*. Jul 1999;13(4):341-348.
30. Wilkinson S, Roberts A, Aldridge J. Nurse-patient communication in palliative care: an evaluation of a communication skills programme. *Palliat Med*. Jan 1998;12(1):13-22.
31. Wilkinson SM, Leliopoulou C, Gambles M, Roberts A. Can intensive three-day programmes improve nurses' communication skills in cancer care? *Psychooncology*. Dec 2003;12(8):747-759.

ARTICLES IDENTIFIED AS WEAK METHODOLOGICAL QUALITY PROGRAM EVALUATIONS (39)

1. Allenbach A, Steinmiller EA. Waiting together: translating the principles of therapeutic relationships one step further. *J Spec Pediatr Nurs*. Jan-Mar 2004;9(1):24-31.
2. Almada P, Carafoli K, Flattery JB, French DA, McNamara M. Improving the retention rate of newly graduated nurses. *J Nurses Staff Dev*. Nov-Dec 2004;20(6):268-273.
3. Azoulay E, Pochard F, Chevret S, et al. Meeting the needs of intensive care unit patient families: a multicenter study. *Am J Respir Crit Care Med*. Jan 2001;163(1):135-139.
4. Berger JL. Incorporation of the Tidal Model into the interdisciplinary plan of care—a program quality improvement project. *J Psychiatr Ment Health Nurs*. Aug 2006;13(4):464-467.

5. Clark JS. An aging population with chronic disease compels new delivery systems focused on new structures and practices. *Nursing Administration Quarterly*. Apr-Jun 2004;28(2):105-115.
6. Cunningham A. Developing a communications course for health care assistants. *Nurs Times*. Nov 23-29 2004;100(47):36-38.
7. Davidson PM, Paull G, Introna K, et al. Integrated, collaborative palliative care in heart failure: the St. George Heart Failure Service experience 1999-2002. *J Cardiovasc Nurs*. Jan-Feb 2004;19(1):68-75.
8. Dodds P, Bowles N. Dismantling formal observation and refocusing nursing activity in acute inpatient psychiatry: a case study. *J Psychiatr Ment Health Nurs*. Apr 2001;8(2):183-188.
9. Douglas M, Pemberton S, Hewitt B. Palliative care nursing. Part 2. Addressing bereavement issues through education. *Nurs Times*. Oct 15-21 2002;98(42):36-37.
10. Durston P. Partners in caring: a partnership for healing. *Nurs Adm Q*. Apr-Jun 2006;30(2):105-111.
11. Feighny KM, Monaco M, Arnold L. Empathy training to improve physician-patient communication skills. *Acad Med*. May 1995;70(5):435-436.
12. Gaskell S, Binns F, Heyhoe M, Jackson B. Taking the sting out of needles: education for staff in primary care. *Paediatr Nurs*. May 2005;17(4):24-28.
13. Goudreau J, Duhamel F, Ricard N. The impact of a family systems nursing educational program on the practice of psychiatric nurses: a pilot study. *J Fam Nurs*. Aug 2006;12(3):292-306.
14. Gunn J, Hegarty K, Nagle C, Forster D, Brown S, Lumley J. Putting woman-centered care into practice: a new (ANEW) approach to psychosocial risk assessment during pregnancy. *Birth*. Mar 2006;33(1):46-55.
15. Hodges SA. An experiment in the development of empathy in student nurses. *J Adv Nurs*. Nov 1991;16(11):1296-1300.
16. Johnson MF, Heinzerling SB, Mattison K, McGurn J, Rock P, Smith-McMahon D. Emergency department Volunteer Liaison Family Communication Program. *J Emerg Nurs*. Feb 1993;19(1):34-37.
17. Kauss DR, Robbins AS, Abrass I, Bakaitis RF, Anderson LA. The long-term effectiveness of interpersonal skills training in medical schools. *J Med Educ*. Jul 1980;55(7):595-601.
18. Kilpatrick K, Frunchak V. The Nursing Extern Program: innovative strategies for students in transition. *Health Care Manager*. Jul-Sep 2006;25(3):236-242.
19. Kinsala E. Focus on. The VERY IMPORTANT PARTNER Program: integrating family and friends into the health care experience. *Progress in Cardiovascular Nursing*. Summer 1999;14(3):103-110.
20. Klisch ML. The one-to-one relationship: an alternative to the psychiatric setting for baccalaureate students in psychosocial nursing. *J Nurs Educ*. Feb 1990;29(2):92-94.
21. LeBrocq P, Charles A, Chan T, Buchanan M. Establishing a bereavement program: caring for bereaved families and staff in the emergency department. *Accident and Emergency Nursing*. Apr 2003;11(2):85-90.
22. Madigan CK, Donaghue DD, Carpenter EV. Development of a family liaison model during operative procedures. *MCN: The American Journal of Maternal/Child Nursing*. Jul-Aug 1999;24(4):185-189.
23. Mangurten JA, Scott SH, Guzzetta CE, et al. Family presence: making room. *Am J Nurs*. May 2005;105(5):40-48; quiz 49.
24. Martin K, Wimberley D, O'Keefe K. Resolving conflict in a multicultural nursing department. *Nursing Management*. 1994;January:49-51.
25. McFarland KF, Rhoades DR. End-of-life care: a retreat format for residents. *J Palliat Med*. Feb 2006;9(1):82-89.
26. Nelms TP. An educational program to examine emergency nurses' attitudes and enhance caring intervention with battered women. *J Emerg Nurs*. Aug 1999;25(4):290-293.
27. Pearson J, Andersen K. Evaluation of a program to promote positive parenting in the neonatal intensive care unit. *Neonatal Netw*. Jun 2001;20(4):43-48.
28. Reid S. Support for parents anticipating premature birth. *Neonatal, Paediatric & Child Health Nursing*. Nov 1998;1(1):18-22.
29. Roye CF, Balk SJ. Caring for pregnant teens and their mothers, too. *MCN: The American Journal of Maternal/Child Nursing*. May-Jun 1997;22(3):153-157.
30. Sampson R, Craven H, Kratsch L. Pyramids to success: laying the foundation for professional practice. *J Nurses Staff Dev*. May-Jun 2000;16(3):96-102.
31. Sanford S, Lamb CR. Nurse partners: going beyond the delivery room. *Mother Baby Journal*. Nov 1997;2(6):8-12.
32. Schiller WR, Anderson BF. Family as a member of the trauma rounds: a strategy for maximized communication. *J Trauma Nurs*. Oct-Dec 2003;10(4):93-101.
33. Snyder D, Ellison NM, Neidig N. Development of a bereavement program in a tertiary medical center. *J Palliat Med*. Dec 2002;5(6):877-882.
34. Sprengel AD, Job L. Reducing student anxiety by using clinical peer mentoring with beginning nursing students. *Nurse Educ*. Nov-Dec 2004;29(6):246-250.
35. Tartaglia A, Linyear AS. Organ donation: a pastoral care model. *J Pastoral Care*. Autumn 2000;54(3):277-286.
36. Thomas VN, Ellis C. Support for A&E nurses caring for patients with sickle cell disease. *Nurs Stand*. Oct 18-24 2000;15(5):35-39.
37. Thornton L. The Model of Whole-Person Caring: creating and sustaining a healing environment. *Holist Nurs Pract*. May-Jun 2005;19(3):106-115.
38. Vail R, Mahon-Salazar C, Morrison A, Kalet A. Patients as teachers: an integrated approach to teaching medical students about the ambulatory care of HIV infected patients. *Patient Education and Counseling*. Jan 1996;27(1):95-101.
39. Yeakel S, Maljanian R, Bohannon RW, Coulombe KH. Professional issues. Nurse caring behaviors and patient satisfaction: improvement after a multifaceted staff intervention. *Journal of Nursing Administration*. Sep 2003;33(9):434-436.

ALL INCLUDED STUDIES (80)

1. Adamowski K, Dickinson G, Weitzman B, Roessler C, Carter-Snell C. Sudden unexpected death in the emergency department: caring for the survivors. *Cmaj*. Nov 15 1993;149(10):1445-1451.
2. Affleck G, Tennen H, Rowe J, Roscher B, Walker L. Effects of formal support on mothers' adaptation to the hospital-to-home transition of high-risk infants: the benefits and costs of helping. *Child Dev*. Apr 1989;60(2):488-501.
3. Ahrens T, Yancey V, Kollef M. Improving family communications at the end of life: implications for length of stay in the intensive care unit and resource use. *American Journal of Critical Care*. Jul 2003;12(4):317-323.
4. Allenbach A, Steinmiller EA. Waiting together: translating the principles of therapeutic relationships one step further. *J Spec Pediatr Nurs*. Jan-Mar 2004;9(1):24-31.
5. Almada P, Carafoli K, Flattery JB, French DA, McNamara M. Improving the retention rate of newly graduated nurses. *J Nurses Staff Dev*. Nov-Dec 2004;20(6):268-273.
6. Appleyard ME, Gavaghan SR, Gonzalez C, Ananian L, Tyrell R, Carroll DL. Nurse-coached intervention for the families of patients in critical care units. *Crit Care Nurse*. Jun 2000;20(3):40-48.
7. Arranz P, Ulla SM, Ramos JL, Del Rincon C, Lopez-Fando T. Evaluation of a counseling training program for nursing staff. *Patient Educ Couns*. Feb 2005;56(2):233-239.
8. Azoulay E, Pochard F, Chevet S, et al. Meeting the needs of intensive care unit patient families: a multicenter study. *Am J Respir Crit Care Med*. Jan 2001;163(1):135-139.
9. Berger JL. Incorporation of the Tidal Model into the interdisciplinary plan of care—a program quality improvement project. *J Psychiatr Ment Health Nurs*. Aug 2006;13(4):464-467.
10. Broom BL. Assessing the value of the follow-through family project for students and families. *J Nurs Educ*. Feb 2001;40(2):79-85.
11. Cilliers F, Terblanche L. Facilitation skills for nurses. *Curationis*. Dec 2000;23(4):90-97.
12. Clark JS. An aging population with chronic disease compels new delivery systems focused on new structures and practices. *Nursing Administration Quarterly*. Apr-Jun 2004;28(2):105-115.
13. Cohen-Katz J, Wiley S, Capuano T, Baker DM, Deitrick L, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout: a qualitative and quantitative study, part III. *Holist Nurs Pract*. Mar-Apr 2005;19(2):78-86.
14. Cohen-Katz J, Wiley SD, Capuano T, Baker DM, Kimmel S, Shapiro S. The effects of mindfulness-based stress reduction on nurse stress and burnout, Part II: A quantitative and qualitative study. *Holist Nurs Pract*. Jan-Feb 2005;19(1):26-35.
15. Cunningham A. Developing a communications course for health care assistants. *Nurs Times*. Nov 23-29 2004;100(47):36-38.
16. Davidson PM, Paull G, Introna K, et al. Integrated, collaborative palliative care in heart failure: the St. George Heart Failure Service experience 1999-2002. *J Cardiovasc Nurs*. Jan-Feb 2004;19(1):68-75.
17. Dingman SK, Williams M, Fosbinder D, Warnick M. Implementing a caring model to improve patient satisfaction. *J Nurs Adm*. Dec 1999;29(12):30-37.
18. Dodds P, Bowles N. Dismantling formal observation and refocusing nursing activity in acute inpatient psychiatry: a case study. *J Psychiatr Ment Health Nurs*. Apr 2001;8(2):183-188.
19. Douglas M, Pemberton S, Hewitt B. Palliative care nursing. Part 2. Addressing bereavement issues through education. *Nurs Times*. Oct 15-21 2002;98(42):36-37.
20. Durston P. Partners in caring: a partnership for healing. *Nurs Adm Q*. Apr-Jun 2006;30(2):105-111.
21. Fallowfield L, Jenkins V, Farewell V, Saul J, Duffy A, Eves R. Efficacy of a Cancer Research UK communication skills training model for oncologists: a randomised controlled trial. *Lancet*. Feb 23 2002;359(9307):650-656.
22. Fallowfield L, Saul J, Gilligan B. Teaching senior nurses how to teach communication skills in oncology. *Cancer Nurs*. Jun 2001;24(3):185-191.
23. Feighny KM, Monaco M, Arnold L. Empathy training to improve physician-patient communication skills. *Acad Med*. May 1995;70(5):435-436.
24. Garcia de Lucio L, Garcia Lopez FJ, Marin Lopez MT, Mas Hesse B, Caamano Vaz MD. Training programme in techniques of self-control and communication skills to improve nurses' relationships with relatives of seriously ill patients: a randomized controlled study. *J Adv Nurs*. Aug 2000;32(2):425-431.
25. Gaskell S, Binns F, Heyhoe M, Jackson B. Taking the sting out of needles: education for staff in primary care. *Paediatr Nurs*. May 2005;17(4):24-28.
26. Goudreau J, Duhamel F, Ricard N. The impact of a family systems nursing educational program on the practice of psychiatric nurses: a pilot study. *J Fam Nurs*. Aug 2006;12(3):292-306.
27. Greenberg LW, Ochsenschlager D, O'Donnell R, Mastruserio J, Cohen GJ. Communicating bad news: a pediatric department's evaluation of a simulated intervention. *Pediatrics*. Jun 1999;103(6 Pt 1):1210-1217.
28. Gunn J, Hegarty K, Nagle C, Forster D, Brown S, Lumley J. Putting woman-centered care into practice: a new (ANEW) approach to psychosocial risk assessment during pregnancy. *Birth*. Mar 2006;33(1):46-55.
29. Haddock J, Burrows C. The role of the nurse in health promotion: an evaluation of a smoking cessation programme in surgical pre-admission clinics. *J Adv Nurs*. Dec 1997;26(6):1098-1110.
30. Hart CN, Drotar D, Gori A, Lewin L. Enhancing parent-provider communication in ambulatory pediatric practice. *Patient Educ Couns*. Oct 2006;63(1-2):38-46.
31. Herbek T, Yammarino F. Empathy training for hospital staff nurses. *Group and Organization Studies*. 1990;15:279-295.
32. Hodges SA. An experiment in the development of empathy in student nurses. *J Adv Nurs*. Nov 1991;16(11):1296-1300.

33. Horak BJ, Pauig J, Keidan B, Kerns J. Patient safety: a case study in team building and interdisciplinary collaboration. *Journal for Healthcare Quality*. Mar-Apr 2004;26(2):6-13, 60.
34. Johnson MF, Heinzerling SB, Mattison K, McGurn J, Rock P, Smith-McMahon D. Emergency department Volunteer Liaison Family Communication Program. *J Emerg Nurs*. Feb 1993;19(1):34-37.
35. Kauss DR, Robbins AS, Abrass I, Bakaitis RF, Anderson LA. The long-term effectiveness of interpersonal skills training in medical schools. *J Med Educ*. Jul 1980;55(7):595-601.
36. Kilpatrick K, Frunchak V. The Nursing Extern Program: innovative strategies for students in transition. *Health Care Manager*. Jul-Sep 2006;25(3):236-242.
37. Kinsala E. Focus on. The VERY IMPORTANT PARTNER Program: integrating family and friends into the health care experience. *Progress in Cardiovascular Nursing*. Summer 1999;14(3):103-110.
38. Klisch ML. The one-to-one relationship: an alternative to the psychiatric setting for baccalaureate students in psychosocial nursing. *J Nurs Educ*. Feb 1990;29(2):92-94.
39. La Monica EL, Wolf RM, Madea AR, Oberst MT. Empathy and nursing care outcomes. *Sch Inq Nurs Pract*. Fall 1987;1(3):197-213.
40. LaMonica EL, Carew DK, Winder AE, Haase AM, Blanchard KH. Empathy training as the major thrust of a staff development program. *Nurs Res*. Nov-Dec 1976;25(6):447-451.
41. Lautrette A, Darmon M, Megarbane B, et al. A communication strategy and brochure for relatives of patients dying in the ICU. *N Engl J Med*. Feb 1 2007;356(5):469-478.
42. LeBrocq P, Charles A, Chan T, Buchanan M. Establishing a bereavement program: caring for bereaved families and staff in the emergency department. *Accident and Emergency Nursing*. Apr 2003;11(2):85-90.
43. Linyear AS, Tartaglia A. Family communication coordination: a program to increase organ donation. *Journal of Transplant Coordination*. Sep 1999;9(3):165-174.
44. Macnab AJ, Richards J, Green G. Family-oriented care during pediatric inter-hospital transport. *Patient Educ Couns*. Mar 1999;36(3):247-257.
45. Madigan CK, Donaghue DD, Carpenter EV. Development of a family liaison model during operative procedures. *MCN: The American Journal of Maternal/Child Nursing*. Jul-Aug 1999;24(4):185-189.
46. Majumdar B, Browne G, Roberts J, Carpio B. Effects of cultural sensitivity training on health care provider attitudes and patient outcomes. *J Nurs Scholarsh*. 2004;36(2):161-166.
47. Malkin KF. Patients' perceptions of a pre-admission clinic. *J Nurs Manag*. Mar 2000;8(2):107-113.
48. Mangone N, King J, Croft T, Church J. Group debriefing: an approach to psychosocial support for new graduate registered nurses and trainee enrolled nurses. *Contemporary Nurse*. Dec 2005;20(2):248-257.
49. Mangurten JA, Scott SH, Guzzetta CE, et al. Family presence: making room. *Am J Nurs*. May 2005;105(5):40-48; quiz 49.
50. Martin K, Wimberley D, O'Keefe K. Resolving conflict in a multicultural nursing department. *Nursing Management*. 1994;January:49-51.
51. McFarland KF, Rhoades DR. End-of-life care: a retreat format for residents. *J Palliat Med*. Feb 2006;9(1):82-89.
52. Minde K, Shosenberg N, Marton P, Thompson J, Ripley J, Burns S. Self-help groups in a premature nursery—a controlled evaluation. *J Pediatr*. May 1980;96(5):933-940.
53. Nelms TP. An educational program to examine emergency nurses' attitudes and enhance caring intervention with battered women. *J Emerg Nurs*. Aug 1999;25(4):290-293.
54. Pearson J, Andersen K. Evaluation of a program to promote positive parenting in the neonatal intensive care unit. *Neonatal Netw*. Jun 2001;20(4):43-48.
55. Preyde M, Ardal F. Effectiveness of a parent "buddy" program for mothers of very pre-term infants in a neonatal intensive care unit. *Cmaj*. Apr 15 2003;168(8):969-973.
56. Razavi D, Delvaux N, Marchal S, Bredart A, Farvacques C, Paesmans M. The effects of a 24-h psychological training program on attitudes, communication skills and occupational stress in oncology: a randomised study. *Eur J Cancer*. 1993;29A(13):1858-1863.
57. Reid S. Support for parents anticipating premature birth. *Neonatal, Paediatric & Child Health Nursing*. Nov 1998;1(1):18-22.
58. Robbins AS, Kauss DR, Heinrich R, Abrass I, Dreyer J, Clyman B. Interpersonal skills training: evaluation in an internal medicine residency. *J Med Educ*. Nov 1979;54(11):885-894.
59. Roman LA, Lindsay JK, Boger RP, et al. Parent-to-parent support initiated in the neonatal intensive care unit. *Res Nurs Health*. Oct 1995;18(5):385-394.
60. Roye CF, Balk SJ. Evaluation of an intergenerational program for pregnant and parenting adolescents. *Maternal-Child Nursing Journal*. Jan-Mar 1996;24(1):32-40.
61. Roye CF, Balk SJ. Caring for pregnant teens and their mothers, too. *MCN: The American Journal of Maternal/Child Nursing*. May-Jun 1997;22(3):153-157.
62. Sampson R, Craven H, Kratsch L. Pyramids to success: laying the foundation for professional practice. *J Nurses Staff Dev*. May-Jun 2000;16(3):96-102.
63. Sanford S, Lamb CR. Nurse partners: going beyond the delivery room. *Mother Baby Journal*. Nov 1997;2(6):8-12.
64. Schiller WR, Anderson BF. Family as a member of the trauma rounds: a strategy for maximized communication. *J Trauma Nurs*. Oct-Dec 2003;10(4):93-101.
65. Schroeder C, Maeve MK. Nursing care partnerships at the Denver Nursing Project in Human Caring: an application and extension of caring theory in practice. *ANS Adv Nurs Sci*. Dec 1992;15(2):25-38.
66. Sliwa JA, Makoul G, Betts H. Rehabilitation-specific communication skills training: improving the physician-patient relationship. *Am J Phys Med Rehabil*. Feb 2002;81(2):126-132.
67. Snyder D, Ellison NM, Neidig N. Development of a bereavement program in a tertiary medical center. *J Palliat Med*. Dec 2002;5(6):877-882.
68. Sprengel AD, Job L. Reducing student anxiety by using clinical peer mentoring with beginning nursing students. *Nurse Educ*. Nov-Dec 2004;29(6):246-250.
69. Stevenson C, Barker P, Fletcher E. Judgement days: developing an evaluation for an innovative nursing model. *J Psychiatr Ment Health Nurs*. Jun 2002;9(3):271-276.
70. Tartaglia A, Linyear AS. Organ donation: a pastoral care model. *J Pastoral Care*. Autumn 2000;54(3):277-286.
71. Teasdale K, Brocklehurst N, Thom N. Clinical supervision and support for nurses: an evaluation study. *J Adv Nurs*. Jan 2001;33(2):216-224.
72. Thomas VN, Ellis C. Support for A&E nurses caring for patients with sickle cell disease. *Nurs Stand*. Oct 18-24 2000;15(5):35-39.
73. Thornton L. The Model of Whole-Person Caring: creating and sustaining a healing environment. *Holist Nurs Pract*. May-Jun 2005;19(3):106-115.
74. Trummer UF, Mueller UO, Nowak P, Stidl T, Pelikan JM. Does physician-patient communication that aims at empowering patients improve clinical outcome? A case study. *Patient Educ Couns*. May 2006;61(2):299-306.
75. Vail R, Mahon-Salazar C, Morrison A, Kalet A. Patients as teachers: an integrated approach to teaching medical students about the ambulatory care of HIV infected patients. *Patient Education and Counseling*. Jan 1996;27(1):95-101.
76. van Dulmen AM, Holl RA. Effects of continuing paediatric education in interpersonal communication skills. *Eur J Pediatr*. Jul 2000;159(7):489-495.
77. Wilkinson S, Bailey K, Aldridge J, Roberts A. A longitudinal evaluation of a communication skills programme. *Palliat Med*. Jul 1999;13(4):341-348.
78. Wilkinson S, Roberts A, Aldridge J. Nurse-patient communication in palliative care: an evaluation of a communication skills programme. *Palliat Med*. Jan 1998;12(1):13-22.
79. Wilkinson SM, Leliopoulou C, Gambles M, Roberts A. Can intensive three-day programmes improve nurses' communication skills in cancer care? *Psychooncology*. Dec 2003;12(8):747-759.
80. Yeakel S, Maljanian R, Bohannon RW, Coulombe KH. Professional issues. Nurse caring behaviors and patient satisfaction: improvement after a multifaceted staff intervention. *Journal of Nursing Administration*. Sep 2003;33(9):434-436.

APPENDIX C: Expanded Descriptions of Strong, Moderately Strong, and Low-quality Studies

Description of Strong Methodological Quality Studies

The bibliography in Appendix B includes separate listings for the studies rated “strong.” Additionally, see Table 1 for *Strong Methodological Quality Studies Outcomes Table*, an outcomes table summarizing the key elements of studies included in the strong methodological quality group. Ten studies (7 of them identified as RCTs) were identified as having “strong” methodological quality. The studies in the strong group were well-designed and used reliable measurement tools and methods. However, they were not without limitations. A recurring flaw in this group of studies was inadequate description of the actual program being evaluated (e.g., details of the intervention’s implementation, duration, etc.), making it impossible to rigorously evaluate the program or for other hospitals to replicate the program. Also, few programs were standardized and systematic methods for tailoring individual treatment were not described, limiting conclusions regarding what, exactly, was effective even when positive results were obtained.

Description of Moderately Strong Methodological Quality Studies

The bibliography in Appendix B includes separate listings for the studies rated “moderately strong.” These studies reported some interesting results, but the degree to which the results could be interpreted or generalized was limited by one or more weaknesses in design or measurement. Sampling bias was a common problem, since the realities of clinical research often result in convenience samples, self-selection or other forms of selection bias, and high rates of attrition. The relevance, importance, or meaning of results was frequently overstated, since study limitations precluded causal conclusions. In a few cases, even studies using randomized, controlled trial design fell into the “moderately strong” category because of flawed measurement, statistical weakness, or bias. For example, the article by Cohen-Katz, et al. (2005) reports on a randomized, controlled trial of mindfulness-based meditation. However, it is the third published report on this study, and focuses only on qualitative, self-reported data collected after all participants had completed the experimental intervention. Several limitations arise, including a high potential for socially-desirable response bias (e.g., some questions were on sensitive personal issues; the participants would have a good sense of how they “should” respond to questions about the program) and the lack of any control group against which to compare results. The study reports rich descriptive information about the self-reported experiences of nurses undergoing this intervention, but lacks the rigor to be considered methodologically strong. (The second published report on this study is also included in this review, and was also rated as “moderately strong” based on measurement issues.)

Description of Low Methodological Quality Studies

The bibliography in Appendix B includes separate listings for the studies rated “low” on methodological strength. A recurring theme in this group of studies was description (with varying degrees of detail) of a program’s implementation (e.g. a class or educational intervention) with a one-time “evaluation” consisting of participants’ rating the intervention on whether it met its goals, whether it was useful, etc. Studies in this category were usually characterized by little or no study design, insufficient detail to allow replication, no clear internal or external validity, and collection of limited descriptive data.