

## **Supplemental Digital Appendix 1**

### **Search Strategies**

#### **Ovid MEDLINE(R) ALL 1946 to March 19, 2020**

Date searched: March 19, 2020

# of results: 1751

1. exp health personnel/ or professional personnel/
2. Counselors/
3. clinicians/ or exp students, health occupations/ or medical residency/
4. (((health or healthcare) adj2 (professional\* or worker\* or employee\* or aide\* or personnel or provider\*)) or student\* or trainee\* or resident or residents or intern or interns or post graduate trainee\* or physician\* or general practitioner\* or GP or doctor\* or surgeon\* or clinician\* or specialist\* or Allergist\* or Anesthetist\* or Anesthesiologist\* or Anaesthesiologist\* or Audiologist\* or Dentist or Dentists or Cardiologist\* or Dermatologist\* or Endocrinologist\* or Gastroenterologist\* or General Practitioner\* or Geriatrician\* or gynaecologist\* or gynecologist\* or haematologist\* or hematologist\* or Hospitalist\* or Internist\* or neonatologist\* or Nephrologist\* or Neurologist\* or obstetrician\* or oncologist\* or ophthalmologist\* or Otolaryngologist\* or pathologist\* or Pediatrician\* or paediatrician\* or physiatrist\* or Pulmonologist\* or Radiologist\* or Rheumatologist\* or urologist\* or physiotherap\* or therapist\* or chiropractor\* or medical staff or nurse\* or APRN or APRNs or RNs or midwife or midwives or pharmacist\* or counsellor\* or psychiatrist\* or psychologist\* or psychotherapist\* or social worker\* or case worker\*).mp.
5. or/1-4
6. compassion\*.mp.
7. exp education, professional/ or staff development/
8. (professional development or webinar\* or lecture\* or seminar\* or rotation\* or workshop\* or train\* or curriculum or course\* or ((intervention\* or program\* or medical or clinic\* or continuing or resident or professional or nurs\* or physician\* or midwi\* or chiropract\* or dentist\* or pharmac\* or therap\* or physio\* or audiolog\* or patholog\* or allied health or skill\* or staff or social work\*) adj5 educat\*).mp.
9. 7 or 8
10. 5 and 6 and 9

#### **Embase 1974 to 2020 March 18**

Date searched: March 19, 2019

Results: 2641

1. exp health care personnel/
2. counselor/
3. exp health student/
4. (((health or healthcare) adj2 (professional\* or worker\* or employee\* or aide\* or personnel or provider\*)) or student\* or trainee\* or resident or residents or intern or interns or post graduate trainee\* or physician\* or general practitioner\* or GP or doctor\* or surgeon\* or clinician\* or specialist\* or Allergist\* or Anesthetist\* or Anesthesiologist\* or Anaesthesiologist\* or Audiologist\* or Dentist or Dentists or Cardiologist\* or Dermatologist\* or Endocrinologist\* or Gastroenterologist\* or General Practitioner\* or Geriatrician\* or gynaecologist\* or gynecologist\* or haematologist\* or hematologist\* or Hospitalist\* or Internist\* or neonatologist\* or Nephrologist\* or Neurologist\* or obstetrician\* or oncologist\* or ophthalmologist\* or Otolaryngologist\* or pathologist\* or Pediatrician\* or paediatrician\* or physiatrist\* or Pulmonologist\* or Radiologist\* or Rheumatologist\* or urologist\* or physiotherap\* or therapist\* or chiropractor\* or medical staff or nurse\* or APRN or APRNs or RNs or midwife or midwives or pharmacist\* or counsellor\* or psychiatrist\* or psychologist\* or psychotherapist\* or social worker\* or case worker\*).mp.
5. or/1-4
6. compassion\*.mp.
7. professional development/
8. continuing education/
9. education program/
10. (professional development or webinar\* or lecture\* or seminar\* or rotation\* or workshop\* or train\* or curriculum or course\* or ((intervention\* or program\* or skill\* or staff or medical or clinic\* or continuing or resident or professional or nurs\* or physician\* or midwi\* or chiropract\* or dentist\* or pharmac\* or therap\* or physio\* or audiolog\* or patholog\* or allied health or social work\*) adj5 educat\*).mp.
11. or/7-10
12. 5 and 6 and 11

#### **CINAHL Plus with Full Text (EBSCO interface)**

Searched: March 20, 2020

# of Results 1860

Search mode: Boolean Phrase

Deselect: Apply equivalent subjects

S1 (MH "Health Personnel+") or (MH "Counselors+") or (MH "Students, Health Occupations+") OR (((health or healthcare) N2 (professional\* or worker\* or employee\* or aide\* or personnel or provider\*)) or student\* or trainee\* or resident or residents or intern or interns or

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordon AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

post-graduate-trainee\* or physician\* or general practitioner\* or GP or doctor\* or surgeon\* or clinician\* or specialist\* or Allergist\* or Anesthetist\* or Anesthesiologist\* or Anaesthesiologist\* or Audiologist\* or Dentist or Dentists or Cardiologist\* or Dermatologist\* or Endocrinologist\* or Gastroenterologist\* or General-Practitioner\* or Geriatrician\* or gynaecologist\* or gynecologist\* or haematologist\* or hematologist\* or Hospitalist\* or Internist\* or neonatologist\* or Nephrologist\* or Neurologist\* or obstetrician\* or oncologist\* or ophthalmologist\* or Otolaryngologist\* or pathologist\* or Pediatrician\* or paediatrician\* or physiatrist\* or Pulmonologist\* or Radiologist\* or Rheumatologist\* or urologist\* or physiotherap\* or therapist\* or chiropractor\* or medical-staff or nurse\* or APRN or APRNs or RNs or midwife or midwives or pharmacist\* or counsellor\* or psychiatrist\* or psychologist\* or psychotherapist\* or social-worker\* or case-worker\*)

S2 compassion\*

S3 (MH "Professional Development") OR (MH "Education, Continuing+") OR (professional-development or webinar\* or lecture\* or seminar\* or rotation\* or workshop\* or train\* or curriculum or course\* or ((intervention\* or program\* or medical or clinic\* or continuing or resident or professional or nurs\* or physician\* or midwi\* or chiropract\* or dentist\* or pharmac\* or therap\* or physio\* or audiolog\* or patholog\* or allied-health or skill\* or staff or social-work\*)) N5 educat\*))

S4 (S1 AND S2 AND S3)

## **ERIC (EBSCO interface)**

Searched: March 20, 2020

# of Results 103

Search mode: Boolean Phrase

Deselect: Apply equivalent subjects

S1 (((health or healthcare) N2 (professional\* or worker\* or employee\* or aide\* or personnel or provider\*)) or resident or residents or intern or interns or post-graduate-trainee\* or physician\* or general practitioner\* or GP or doctor\* or surgeon\* or clinician\* or specialist\* or Allergist\* or Anesthetist\* or Anesthesiologist\* or Anaesthesiologist\* or Audiologist\* or Dentist or Dentists or Cardiologist\* or Dermatologist\* or Endocrinologist\* or Gastroenterologist\* or General-Practitioner\* or Geriatrician\* or gynaecologist\* or gynecologist\* or haematologist\* or hematologist\* or Hospitalist\* or Internist\* or neonatologist\* or Nephrologist\* or Neurologist\* or obstetrician\* or oncologist\* or ophthalmologist\* or Otolaryngologist\* or pathologist\* or Pediatrician\* or paediatrician\* or physiatrist\* or Pulmonologist\* or Radiologist\* or Rheumatologist\* or urologist\* or physiotherap\* or therapist\* or chiropractor\* or medical-staff or nurse\* or APRN or APRNs or RNs or midwife or midwives or pharmacist\* or counsellor\* or psychiatrist\* or psychologist\* or psychotherapist\* or social-worker\* or case-worker\* or ((student\* or trainee\*) N5 (medical or clinic\* or nurs\* or physician\* or midwi\* or chiropract\* or

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dentist\* or pharmac\* or therap\* or physio\* or audiolog\* or patholog\* or allied-health or social-work\*))

S2 compassion\*

S3 (professional-development or webinar\* or lecture\* or seminar\* or rotation\* or workshop\* or train\* or curriculum or course\* or ((intervention\* or program\* or medical or clinic\* or continuing or resident or professional or nurs\* or physician\* or midwi\* or chiropract\* or dentist\* or pharmac\* or therap\* or physio\* or audiolog\* or patholog\* or allied-health or skill\* or staff or social-work\*)) N5 educat\*))

S4 (S1 AND S2 AND S3)

### Education Research Complete (EBSCO interface)

Searched: March 20, 2020

# of Results: 646

Search mode: Boolean Phrase

Deselect: Apply equivalent subjects

S1 (((health or healthcare) N2 (professional\* or worker\* or employee\* or aide\* or personnel or provider\*)) or resident or residents or intern or interns or post-graduate-trainee\* or physician\* or general practitioner\* or GP or doctor\* or surgeon\* or clinician\* or specialist\* or Allergist\* or Anesthetist\* or Anesthesiologist\* or Anaesthesiologist\* or Audiologist\* or Dentist or Dentists or Cardiologist\* or Dermatologist\* or Endocrinologist\* or Gastroenterologist\* or General-Practitioner\* or Geriatrician\* or gynaecologist\* or gynecologist\* or haematologist\* or hematologist\* or Hospitalist\* or Internist\* or neonatologist\* or Nephrologist\* or Neurologist\* or obstetrician\* or oncologist\* or ophthalmologist\* or Otolaryngologist\* or pathologist\* or Pediatrician\* or paediatrician\* or physiatrist\* or Pulmonologist\* or Radiologist\* or Rheumatologist\* or urologist\* or physiotherap\* or therapist\* or chiropractor\* or medical-staff or nurse\* or APRN or APRNs or RNs or midwife or midwives or pharmacist\* or counsellor\* or psychiatrist\* or psychologist\* or psychotherapist\* or social-worker\* or case-worker\* or ((student\* or trainee\*) N5 (medical or clinic\* or nurs\* or physician\* or midwi\* or chiropract\* or dentist\* or pharmac\* or therap\* or physio\* or audiolog\* or patholog\* or allied-health or social-work\*))

S2 compassion\*

S3 (professional-development or webinar\* or lecture\* or seminar\* or rotation\* or workshop\* or train\* or curriculum or course\* or ((intervention\* or program\* or medical or clinic\* or continuing or resident or professional or nurs\* or physician\* or midwi\* or chiropract\* or dentist\* or pharmac\* or therap\* or physio\* or audiolog\* or patholog\* or allied-health or skill\* or staff or social-work\*)) N5 educat\*))

S4 (S1 AND S2 AND S3)

### **Sociological Abstracts (ProQuest interface)**

Searched: March 20, 2020

# of Results: 70

(((((noft(health) or noft(healthcare)) NEAR/2 (noft(professional\*) or noft(worker\*) or noft(employee\*) or noft(aide\*) or noft(personnel) or noft(provider\*))) or noft(resident) or noft(residents) or noft(intern) or noft(interns) or noft(post-graduate-trainee\*) or noft(physician\*) or noft(general practitioner\*) or noft(GP) or noft(doctor\*) or noft(surgeon\*) or noft(clinician\*) or noft(specialist\*) or noft(Allergist\*) or noft(Anesthetist\*) or noft(Anesthesiologist\*) or noft(Anaesthesiologist\*) or noft(Audiologist\*) or noft(Dentist) or noft(Dentists) or noft(Cardiologist\*) or noft(Dermatologist\*) or noft(Endocrinologist\*) or noft(Gastroenterologist\*) or noft(General-Practitioner\*) or noft(Geriatrician\*) or noft(gynaecologist\*) or noft(gynecologist\*) or noft(haematologist\*) or noft(hematologist\*) or noft(Hospitalist\*) or noft(Internist\*) or noft(neonatologist\*) or noft(Nephrologist\*) or noft(Neurologist\*) or noft(obstetrician\*) or noft(oncologist\*) or noft(ophthalmologist\*) or noft(Otolaryngologist\*) or noft(pathologist\*) or noft(Pediatrician\*) or noft(paediatrician\*) or noft(physiatrist\*) or noft(Pulmonologist\*) or noft(Radiologist\*) or noft(Rheumatologist\*) or noft(urologist\*) or noft(physiotherap\*) or noft(therapist\*) or noft(chiropractor\*) or noft(medical-staff) or noft(nurse\*) or noft(APRN) or noft(APRNs) or noft(RNs) or noft(midwife) or noft(midwives) or noft(pharmacist\*) or noft(counsellor\*) or noft(psychiatrist\*) or noft(psychologist\*) or noft(psychotherapist\*) or noft(social-worker\*) or noft(case-worker\*) or ((noft(student\*) or noft(trainee\*)) NEAR/5 (noft(medical) or noft(clinic\*) or noft(nurs\*) or noft(physician\*) or noft(midwi\*) or noft(chiropract\*) or noft(dentist\*) or noft(pharmac\*) or noft(therap\*) or noft(physio\*) or noft(audiolog\*) or noft(patholog\*) or noft(allied-health) or noft(social-work\*)))) ) AND noft(compassion\*) AND ( (noft(professional-development) or noft(webinar\*) or noft(lecture\*) or noft(seminar\*) or noft(rotation\*) or noft(workshop\*) or noft(train\*) or noft(curriculum) or noft(course\*) or ((noft(intervention\*) or noft(program\*) or noft(medical) or noft(clinic\*) or noft(continuing) or noft(resident) or noft(professional) or noft(nurs\*) or noft(physician\*) or noft(midwi\*) or noft(chiropract\*) or noft(dentist\*) or noft(pharmac\*) or noft(therap\*) or noft(physio\*) or noft(audiolog\*) or noft(patholog\*) or noft(allied-health) or noft(skill\*) or noft(staff) or noft(social-work\*)) NEAR/5 noft(educat\*)) ) )

### **Web of Science (Clarivate Analytics interface)**

Searched: March 20, 2020

# of Results: 1461

Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI Timespan=All years

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordon AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

TS((((health or healthcare) NEAR/2 (professional\* or worker\* or employee\* or aide\* or personnel or provider\*)) or resident or residents or intern or interns or post-graduate-trainee\* or physician\* or general practitioner\* or GP or doctor\* or surgeon\* or clinician\* or specialist\* or Allergist\* or Anesthetist\* or Anesthesiologist\* or Anaesthesiologist\* or Audiologist\* or Dentist or Dentists or Cardiologist\* or Dermatologist\* or Endocrinologist\* or Gastroenterologist\* or General-Practitioner\* or Geriatrician\* or gynaecologist\* or gynecologist\* or haematologist\* or hematologist\* or Hospitalist\* or Internist\* or neonatologist\* or Nephrologist\* or Neurologist\* or obstetrician\* or oncologist\* or ophthalmologist\* or Otolaryngologist\* or pathologist\* or Pediatrician\* or paediatrician\* or physiatrist\* or Pulmonologist\* or Radiologist\* or Rheumatologist\* or urologist\* or physiotherap\* or therapist\* or chiropractor\* or medical-staff or nurse\* or APRN or APRNs or RNs or midwife or midwives or pharmacist\* or counsellor\* or psychiatrist\* or psychologist\* or psychotherapist\* or social-worker\* or case-worker\* or ((student\* or trainee\*) NEAR/5 (medical or clinic\* or nurs\* or physician\* or midwi\* or chiropract\* or dentist\* or pharmac\* or therap\* or physio\* or audiolog\* or patholog\* or allied-health or social-work\*))) ) AND compassion\* AND ( (professional-development or webinar\* or lecture\* or seminar\* or rotation\* or workshop\* or train\* or curriculum or course\* or ((intervention\* or program\* or medical or clinic\* or continuing or resident or professional or nurs\* or physician\* or midwi\* or chiropract\* or dentist\* or pharmac\* or therap\* or physio\* or audiolog\* or patholog\* or allied-health or skill\* or staff or social-work\*) NEAR/5 educat\*)))) Indexes=SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH, ESCI Timespan=All years

### **Gray literature search**

A targeted gray literature search of relevant organizational websites including Edinburgh Napier University (<https://www.napier.ac.uk/research-and-innovation/research-search?q=compassion&tlasz=100&tab=1>), The Center for Compassion and Altruism Research and Education (<http://ccare.stanford.edu/research/compassion-database/>), and the Schwartz Center for Compassionate Healthcare (<https://www.theschwartzcenter.org/>) was completed.

## Supplemental Digital Appendix 2

### Risk of Bias Assessment of Each Included Study

#### *Education setting*

##### *Curricula Based Education*

41. Ellman MS, Fortin AH, Putnam A, Bia M. Implementing and evaluating a four-year integrated end-of-life care curriculum for medical students. *Teaching and Learning in Medicine*. 2016;28(2):229–239.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “All curricular components were mandatory for each class of 100 students.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “All curricular components were mandatory for each class of 100 students.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “All curricular components were mandatory for each class of 100 students.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “The mixed-method evaluation of the curriculum included analyses of student written reflections in selected components of the curriculum; graduating student surveys; and demonstration of students’ competency with a newly created palliative care OSCE.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “We compared our graduating students’ responses to these questions over the 9 years from 2005 to 2013. In 2005 students graduated prior to implementation of any of the curricular components, but graduates in 2012 and 2013 had participated in all longitudinal components of the curriculum. Students graduating in the years 2006–2011 had varying, increasing exposure as more components were implemented into the curriculum over that period.”

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

		Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (maturation bias)	Unclear risk	Comment: Natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

42. Costello M, Barron AM. Teaching compassion: Incorporating Jean Watson's caritas processes into a care at the end of life course for senior nursing students. Int J Caring Sci. 2017;10(3):1113–1117.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Care at the End of Life, is a course which was developed utilizing the End-of-Life Nursing Education Consortium (ELNEC) curriculum.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Care at the End of Life, is a course which was developed utilizing the End-of-Life Nursing Education Consortium (ELNEC) curriculum.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Care at the End of Life, is a course which was developed utilizing the End-of-Life Nursing Education Consortium (ELNEC) curriculum.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Throughout the course students were asked to reflect on many of the experiences...” Comment: No information on blinding of outcome



		assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (social-desirability)	High risk	Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

43. Brown JS, Halupa C. Improving human immunodeficiency virus/AIDS palliative care in critical care. Dimens Crit Care Nurs. 2015;34(4):216–221.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Thirty critical care nurses were recruited out of 42 based on availability and criterion from the critical care unit at a hospital in a small city in the South.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Thirty critical care nurses were recruited out of 42 based on availability and criterion from the critical care unit at a hospital in a small city in the South.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Thirty critical care nurses were recruited out of 42 based on availability and criterion from the critical care unit at a hospital in a small city in the South.” Comment: Unable to blind participation.

Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "A pretest and posttest on palliative care were provided to each subject to assess knowledge and confidence in palliative care in critical care nursing. Surveys were given to the participants after completion of the course about incorporating a palliative care course within nursing orientation. Interview data were analyzed by summarizing participants' attitudes toward palliative care and common themes." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "This study had some limitations. It was conducted at only 1 facility, and the sample was small." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (other)	Unclear risk	Quote: "Some of the improvement in scores could have been from "testing effect." Comment: Nurses were given the same tests before and after the classes, which might have caused them to remember some of the questions.
Other Bias: (other)	Unclear risk	Quote: "All participants who were recruited volunteered" Comment: May be inherent differences in individuals who volunteered to participate - may be more motivated to improve their competency in providing palliative care to HIV/AIDS patient.
Other Bias: (other)	High risk	Quote: "This study had some limitations...The lack of a control group did not permit an accurate estimation of the effects of palliative care education on nurses' adherence to recommended practices. In addition, there was not a way to know if the nurses were

providing palliative care before the study, and there were no tests done to see if their care improved.”  
 Comment: Results were attributed to the program, but there was no control arm.

44. Shih CY, Hu WY, Lee LT, Yao CA, Chen CY, Chiu TY. Effect of a compassion-focused training program in palliative care education for medical students. Am J Hosp Palliat Med. 2013;30(2):114–120.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “All fifth-year medical students at NTU are required to complete a 1-day multimodule course for palliative care in a hospice unit.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “All fifth-year medical students at NTU are required to complete a 1-day multimodule course for palliative care in a hospice unit.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “All fifth-year medical students at NTU are required to complete a 1-day multimodule course for palliative care in a hospice unit.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “A 4-part structured pretest/posttest questionnaire was administered to all participants.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: The questionnaire was administered to 251 medical students who attended the 1-day course; a 100% response rate was obtained.” Comment: Portions of the study were not completed by all participants but 100% response was obtained from all those administered the questionnaire.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “A total of 251 preclinical medical students were enrolled in a palliative care training course.” Comment: Small sample size increased the possibility that results were due to chance and limited

generalizability.		
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Quote: “Our study has some inherent limitations...This study was conducted with a self-report questionnaire. The results may be overestimated because medical students may tend to report beliefs considered appropriate by the instructors.” Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

45. Anandarajah G, Roseman J, Lee D, Dhandhanian N. A 10-Year longitudinal study of effects of a multifaceted residency spiritual care curriculum: Clinical ability, professional formation, end of life, and culture. J Pain Symptom Manag. 2016;52(6):859–872.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “We recruited study participants using a combination of stratified purposeful sampling and criterion (with 100% quota) sampling” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “We identified all members of the class of 2003 (N= 13) as intervention physicians (received the required curriculum) and all members of the class of 2001 (N = 13) as comparison physicians (did not receive the curriculum).” Comment: No randomization.

Blinking of participants and personnel (performance bias)	High risk	Quote: "We identified all members of the class of 2003 (N= 13) as intervention physicians (received the required curriculum) and all members of the class of 2001 (N = 13) as comparison physicians (did not receive the curriculum)." Comment: Unable to blind participation.
Blinking of outcome assessment (detection bias)	Unclear risk	Quote: "In-depth, semi-structured, individual interviews... Interviews were audio-recorded, transcribed, and analyzed by four researchers." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: "We analyzed 49 transcripts from 26 physicians (13 intervention; 13 comparison). All 13 intervention residents participated in the required, longitudinal SC curriculum and were interviewed in 2001 and 2003. Although all 13 agreed to interviews in 2011, due to scheduling difficulties, one provided written answers to interview questions and one was not interviewed. We interviewed all 13 comparison residents in 2001; two interviews were lost because of equipment malfunction, so we analyzed 11." Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "Study limitations include that it was conducted with physicians from a single residency program, all were U.S. medical graduates." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Quote: "We used a multistep process to analyze this complex data set, which was tailored to our study goals of gaining a nuanced understanding of physicians' approach to spiritual care and of curriculum effects." Comment: Potential for participants to want to answer questions in a way that would be viewed

		favorably by others.
Other Bias: (maturation bias)	Unclear risk	Comment: Natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Quote: "...no direct comparison group was available for practicing physicians..." Comment: Results were attributed to the program, but there were insufficient control arms.

46. Anderson JG, Ann Friesen M, Fabian J, Swengros D, Herbst A, Mangione L. Examination of the perceptions of registered nurses regarding the use of healing touch in the acute care setting. J Holist Nurs. 2016; 34(2): 167-176.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "All RNs at the Inova Health System who had completed at a minimum HT Level One through Inova were contacted by e-mail for participation in the study." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "All RNs at the Inova Health System who had completed at a minimum HT Level One through Inova were contacted by e-mail for participation in the study." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "All RNs at the Inova Health System who had completed at a minimum HT Level One through Inova were contacted by e-mail for participation in the study." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "Each of these nurses was asked to submit a personal narrative and demographic data using an online electronic survey developed by the study team. A convenience sample of nurses who attended regularly scheduled monthly HT practice group sessions was asked to share personal narratives during the 1-hour discussion portion of these meetings. Data

		from the focus groups were organized, analyzed, and interpreted using content analysis and supplemented by a thematic analysis approach.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Quote: “There were 11 nurses who participated in the focus groups, while 24 nurses submitted online narratives.” Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: ““There were 11 nurses who participated in the focus groups, while 24 nurses submitted online narratives.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comments: Qualitative study design utilizing focus groups was selected for this study; however, focus groups are susceptible to social desirability bias.”
Other Bias: (other)	Unclear risk	Quote: “Nurses can provide support and encouragement to one another through monthly practice group sessions and meetings, a unique set of circumstances that may not be present in other settings.” Comment: Collaborative change/improvement in time may have influenced results.
Other Bias: (other)	High risk	Quote: “The nurses who participated in the study self-selected...” Comment: Inherent bias as those who readily incorporate and use HT in their practice would be more likely to participate.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

47. Aggarwal AK, Thompson M, Falik R, Shaw A, O'Sullivan P, Lowenstein DH. Mental illness among us: A new curriculum to reduce mental illness stigma among medical students. Acad Psychiatr. 2013;37:385–391.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “We analyzed three groups for whom we had matched pre and post- data: 1) students who went to both the panel and the small group; 2) students who went to one but not both sessions; and 3) students who went to neither session.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “There were 149 students enrolled each year in 2010 and 2011, and all were invited to participate.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “There were 149 students enrolled each year in 2010 and 2011, and all were invited to participate.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Surveys were administered to all 149 students enrolled each year in 2010 and 2011... The first-year medical students in 2011 were given an additional question on the BMB final exam. Students in the second of the two cohorts were given the option to write about their impression of how the course in which MIAU took place prepared them as physicians.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “In all, 298 students were enrolled and eligible to attend classes and participate during the 2 years of the study. Each could complete the survey twice (once pre- and once post-intervention). Of 596 surveys distributed, 511 were returned, for an overall total response rate of 85.7%. Of these, 500 were matched pairs of surveys filled out both pre- and post-curriculum, representing a total of 250 students and a response rate of 250/298 (84%). Of the 250 students with matched responses, 175 (70.0%) attended the student panel and the small-group discussion; 32 (12.8%) attended only the panel; 41 (16.4%) did not participate in the student panel or small-group discussion; and 2 (0.8%) did not indicate their



		attendance.” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Quote: “This study consisted of a pre- and post-intervention assessment of students who were given an option to voluntarily attend a panel or a panel plus student-led small-group session on mental illness among medical students. The first-year medical students in 2011 were given an additional question on the BMB final exam. Students in the second of the two cohorts were given the option to write about their impression of how the course in which MIAU took place prepared them as physicians” Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: “Other content in BMB may have influenced the responses to the open-ended question.” Comment: Responses may have been biased.
Other Bias: (other)	Unclear risk	Quote: “This study consisted of a pre- and post-intervention assessment of students who were given an option to voluntarily attend a panel or a panel plus student-led small-group session on mental illness among medical students.” Comment: May be inherent differences in individuals who self-selected to participate - may be more motivated to reduce stigma associated with mental illness.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

48. Camp CL, Gregory JK, Lachman N, Chen LP, Juskewitch JE, Pawlina W. Comparative efficacy of group and individual feedback in gross anatomy for promoting medical student professionalism. *Anat Sci Educ.* 2010;3(2):64–72.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: “The class of first-year students at Mayo Medical School (n=49) was divided into ten groups of four and three groups of three (thirteen groups total, numbered one through thirteen). Midblock feedback data were delivered to all students at the halfway point of the course by one of two methods. Students in even-numbered groups (2, 4, 6. . .12) participated in feedback sessions on an individual basis (n 5 23 students) in which only the student and one instructor were present. Members of odd-numbered groups (1, 3, 5. . .13) participated in group feedback sessions in which all members of the group (three or four students) and one instructor were present (n 5 26 students). This randomization of the groups resulted in two cohorts without any significant gender or other demographical differences.” Comment: Randomization procedure for mid-block feedback data.
Allocation concealment (selection bias)	Unclear risk	Quote: “The class of first-year students at Mayo Medical School (n=49) was divided into ten groups of four and three groups of three (thirteen groups total, numbered one through thirteen).” Comment: No description of allocation concealment.
Blinding of participants and personnel (performance bias)	High risk	Quote: “The class of first-year students at Mayo Medical School (n=49) was divided into ten groups of four and three groups of three (thirteen groups total, numbered one through thirteen).” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Low risk	Quote: “During the Human Structure block, all students completed weekly, anonymous self- and peer evaluation surveys focused on professionalism.” Comment: Evaluation surveys were anonymous.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.

Other Bias: (small sample size)	High risk	Quote: “One of the limitations of this study is its small sample size of only 49 students. Also, this study represents a single medical school and format of teaching gross anatomy, radiology, and embryology. No two programs teach these subjects in exactly the same manner and this could affect outcomes.” Comment: Small sample size and single institution increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to provide feedback in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: “...although the weekly peer evaluations and midcourse formative feedback sessions did not affect students’ grades, they were administered by course faculty, which may have created additional pressure on students.” Comment: Unknown if additional pressure on students affected study outcomes.
Other Bias: (other)	Unclear risk	Quote: “Some students may feel somewhat uncomfortable or embarrassed with giving and receiving feedback in a face-to-face setting with their peers during the early stages of their medical education.” Comment: Unknown if the students’ attitudes affected study outcomes.
Other Bias: (other)	Unclear risk	Quote: “More statistically significant conclusions could have been possible if this study had included a control cohort of students who did not receive any feedback at all.” Comment: Results were attributed to the program, but there was no control arm.

49. Frazier M, Schnell K, Baillie S, Stuber ML. Chaplain rounds: A chance for medical students to reflect on spirituality in patient-centered care. Acad Psychiatr. 2015;39(3):320–323.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “First-year students at the David Geffen School of Medicine at UCLA have been required to attend 3 hours of chaplain rounds as part of their year-long doctoring curriculum in the behavioral and social sciences.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “This is one of the planned experiences designed to help medical students understand the types of care settings and professionals involved with health care.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “This is one of the planned experiences designed to help medical students understand the types of care settings and professionals involved with health care.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Low risk	Quote: “After the rounds, students are asked to write a one-page personal reflection about their experience and submit these to their tutors. 166 student-written reflections were de-identified and analyzed, as we looked for common themes using the grounded theory method” Comment: Student reflections were de-identified.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Quote: “For this study, 166 student-written reflections were de-identified and analyzed.” Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “For this study, 166 student-written reflections were de-identified and analyzed.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Other Bias: (social desirability bias)	High risk	Quote: “There are limitations to the generalizability of the findings. Because the students knew that their reflections would be read by a faculty member for the course (though anonymous in the study), they may have been more inclined to be positive in their description of the experience.” Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

50. Konkin J, Suddards C. Creating stories to live by: Caring and professional identity formation in a longitudinal integrated clerkship. Adv Health Sci Educ.2011;17(4):585–596.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Participants were drawn from the first three cohorts of students to enter the program. All ICC students were invited to participate and all who consented were included.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Participants were drawn from the first three cohorts of students to enter the program. All ICC students were invited to participate and all who consented were included.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Participants were drawn from the first three cohorts of students to enter the program. All ICC students were invited to participate and all who consented were included.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Through a hermeneutic phenomenological study, the authors focused on students’ accounts of being with patients.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition

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Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: "All ICC students were invited to participate and all who consented were included." Comment: May be inherent differences in individuals who self-selected to participate - may be more motivated to develop a professional identity and an ethic of caring.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

51. Teskereci G, Oncel S, Ozer U. Developing compassion and emotional intelligence in nursing students: A quasi-experimental study. Perspectives in psychiatric care. 2020;56:797-803.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "Two elective courses opened in the fall semester for first year nursing students. The students are expected to choose only one of these courses. A quota of 37 people is placed for each course" "No sample selection was carried out in this study; all students who volunteered...were included..." Comment: No random sequence was generated.

Allocation concealment (selection bias)	High risk	Quote: “Two elective courses opened in the fall semester for first year nursing students. The students are expected to choose only one of these courses. A quota of 37 people is placed for each course” “No sample selection was carried out in this study; all students who volunteered...were included...” Comment: There was no allocation concealment.
Blinding of participants and personnel (performance bias)	High risk	Quote: All first-year nursing students volunteered to participate in the study. Written and verbal informed consent of the students who participated...was obtained...” “No sample selection was carried out in this study; all students who volunteered...were included...” Comment: No blinding of participants and personnel.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “In the first week of the fall semester of the 2018-2019 academic year, the Personal Information Form...and the Compassion Scale were administered to the students...In the last week of the fall semester, the measurement tools were re-administered to the intervention and control groups.” Comment: No information provided on blinding of outcome assessment.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “Seventy-three students participated in this study. Of the students, 37 selected the Caring Behavior in Nursing course (intervention group) and 36 selected the Health Protection and Promotion course (control group). Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	Unclear risk	Quote: “The participating students were assured that their participation in the study was voluntary...They were also informed that the obtained data would be kept confidential.” Comment: Participants were aware of the study, which could have affected their responses in a way that would be viewed favorably by others. No information available on whether responses were anonymous, only confidentiality was ensured.

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Other Bias: (other)	Unclear risk	Quote: “The self-report instruments used to measure. Compassion and emotional intelligence could have been susceptible to potential bias.” Comment: Although results were attributed to the program, they were not free from bias.
Other Bias: (small sample size)	High risk	Quote: “Given that the study utilized a small convenience sample, the subjects may not be representative of all nursing students” Comment: Small sample size means possibility that results are of limited generalizability.

52. Chambliss C, Altener A, Parkes E. Participative AIDS Education Methods. 1990.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Morning and afternoon shift members of the nursing and housekeeping departments of these units were required to attend both training sessions, if adequate ward staffing at the time of the meetings permitted” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Morning and afternoon shift members of the nursing and housekeeping departments of these units were required to attend both training sessions, if adequate ward staffing at the time of the meetings permitted” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Morning and afternoon shift members of the nursing and housekeeping departments of these units were required to attend both training sessions, if adequate ward staffing at the time of the meetings permitted” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “The training method was designed to foster staff involvement and participation. An interactive, shared problem-solving strategy was used....” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “Only 14 candidates were permitted to attend both sessions; 18 attended the first session only; 6



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		attended the second session only; 4 were unable to participate at all in training because of staff shortage.” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses. Additionally, some strong and negative opinions of some group could have affected the views of their peers.
Other Bias: (social-desirability)	High risk	Comment: Because the study was a participative approach, combining a nominal group technique with open discussion, there is potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (maturation bias)	Unclear risk	Comment: Natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

53. Krajewski A, Filippa D, Staff I, Singh R, Kirton OC. Implementation of an intern boot camp curriculum to address clinical competencies under the new Accreditation Council for Graduate Medical Education supervision requirements and duty hour restrictions. JAMA Surg. 2013;148(8):727-732.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “All surgical interns (n = 18) at the University of Connecticut School of Medicine during the 2011-2012 academic year participated in the intern boot camp.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “All surgical interns (n = 18) at the University of Connecticut School of Medicine during the 2011-2012 academic year participated in the intern boot camp.” Comment: No randomization.

Blinking of participants and personnel (performance bias)	High risk	Quote: "All surgical interns (n = 18) at the University of Connecticut School of Medicine during the 2011-2012 academic year participated in the intern boot camp. Surgical teaching faculty (including O.C.K.) taught the didactic sessions." Comment: Unable to blind participation.
Blinking of outcome assessment (detection bias)	Unclear risk	Quote: "We used several measures to assess the effect of the boot camp curriculum. Nursing staff and teaching faculty were administered surveys at 3 months after the conclusion of the boot camp to assess their perception of intern performance" Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	All boot camp sessions were well attended; only 2 of 18 interns missed more than 1 session because of on-call status, with 11% (12 of 108 sessions) overall absenteeism if vacation and medical leave are counted Comment: Most participants completed the study.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "One limitation is the small size of our study cohort interns and comparison populations." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

### ***Clinically Based Education Interventions***

#### **Service Learning**

54. Brown KM, Bright LM. Teaching caring and competence: Student transformation during an older adult focused service-learning course. Nurse Educ Pract. 2017;27:29–35.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “This study included some limitations... the study’s participants included a convenience sample of nursing students enrolled in a BSN program at a Midwestern U. S. university.” Comment: No randomization –self control pre/post.
Allocation concealment (selection bias)	High risk	Quote: “This study included some limitations... the study’s participants included a convenience sample of nursing students enrolled in a BSN program at a Midwestern U. S. university.” Comment: No randomization – self control.
Blinding of participants and personnel (performance bias)	High risk	Quote: “This study included some limitations... the study’s participants included a convenience sample of nursing students enrolled in a BSN program at a Midwestern U. S. university.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Data collection was derived from a combination of online survey responses and student participants’ reflective journals.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “This study included some limitations... not all participants responded to the member check.” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “A total of 45 students participated; participants included 24 junior and 21 senior level baccalaureate nursing (BSN).” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.

Other Bias: (social-desirability)	High risk	Quote: “Each researcher coded the data independently and determined the nascent themes.” Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: “This study included some limitations... participants’ initial attitudes toward the population of older adults were gathered retrospectively.” Comment: Results of pre-test could be attributed to the course.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

55. Nagle BJ, Berry A, Gorman L, Dangiolo M. A preliminary qualitative evaluation of an in-home geriatric care elective experience for third-year medical students. Cureus. 2018;10(4):e2415.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Participants were selected from students in their third year of medical school...by the clerkship directors to participate in the pilot component.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Participants were selected from students in their third year of medical school...by the clerkship directors to participate in the pilot component.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Participants were selected from students in their third year of medical school...by the clerkship directors to participate in the pilot component.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “A qualitative study design, utilizing focus groups, was used to assess general themes in students’ responses.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “There were 24 students who completed this component of the clerkship...12 of the students (50%) volunteered to participate in the focus groups

		Participation in the post-experience Geriatrics Attitudes Scale was small and incomplete (n=6). Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "There are several limitations... the sample size was limited due to convenience, the number of patients willing to participate, and student availability to participate." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Quote: "There are several limitations... qualitative study design utilizing focus groups was selected for this preliminary study, however, focus groups are susceptible to social desirability bias." Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	High risk	Quote: "There are several limitations... there appeared to be a high degree of agreement across focus groups, which could be attributed to selection bias..." Comment: Students who had more positive experiences in the program may have been more likely to participate in the focus group.
Other Bias: (other)	Unclear risk	Quote: "The strategic approach to recruiting patients to the program likely impacted the students' impression as to whether the encounters were realistic." Comment: Uncertainty may have led students to question their ability to care for the older adult population and affected their responses.
Other Bias: (other)	Unclear risk	Quote: "Participation was dependent on a number of factors, such as the availability of independent seniors for in-home visits, the availability of the pilot program's mentor, and the students' schedule and

		clerkship site” Comment: Unknown if the students’ schedule and clerkship site were the only reason for student non-participation. May also be inherent differences in individuals who self-selected to participate - may be more motivated to improve their attitude toward the elderly.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

56. Pate JD. Bridging community generational gaps through experiential learning: A college nursing student practicum for elderly patients [dissertation]. Minneapolis, MN: Walden University; 2013.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Quote: “From the population of 80 nursing students within the sampling frame, a sample of 33 nursing majors formed the treatment group, and a sample of 32 nursing majors formed the control group. The course instructor randomly assigned nursing students to each of the two groups.” Comment: While students were randomized, the method for this was not revealed.
Allocation concealment (selection bias)	High risk	Quote: “..33 nursing students engaged with older patients at local nursing homes in a nursing elder care practicum (treatment group) and 32 nursing students not engaged with elders and receiving traditional lecture classes on patient care (control group).” Comment: No description of allocation concealment.
Blinding of participants and personnel (performance bias)	High risk	Quote: “... 33 nursing students engaged with older patients at local nursing homes in a nursing elder care practicum (treatment group) and 32 nursing students not engaged with elders and receiving traditional lecture classes on patient care (control group).” Comment: Unable to blind participation.

Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “The researcher used two research tools to collect data... a demographic questionnaire... Kogan’s Attitudes Toward Old People Scale.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “Of the 80 nursing students enrolled in the Registered Nursing Program, 68 were eligible to participate in this study. However, the sample size was reduced from 68 to 65 because three students dropped the nursing course before the posttest was administered.” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “...a sample of 33 nursing majors formed the treatment group, and a sample of 32 nursing majors formed the control group.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (gender-age bias; selection bias)	Unclear risk	Quote: “More research into the age of the study’s student participants and the effect age has on positive and negative attitudes toward the elderly would be another recommendation. Exploring gender differences and the effects of those differences on attitudes toward the elderly is another recommendation for study.” Comment: Age-and gender-related factors may have affected attitudes toward the elderly.

57. Redfield CS, McGuire AP, Lin T-C, Orton VJ, Aust M, Erickson TM. Shifts in attitudes, knowledge, and social goals in nursing students following structured contact with community-dwelling older adults. J Nurs Educ. 2016;55:569–573.

Entry	Judgement	Support for judgement
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Random sequence generation (selection bias)	High risk	Quote: "Several limitations must be noted...future studies should randomly assign nursing students to the OAPP." Comment: No randomization - self control pre/post.
Allocation concealment (selection bias)	High risk	Quote: "All nursing students in a health promotion course participated in the OAPP, but the research aspect of the program (i.e., assessment) was optional." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Older adults were randomly paired with two nursing students to form triads that met four times in one academic year." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "Prior to the first visit and after each subsequent visit, students completed measures of knowledge of aging and attitudes on caring for older adults." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Six percent of observations were missing." Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "...a total of 63 of 65 junior undergraduate nursing students provided informed consent and participated." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (gender-age bias; selection bias)	Unclear risk	Quote: "A total of 63 of 65 junior undergraduate nursing students (i.e., 53 women, 9 men, and one non-respondent) provided informed consent and participated (mean age = 21.97 years, <i>SD</i> = 3.82 years)." Comment: Age-and gender-related factors may have affected attitudes toward the elderly.



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Other Bias: (other)	Unclear risk	Quote: “Future studies should limit external contact between curricular nurse educators and students, as that may have inadvertently reinforced content and biased results”. Comment: External contact between curricular nurse educators and students may have confounded results.
Other Bias: (other)	Unclear risk	Quote: “All nursing students in a health promotion course participated in the OAPP, but the research aspect of the program (i.e., assessment) was optional.” Comment: Potential for inherent differences in the individuals who self-selected to participate in the research - they may have been more motivated to improve their attitude.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

58. Davis LI, Wright DJ, Gutierrez MS, Nam JJ, Nguyen J, Waite AT. Inter-professional global service learning: A pharmacy and nursing practice experience in Botswana. Curr Pharm Teach Learn. 2015;7:169–178.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “An interprofessional educational experience was developed for volunteer pharmacy students to collaborate with nursing students... Five pharmacy students and 11 nursing students participated in the program” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Pharmacy student participation was integrated into a program that the School of Nursing had been offering for the past eight years.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Pharmacy student participation was integrated into a program that the School of Nursing had been offering for the past eight years.” Comment: Unable to blind participation.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Blinking of outcome assessment (detection bias)	Low risk	Quote: "Pharmacy and nursing students were required to write a reflection paper at the end of their experience... an anonymous IRB-approved qualitative survey was sent to all students as an IPE assessment." Comment: Surveys were anonymous.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "There was a 75% response rate among nursing students. Among pharmacy students, there was an 80% response rate" Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "Five pharmacy students and 11 nursing students participated in the program." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "The LLU pharmacy and nursing students were required to write a reflection paper at the end of their experience. This is a requirement for all LLU students who engage in global service." Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: "Service learning is not currently a required component of the LLU School of Pharmacy's experiential curriculum." Comment: Potential for inherent differences in the individuals who self-selected to participate in the research - they may be more motivated to improve their cultural competency and compassion.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

59. Baldacchino DR. Caring in Lourdes: An innovation in students' clinical placement. BJN. 2010;19(6):358–366.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “The study unit <i>Spirituality for Health Carers</i> – NUR 3903(2 ECTS) was devised and approved by the University of Malta in 2008. This study unit included the theoretical component (10 hours) and an experience of clinical voluntary work” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “The study unit <i>Spirituality for Health Carers</i> – NUR 3903(2 ECTS) was devised and approved by the University of Malta in 2008. This study unit included the theoretical component (10 hours) and an experience of clinical voluntary work”. Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “The study unit <i>Spirituality for Health Carers</i> – NUR 3903(2 ECTS) was devised and approved by the University of Malta in 2008. This study unit included the theoretical component (10 hours) and an experience of clinical voluntary work.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “The students were assessed by keeping a reflective diary and writing a reflective account on their clinical experience. The qualitative data from the students’ written reflective account and the transcribed focus group discussion underwent thematic analysis...” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “Thirty-one undergraduate students undertook the study unit in total, of whom seven participated in this study” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “Thirty-one undergraduate students undertook the study unit in total, of whom seven participated in this study” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: “The author read through the transcripts several time and coded each sentence.” Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (gender- bias; selection bias)	Unclear risk	Quote: “Thirty-one undergraduate students undertook the study unit in total, of whom seven (all females, aged 19–45 years, all Roman Catholics) participated in this study.” Comment: Gender- related factors and religious beliefs may have affected attitudes toward the pilgrims.
Other Bias: (other)	Unclear risk	Quote: “Thirty-one undergraduate students undertook the study unit in total, of whom seven participated in this study.” Comment: Potential for inherent differences in the individuals who self-selected to participate in the research- they may be more motivated to deliver spiritual and holistic care.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

60. Dhital R, Subedi M, Prasai N, Shrestha K, Malla M, Upadhyay S. Learning from Primary Health Care Centers in Nepal: reflective writings on experiential learning of third year Nepalese medical students. BMC Res Notes. 2015;8:741.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “A significant portion of the CBLE is delivered through mandatory experiential learning.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “A significant portion of the CBLE is delivered through mandatory experiential learning in diverse community settings that have different tiers of health facilities within the national health system.” Comment: No randomization.

Blinding of participants and personnel (performance bias)	High risk	Quote: "A significant portion of the CBLE is delivered through mandatory experiential learning in diverse community settings that have different tiers of health facilities within the national health system." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "The students were required to maintain a written log of their daily work, experiences, and reflections. We analyzed the data of 50 logbooks through content analysis" Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: "Fifty students provided written informed consent to analyze the written contents from the logbooks" Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "A total of 55 third-year medical students, the first cohort at PAHS, were posted in seven rural PHCCs." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "This study has certain limitations...the students were aware of the fact that their writing would be read by the teachers... the social desirability bias cannot be completely ruled out." Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

61. Clark DL, Melillo A, Wallace D, Pierrel S, Buck DS. A multidisciplinary, learner-centered, student-run clinic for the homeless. Fam Med. 2003;35(6):394–397.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “A student-run free clinic for homeless clients.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “A convenience sample of students was surveyed.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “A convenience sample of students was surveyed.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “An analysis of student reflections was performed. A questionnaire...was administered one time to all students who participated on eight Sundays” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “The clinical psychologist reviewed approximately 3,000 verbal and 500 written student reflections compiled over 2.5 years. His findings were crosschecked verbally with two physicians through their review of written reflections and participation in more than 40 sessions and through meetings with 30 students and one physician who had participated in multiple sessions. ” Comment: Although portions of the study were not completed by all participants, the triangulation process confirmed the accuracy of recurrent patterns.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	Unclear risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: “An analysis of student reflections was performed.” Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.

Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.
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62. Levine MA. Transforming Experiences: Nursing Education and International Immersion Programs. J Prof Nurs. 2009;25(3):156-169.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "U.S. baccalaureate nurses who, while in nursing school, participated in international immersion programs. I interviewed 10 participants in my research project." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "U.S. baccalaureate nurses who, while in nursing school, participated in international immersion programs. I interviewed 10 participants in my research project." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "U.S. baccalaureate nurses who, while in nursing school, participated in international immersion programs. I interviewed 10 participants in my research project." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "Ten nurses were invited and agreed to participate in a semi-structured interview process consistent with the theoretical framework." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "I interviewed 10 participants in my research project." Comment: Only 10 participants in the program were included in the interviews.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "I interviewed 10 participants in my research project." Comment: Small sample size increased the possibility that results were due to chance and limited

		generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: “An analysis of student reflections was performed.” Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

53. Smith JK, Weaver DB. Capturing medical students' idealism. Ann Fam Med. 2006;4(Suppl 1):S32–S37.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Participants were medical students at the end of their first year of studies enrolled in an elective. Students were selected for the elective by the course directors based on an application and personal statement.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Participants were medical students at the end of their first year of studies enrolled in an elective. Students were selected for the elective by the course directors based on an application and personal statement”. Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Students were selected for the elective by the course directors based on an application and personal statement.” Comment: Unable to blind participation.



Blinking of outcome assessment (detection bias)	Low risk	Quote: "Students submit a written report, gave an oral presentation, or both at the end of the elective. Students complete a course evaluation form, which included several open-ended questions for qualitative feedback. We analyzed for common themes students' responses to 4 of the questions on this form... To assess the robustness of our initial interpretation, an independent analyst reviewed the raw data and developed a very similar list of common themes." Comment: Assessments made by an independent analyst.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Sixty-six students participated in the elective, and 62 completed post-elective evaluations. Narrative information was missing from 10 questionnaires." Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "Sixty-six students participated in the elective, and 62 completed post-elective evaluations" Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "2 authors reviewed the responses independently and identified common themes based on the frequency of similar responses." Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: "Limitations...A student self-selection bias, as well as bias on the part of the course directors who select participants, existed." Comment: Potential for inherent differences in the individuals who self-selected to participate in the research- they may be more motivated to improve their attitudes and idealism.

Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.
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64. Schneider AR, Stephens LAM, Ochoa Marín SC, Semenik S. Benefits and challenges of a nursing service-learning partnership with a community of internally-displaced persons in Colombia. Nurse Educ Pract. 2018;33:21–26.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Purposive sampling was used to identify current or retired professors from the nursing program ... Both convenience and purposive sampling were used to recruit students from each of the practicums within the service-learning partnership.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Purposive sampling was used to identify current or retired professors from the nursing program ... Both convenience and purposive samplings were used to recruit students from each of the practicums within the service-learning partnership.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Purposive sampling was used to identify current or retired professors from the nursing program ... Both convenience and purposive sampling were used to recruit students from each of the practicums within the service-learning partnership.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “All participants were interviewed once. Interviews were audio-recorded, transcribed and analyzed using qualitative content analysis.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “Ten out of 49 students responded... nine students participated.” Comment: Recruitment and interviewing of students continued until data saturation was reached.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Other Bias: (small sample size)	High risk	Quote: “10 nursing professors and nine students participated in the service-learning partnership” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: “All audio-recordings were transcribed verbatim by research professionals.” Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (gender- bias; selection bias)	Unclear risk	Quote: “Ten female professors completed an interview. Two of the students were male and seven were female” Comment: Gender-related factors may have affected attitudes toward the program.
Other Bias: (other)	Unclear risk	Quote: “Limitations... students who chose to participate may have been more motivated and invested in their learning.” Comment: Potential for inherent differences in the individuals who self-selected to participate in the research.
Other Bias: (other)	Unclear risk	Quote: “Limitations... interviews were conducted in Spanish but the data was coded and disseminated in English.” Comment: Potential for meaning to be lost in translation.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

65. Whelan M, Ulrich E, Ginty J, Walsh D. Journeys to Jamaica: A Healthy Dose of Culture, Competence, and Compassion. J Christ Nurs: a quarterly publication of Nurses Christian Fellowship. 2018;35(2):E21–E27.

Entry	Judgement	Support for judgement
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Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Random sequence generation (selection bias)	High risk	Quote: “Biannually, NP students are invited to participate in the STIHM” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Biannually, NP students are invited to participate in the STIHM.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Biannually, NP students are invited to participate in the STIHM.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “...after their return, recent students now complete a postmission assignment to ascertain their perceptions of the STIHM. ... themes ...were extracted from the student essay responses.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “after their return, recent students now complete a postmission assignment to ascertain their perceptions of the STIHM.” Comment: Postmission assignments only completed by recent participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (other)	Unclear risk	Quote: “They pay for their airfare, accommodations, and meals. In return, they receive credit for 55 clinical hours toward their clinical practice requirements.” Comment: Potential for inherent differences in the students who were invited to participate in the STIHM.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

66. Rubin RW. Developing cultural competence and social responsibility in preclinical dental students. J Dent Educ. 2004;68(4):460–467.

Entry	Judgement	Support for judgement
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Random sequence generation (selection bias)	High risk	Quote: "As part of this newly established and currently ongoing dental school curriculum, freshman students from the graduating class of 2005 (n=61) completed forty hours of nondental community service over a two-year period." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "As part of this newly established and currently ongoing dental school curriculum, freshman students from the graduating class of 2005 (n=61) completed forty hours of nondental community service over a two-year period." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "As part of this newly established and currently ongoing dental school curriculum, freshman students from the graduating class of 2005 (n=61) completed forty hours of nondental community service over a two-year period." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "...reflective journals were completed by the end of second year. Competency outcomes were measured by selecting key words and phrases found in the individual journals" Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Quote: "Each student paper was reviewed, and key words and phrases...that articulated positive shifts in cultural competency and recognition of social responsibility were identified." Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "Sixty-one freshmen (class of 2005) participated in forty hours of nondental community service" Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Other Bias: (social-desirability)	High risk	Quote: “Each student paper was reviewed, and key words and phrases... that articulated positive shifts in cultural competency and recognition of social responsibility were identified.” Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

67. Romem P, Anson O, Kanat-Maymon Y, Moisa R. Reshaping Students’ Attitudes Toward Individuals with Mental Illness Through a Clinical Nursing Clerkship. J Nurs Educ. 2008;47(9):396–402.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Participants included 136 nursing students in an academic program granting both RN certification and a bachelor’s degree in nursing on completion. All third-year students participated in the study (i.e., there was no sampling procedure).” Comment: No randomization - self control pre/post.
Allocation concealment (selection bias)	High risk	Quote: “Participants included 136 nursing students in an academic program granting both RN certification and a bachelor’s degree in nursing on completion. All third-year students participated in the study (i.e., there was no sampling procedure).” Comment: No randomization - self control pre/post.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Participants included 136 nursing students in an academic program granting both RN certification and a bachelor’s degree in nursing on completion. All third-year students participated in the study (i.e., there was no sampling procedure).” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “A pencil-and-paper questionnaire was administered to 126 third-year students before and after the clerkship. Structural equation models were used to explore whether the theoretical attribution relationships between perceived responsibility, emotions, and attitudes toward care provision...

		<p>changed during the 4-week clerkship toward a more professional attitude.”</p> <p>Comment: No information on blinding of outcome assessments.</p>
Incomplete outcome data addressed (attrition bias)	Low risk	<p>Quote: “The analysis is based on 126 respondents.”</p> <p>Comment: Eight questionnaires marked with nonidentical numbers were excluded from the analysis, as were two questionnaires with incomplete data.</p>
Selective reporting (reporting bias)	Unclear risk	<p>Comment: Study protocol not available.</p>
Other Bias: (Hawthorne effect)	High risk	<p>Comment: Participants were aware of the study, which could have affected their behavior and responses.</p>
Other Bias: (social-desirability)	High risk	<p>Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.</p>
Other Bias: (gender-bias; selection bias)	Unclear risk	<p>Quote: “Twenty students were men”</p> <p>Comment: Gender-related factors may have affected attitudes toward the program.</p>
Other Bias: (other)	Unclear risk	<p>Quote: “Another limitation was the lack of a control group.”</p> <p>Comment: Results were attributed to the program, but there was no control arm.</p>

68. Crandell CE, Wiegand MR, Brosky JA. Examining the role of service-learning on development of professionalism in Doctor of Physical Therapy students: A case report. J Allied Health. 2013;42(1):e25–32.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	<p>Quote: “There were a total of 91 DPT students involved in SL experiences. Of these 91 students, approximately 50% were assigned to the off-campus experience. The eight students identified for this project were selected from those assigned to the off-campus location and therefore consisted of a convenience sample of four first-year and four second-year students. Limitations... Randomized selection of student participants would have minimized sample</p>

		selection bias inherent in a convenience sample.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: The eight students identified for this project were selected from those assigned to the off-campus location and therefore consisted of a convenience sample of four first-year and four second-year students.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: The eight students identified for this project were selected from those assigned to the off-campus location and therefore consisted of a convenience sample of four first-year and four second-year students.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Student perceptions of the role of the off-campus SLC experiences in the development of professionalism and core values were assessed through three methods: 1) student interviews; 2) completion of the APTA Core Values Self-Assessment form; and 3) analysis of student Reflection Papers. Limitations... The primary author performed all data collection and data analysis.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “There were a total of 91 DPT students involved in SL experiences. Of these 91 students, approximately 50% were assigned to the off-campus experience. The eight students identified for this project were selected from those assigned to the off-campus location.” Comment: Portions of the study were not completed by all program participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “The eight students identified for this project were selected from those assigned to the off-campus location and therefore consisted of a convenience sample of four first-year and four second-year students” Comment: Small sample size increased the possibility



		that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "There was potential interviewer and student bias present. The role of the primary author was two-fold: provision of clinical supervision to all students at the off-campus SLC and execution of project implementation including conducting all eight student interviews" Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (gender-bias; selection bias)	Unclear risk	Quote: "Two of the students were male and six were female" Comment: Gender-related factors may have affected attitudes toward the program.
Other Bias: (other)	Unclear risk	Quote: "Limitations... The SL course coordinator was responsible for student assignments to both the on- and off-campus SLC experiences. Every effort was made to offer this unique off-campus SLC opportunity to all students; however, space, time and scheduling constraints were barriers to providing such exposure." Comment: Potential for inherent differences in the individuals who were selected to participate in the program.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

69. Hayward KS, Weber LM. A community partnership to prepare nursing students to respond to domestic violence. Nurs Forum. 2003;38(3):5–10.

Entry	Judgement	Support for judgement
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Random sequence generation (selection bias)	High risk	Quote: "All senior students at ISU are invited to participate in the Domestic Violence Partnership Project, Leadership Clinical Option, in the Nursing Leadership practicum course. Participation is not mandatory; to date, each semester 8 to 10 students (40%-50% of those eligible) have participated." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "All senior students at ISU are invited to participate in the Domestic Violence Partnership Project, Leadership Clinical Option, in the Nursing Leadership practicum course. Participation is not mandatory; to date, each semester 8 to 10 students (40%-50% of those eligible) have participated." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "All senior students at ISU are invited to participate in the Domestic Violence Partnership Project, Leadership Clinical Option, in the Nursing Leadership practicum course. Participation is not mandatory; to date, each semester 8 to 10 students (40%-50% of those eligible) have participated." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "Regular meetings are held with students and the interdisciplinary team to reflect on experiences and their meaning in working with individuals and families experiencing violence. Participating students complete an Excellence in Leadership project, a written proposal and paper, as part of the experience." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Participation is not mandatory; to date, each semester 8 to 10 students (40%-50% of those eligible) have participated." Comment: Portions of the study were not completed by all program participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "...each semester 8 to 10 students (40%-50% of those eligible) have participated." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "Regular meetings are held with students and the interdisciplinary team to reflect on experiences and their meaning in working with individuals and families experiencing violence." Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: "...each semester 8 to 10 students (40%-50% of those eligible) have participated." Comment: Potential for inherent differences in the individuals who self-selected to participate in the program.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

### Leadership Programs

70. Bridges J, Fuller A. Creating learning environments for compassionate care: A programme to promote compassionate care by health and social care teams. Int J Older People Nurs. 2015;10(1):48–58.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "The programme focuses on using workplace learning to promote change at unit/ward/team level by enabling the development of leadership and team relational practices, which are also designed to enhance the capacity of individual team members to relate to older people" Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "The programme focuses on using workplace learning to promote change at unit/ward/team level by enabling the development of leadership and team relational practices, which are also designed to enhance the capacity of individual team members to relate to older people" Comment: No randomization

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordon AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Blinding of participants and personnel (performance bias)	High risk	Quote: “The programme focuses on using workplace learning to promote change at unit/ward/team level by enabling the development of leadership and team relational practices, which are also designed to enhance the capacity of individual team members to relate to older people” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “The programme focuses on using workplace learning to promote change at unit/ward/team level by enabling the development of leadership and team relational practices, which are also designed to enhance the capacity of individual team members to relate to older people” Comment: Unable to blind outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.

71. Bridges J, May C, Fuller A, et al. Optimising impact and sustainability: A qualitative process evaluation of a complex intervention targeted at compassionate care. BMJ Qual Saf. 2017;26(12):970–977.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “The CLECC intervention was introduced to four inpatient wards in two general hospitals in England in 2015.” Comment: No randomization – self control
Allocation concealment (selection bias)	High risk	Quote: “The CLECC intervention was introduced to four inpatient wards in two general hospitals in England in 2015.” Comment: No randomization – self control.
Blinding of participants and personnel (performance bias)	High risk	Quote: “The CLECC intervention was introduced to four inpatient wards in two general hospitals in England in 2015.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Individual face-to-face semi-structured interviews were undertaken with staff over a 12-month

		<p>period beginning at the outset of the implementation period followed by two further interview rounds (at 3–6 months and 7–12 months). Process evaluation guided by normalization process theory.”</p> <p>Comment: No information on blinding of outcome assessments.</p>
Incomplete outcome data addressed (attrition bias)	Low risk	<p>Quote: “In total, 47 interviews were conducted with ward managers. Thirteen people were interviewed once, two people twice and ten people three times. Eleven people declined further interviews after one interview and two people after two interviews. Two study days and five action-learning sets were observed in full.”</p> <p>Comment: Portions of the study were not completed by all program participants.</p>
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

72. Bridges J, Pickering RM, Barker H, et al. Implementing the Creating Learning Environments for Compassionate Care (CLECC) programme in acute hospital settings: a pilot RCT and feasibility study. HS&DR. 2018;6(33):1–196.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	<p>Quote: “Ward teams (i.e. clusters) were randomly allocated following baseline data collection to participate in the intervention or act as control. Randomisation was stratified by hospital and by ward type [medicine for older people (MOP) or surgical]. Randomisation was accomplished using the ralloc command in Stata® 12 (StataCorp LP, College</p>

		Station, TX, USA) and conducted by the study statistician” Comment: Randomized trial.
Allocation concealment (selection bias)	Low risk	Quote: “Ward teams (i.e. clusters) were identified and recruited before randomisation. Clusters were randomly allocated to a group following baseline data collection by team members not involved in data collection.” Comment: Allocation concealment described.
Blinding of participants and personnel (performance bias)	Low risk	Quote: “At follow-up, researchers conducting observations of the quality of staff–patient interactions were recruited from outside the core research team and not informed of allocation. It was not possible to conceal allocation from ward team nursing staff. Patients and visitors were not informed of allocation. Researchers gathering questionnaire data at follow-up and involved in qualitative interviewing were aware of ward allocation” Comment: Some blinding.
Blinding of outcome assessment (detection bias)	High risk	Quote: “Researchers involved in distributing and helping patients and visitors with questionnaire completion were not blinded to ward allocation. Blinding of patients and visitors to ward allocation appeared successful, although strategies to blind researchers gathering data need further development in a future trial.” Comment: Unable to blind outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “Six ward nursing teams across two hospitals took part in the study, with three ward teams in each hospital. Ward leaders in all of the three nominated teams in Hospital A agreed to take part on behalf of their team. Two ward leaders in Hospital B agreed to take part, but a third ward leader nominated in Hospital B declined.” Comment: No clear attrition.
Selective reporting (reporting bias)	Low risk	Comment: All outcomes reported.
Other Bias: (small sample size)	High risk	Quote: “Insufficient information was available at the outset of this study to enable power calculations that informed sample size... The research to date has focused on nursing teams in hospital settings.”

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		Comment: There was no certainty that any apparent positive effects were not produced by chance alone, rather than the impact of the CLECC intervention. No claims can be made about the generalisability of the findings to other types of team or other settings.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.

73. Dewar B, Mackay R. Appreciating and developing compassionate care in an acute hospital setting caring for older people. Int J Older People Nurs. 2010;5:299–308.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Acute hospital setting, caring for older people.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	“Acute hospital setting, caring for older people.” Comment: No randomization
Blinding of participants and personnel (performance bias)	High risk	Quote: “Acute hospital setting, caring for older people.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: Appreciative action research informed the development and evaluation of the project.” Comment: Unable to blind outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

74. Dewar B, Cook F. Developing compassion through a relationship centred appreciative leadership programme. Nurse Educ Today. 2014;34(9):1258–1264.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “A total of 86 nurses (approximately 10% of current nursing workforce within the hospital) across one acute hospital in a rural part of Scotland were invited to take part.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “A total of 86 nurses (approximately 10% of current nursing workforce within the hospital) across one acute hospital in a rural part of Scotland were invited to take part.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “A total of 86 nurses (approximately 10% of current nursing workforce within the hospital) across one acute hospital in a rural part of Scotland were invited to take part.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “The methods comprised... a staff culture questionnaire... on-going reflections following action learning...descriptions of staff reported developments...case studies...short reflection on changed behavior...staff interviews” Comment: Unable to blind outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “Attendance on the programme was excellent. The total number of staff who completed the programme was 83/97%. Long term absence was the main reason for not being able to complete the programme” Comment: Most staff completed the program.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.



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Other Bias: (social-desirability)	High risk	Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

75. Dewar B, MacBride T. Developing Caring Conversations in care homes: an appreciative inquiry. Health Soc Care Community. 2017;25(4):1375–1386.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “The study took place over 10 months in 2013–2014 in one care home in Scotland, comprising of four units which was registered for 72 residents and employed 100 staff.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “The study took place over 10 months in 2013–2014 in one care home in Scotland, comprising of four units which was registered for 72 residents and employed 100 staff.” Comment: No randomization
Blinding of participants and personnel (performance bias)	High risk	Quote: “The study took place over 10 months in 2013–2014 in one care home in Scotland, comprising of four units which was registered for 72 residents and employed 100 staff.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “The study used the approach of appreciative inquiry to develop Caring Conversations in the care home setting. All data collection took place within the care home setting, either in the open areas or in individual rooms. An iterative process of data analysis involved two researchers reading and re-reading data extracts and mapping these to the Caring Conversations.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “The study took place over 10 months in 2013–2014 in one care home in Scotland, comprising of four units which was registered for 72 residents and employed 100 staff.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

76. Saab MM, Drennan J, Cornally N, et al. Impact of a compassionate care leadership programme. British Journal of Nursing. 2019;28(11):708-714.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “non-probability convenience sampling was used to recruit participants...this sampling strategy is known to increase the risk of self-selection bias”. Comment: 168 leaders completed 3 days of the Leaders for Compassionate Care Programme (LCCP). All were invited to participate in the study, which was a cross-sectional descriptive survey. No randomization was done during the programme implementation.
Allocation concealment (selection bias)	High risk	Comment: 168 leaders completed 3 days of the Leaders for Compassionate Care Programme (LCCP). All were invited to participate in the study, which was a cross-sectional descriptive survey. No randomization was done during the programme implementation.

Blinding of participants and personnel (performance bias)	High risk	Comment: 168 leaders completed 3 days of the Leaders for Compassionate Care Programme (LCCP). All were invited to participate in the study, which was a cross-sectional descriptive survey. No randomization was done during the programme implementation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "A cross-sectional descriptive survey incorporating a modified retrospective pre-test design was used. Participants were provided with the option of either returning the questionnaire by post or responding via the web-based survey platform." Comment: No information provided on blinding of outcome assessment.
Incomplete outcome data addressed (attrition bias)	High risk	Comment: Of the 168 leaders who received the LCCP training, only 79 participants completed the follow up survey, resulting in attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	Unclear risk	Comment: Participants were aware of the study, which could have affected their responses in a way that would be viewed favorably by others. No information available on whether responses were anonymous.
Other Bias: (maturation bias)	High risk	Comment: With the follow-up data being collected 4 months after the programme, natural change/improvement in time may have influenced results.
Other Bias: (other)	High risk	Quote: "It is worth considering conducting a randomized controlled trial in order" Comment: Results were attributed to the program, but there was no control arm.
Other Bias: (small sample size)	High risk	Quote: "...approximately half of the nursing and midwifery leaders who undertook the LCCP participated in the study, compromising the generalizability of findings" Comment: Small sample size means possibility that results are of limited generalizability.

## End of Life Care

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

77. Chan B. An evaluation of the influence of the CARE (Compassion and Respect at the End-of-Life) Program on Registered Nurses' Knowledge and Comfort About End-of-Life Care and Care Delivery for Patients with Life-Limiting Illnesses [dissertation]. Azusa CA: Azusa Pacific University; 2018.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "The PI ... recruited 51 nurses to participate in the project. Participants were self-selected... The study recruited participants using convenience sampling without randomization." Comment: No randomization –pre post.
Allocation concealment (selection bias)	High risk	Quote: "The study recruited participants using convenience sampling without randomization." Comment: No randomization
Blinding of participants and personnel (performance bias)	High risk	Quote: "The study recruited participants using convenience sampling without randomization." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "All survey entries were anonymous and did not require personal information. A two-digit code was assigned to each participant by the PI. This coding method was used to identify the matched pairs for pre-test and post-test score comparison purposes only. No other identifier was used." Comment: Outcome assessments were anonymous.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "There were 51 participants who agreed and consented to participate in the study initially. But only 24 participants completed the post-tests and returned them..." Comment: Portions of the study were not completed by all program participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "The sample size of the study was small with a restricted population (nurses from one hospital)." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordon AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. *Acad Med*.

Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: "Participants were self-selected." Comment: May be inherent differences in individuals who self-selected to participate - may be more motivated to improve their knowledge and comfort about end of life care.
Other Bias: (other)	Unclear risk	Quote: "Study results would be stronger if the study design had a control group." Comment: Results were attributed to the program, but there was no control arm.

78. Moore KJ, Candy B, Davis S, et al. Implementing the compassion intervention, a model for integrated care for people with advanced dementia towards the end of life in nursing homes: A naturalistic feasibility study. *BMJ Open*. 2017;7:e015515.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "Two nursing homes in northern London, UK. Thirty residents with advanced dementia were assessed..." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "The study took place over 10 months in 2013–2014 in one care home in Scotland, comprising of four units which was registered for 72 residents and employed 100 staff." Comment: No randomization
Blinding of participants and personnel (performance bias)	High risk	Quote: "Two nursing homes in northern London, UK. Thirty residents with advanced dementia were assessed of whom nine were recruited for data collection; four of these residents' family members were interviewed." Comment: Unable to blind participation.

Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Process and outcome data were collected. Symptoms were recorded monthly for recruited residents. Semi-structured interviews were conducted at 7, 11 and 15 months with nursing home staff and external healthcare professionals and at 7 months with family carers. ICL hours were costed using Department of Health and Health Education England tariffs.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Quote: “Two nursing homes in northern London, UK. Thirty residents with advanced dementia were assessed of whom nine were recruited for data collection; four of these residents’ family members were interviewed. Twenty-eight nursing home and external healthcare professionals participated in interviews at 7 (n=19), 11 (n=19) and 15 months (n=10).” Comment: Exploratory study
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “As an exploratory study the sample size was small and we did not aim to detect differences or calculate a sample size for future studies.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

### Patient Population Targeted Programs

79. Carson NE, Wise HH, Jacques PF. Caregivers Are Heroes: An innovative educational strategy designed to promote compassion/caring in health professional students. J Allied Health. 2017;46(2):117–123.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “The sample population consisted of 51 caregivers and 170 students enrolled in three graduate programs during the 2014 summer semester.” Comment: No randomization – pre post.
Allocation concealment (selection bias)	High risk	Quote: “The sample population consisted of 51 caregivers and 170 students enrolled in three graduate programs during the 2014 summer semester. Students conducted caregiver interviews (CGI) in interprofessional groups of 3 to 4 students” Comment: No randomization – pre post.
Blinding of participants and personnel (performance bias)	High risk	Quote: “The sample population consisted of 51 caregivers and 170 students enrolled in three graduate programs during the 2014 summer semester. Students conducted caregiver interviews (CGI) in interprofessional groups of 3 to 4 students” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Pre- and post-CGI surveys were designed to measure change in student attitudes and perceptions from the CGI experience. Questions were taken from the Attitude Towards Helping Others (AHO) scale and the Zarit Burden Interview Screen (ZBIS).” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

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80. Baran Stecker M. The Evaluation of the Effectiveness of a Structured Educational Program on Nurses' Assessment Ratings in an Epilepsy Monitoring Unit [dissertation]. Morgantown, WV: West Virginia University; 2011.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "There were 25 nurses working on the EMU at the time of this study. A total of 120 nurse-patient encounters were analyzed as part this study." Comment: No randomization – pre post.
Allocation concealment (selection bias)	High risk	Quote: "There were 25 nurses working on the EMU at the time of this study. A total of 120 nurse-patient encounters were analyzed as part this study." Comment: No randomization – pre post.
Blinding of participants and personnel (performance bias)	High risk	Quote: "There were 25 nurses working on the EMU at the time of this study. A total of 120 nurse-patient encounters were analyzed as part this study." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "An investigator-developed tool, the Nursing Assessment Rating Scale, was used to quantitatively measure the nursing assessment and patient interactions using videotapes that captured specific clinical events that occurred in the EMU." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "There were 25 nurses working on the EMU at the time of this study. A total of 120 nurse-patient encounters were analyzed as part this study. Findings were based on a single centre..." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.



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Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: Potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (gender bias; other selection bias)	Unclear risk	Quote: “81% Female” Comment: Gender- related factors may have affected study outcomes.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

### Studentships

82. Jeste DV, Avanzino J, Depp CA, et al. Effect of short-term research training programs on medical students’ attitudes toward aging. Gerontol Geriatr Educ. 2018;39(2):214–222.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “A total of 178 first-year medical students who completed the MSTAR and M-STREAM programs from 2011 to 2016...” Comment: No randomization – pre/post.
Allocation concealment (selection bias)	High risk	Quote: “A total of 178 first-year medical students who completed the MSTAR and M-STREAM programs from 2011 to 2016...” Comment: No randomization – pre/post.
Blinding of participants and personnel (performance bias)	High risk	Quote: “A total of 178 first-year medical students who completed the MSTAR and M-STREAM programs from 2011 to 2016...” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “We used the Carolina Opinions on Care of Older Adults (COCOA), a standardized and validated scale with strong inter-item reliability for assessment of medical and health professional students’ attitudes toward older adults.” Comment: No information on blinding of outcome assessments.

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Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “A total of 178 first-year medical students who completed the MSTAR and M-STREAM programs from 2011 to 2016, and 149 completed the pre-program COCOA. Of the 149 who completed the pre-program COCOA, 134 students completed both the pre- and post-program COCOA.” Comment: Portions of the study were not completed by all program participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “A total of 178 first-year medical students who completed the MSTAR and M-STREAM programs from 2011 to 2016, and 149 completed the pre-program COCOA. Of the 149 who completed the pre-program COCOA, 134 students completed both the pre- and post-program COCOA.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (gender bias; other selection bias)	Unclear risk	Quote: “A majority of the participating students were female, Caucasian, from Top-20 medical schools, enrolled in MSTAR, and completed clinical research projects” Comment: Gender-and other related factors may have affected study outcomes.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

83. Lefresne S, Nielsen D, Fairchild A. The Cross Cancer Institute Multidisciplinary Summer Studentship in Palliative and Supportive Care in Oncology: Teaching students to see through patients' eyes. Support Care in Cancer. 2011;19(3):403–408.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “The Cross Cancer Institute (CCI) Multidisciplinary Summer Studentship in Palliative and Supportive Care in Oncology is an elective, inter-professional 6-week summer placement.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “The Cross Cancer Institute (CCI) Multidisciplinary Summer Studentship in Palliative and Supportive Care in Oncology is an elective, inter-professional 6-week summer placement.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “The Cross Cancer Institute (CCI) Multidisciplinary Summer Studentship in Palliative and Supportive Care in Oncology is an elective, inter-professional 6-week summer placement.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Preceptor-facilitated “fireside chats” are an opportunity to reflect on weekly experiences, inter-professional roles, and collaborative practice. An exploratory investigation or research project is required, as well as a 40-min presentation.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

## ***Teaching methods***

### ***Self-Reflection***

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

84. Hawthornthwaite L, Roebbotham T, Lee L, O'dowda M, Lingard L. Three sides to every story: Preparing patient and family storytellers, facilitators, and audiences. Perm J. 2018;22:17–119.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "Recruitment of storytellers was based on a willingness to share information about their experiences, passion for improving the patient experience, ability to use their personal experience constructively, respect for diversity and differing opinions, comfort with public speaking, and openness to feedback. Audiences were composed of new nursing graduates, as well as experienced nurses who were newly hired by our center." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "Recruitment of storytellers was based on a willingness to share information about their experiences, passion for improving the patient experience, ability to use their personal experience constructively, respect for diversity and differing opinions, comfort with public speaking, and openness to feedback. Audiences were composed of new nursing graduates, as well as experienced nurses who were newly hired by our center." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Recruitment of storytellers was based on a willingness to share information about their experiences, passion for improving the patient experience, ability to use their personal experience constructively, respect for diversity and differing opinions, comfort with public speaking, and openness to feedback. Audiences were composed of new nursing graduates, as well as experienced nurses who were newly hired by our center." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "We surveyed audience members at nursing orientation events and interviewed the patient storytellers who shared their stories. The survey was distributed to all audience members, along with a letter of information. Inductive thematic analysis was performed to organize the data into conceptual categories." Comment: No information on blinding of outcome

		assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “Initial contact with the 33 storytellers involved in the curriculum was made via an e-mail sent by the student researcher. Twenty-six storytellers responded to the invitation to participate, and 25 could be scheduled for an interview. No refusals to participate were made. Of the 542 respondents to our survey collected from June 2014 to February 2017...” Comment: Portions of the study were not completed by the storytellers; no attrition for the audience.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: “Recruitment of storytellers was based on a willingness to share information about their experiences, passion for improving the patient experience, ability to use their personal experience constructively, respect for diversity and differing opinions, comfort with public speaking, and openness to feedback.” Comment: May be inherent differences in individuals who were selected to participate - may be more motivated to forge a connection between health professionals, patients, and families.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

85. Adamson E, Dewar B. Compassionate care: Student nurses' learning through reflection and the use of story. Nurse Educ Pract. 2015;15(3):155–161.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "A group of 37 students were enrolled on the module. These were both pre-registration and registered nurses." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "A group of 37 students were enrolled on the module. These were both pre-registration and registered nurses. Stories gathered within clinical practice were used to stimulate reflective learning as part of a nursing module that teaches recognition of acute illness and deterioration at Edinburgh Napier University." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "A group of 37 students were enrolled on the module. These were both pre-registration and registered nurses." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "Students listened to stories which included experiences of staff, students, patients and relatives and related these to their own experiences in practice." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "All 37 listened to the podcasts, 33 students viewed the stories on up to twelve occasions, however only 16 students added posts to the online discussions." Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "The group of students who participated in this nursing module was relatively small and studying adult nursing. Although all of the students chose to listen to the podcasts only a small number contributed to the online discussions" Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

86. Clandinin DJ, Cave MT. Creating pedagogical spaces for developing doctor professional identity. Medical Educ. 2008;42:765–770.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “They invited residents to write a parallel chart on one clinical encounter each week for 10 weeks and to attend bi-weekly sessions to share and discuss their parallel charts with participating residents and the two researchers.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “They invited residents to write a parallel chart on one clinical encounter each week for 10 weeks and to attend bi-weekly sessions to share and discuss their parallel charts with participating residents and the two researchers.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “They invited residents to write a parallel chart on one clinical encounter each week for 10 weeks and to attend bi-weekly sessions to share and discuss their parallel charts with participating residents and the two researchers.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Each resident wrote 10 parallel charts over 10 weeks. All residents met bi-weekly as a group with two researchers to narratively inquire into the stories told in their charts. Exit interviews on what they had learned about their experiences were also scheduled.”

		Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “Each resident wrote 10 parallel charts over 10 weeks. All residents met bi-weekly as a group with two researchers to narratively inquire into the stories told in their charts.” Comment: All participants completed the study.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “This paper draws on a 2006 study carried out with four family medicine residents into the potential of writing, sharing and inquiring into parallel charts in order to help develop doctor identity” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

87. Scamell M, Hanley T. Innovation in preregistration midwifery education: Web based interactive storytelling learning. Midwifery. 2017;50:93–98.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Cross sectional sample of first year undergraduate Midwifery students (n=111).” Comment: No randomization.



Allocation concealment (selection bias)	High risk	Quote: “the online role-play environment...was created for two cohorts of undergraduate midwifery students in the academic years 2014/15 and 2015/16.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Cross sectional sample of first year undergraduate Midwifery students (n=111).” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “The students were encouraged to be actively involved in the production of the audit documents, publications and conference presentations. The second data source ... comes from... Student Midwife Evaluation of Online Learning Effectiveness (SMEOL).” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “68 students took part in the web based interactive storytelling learning. All online role-play posts made during the academic years 2014/15 were analyzed for the audit. All the students who took part in the second running of the web based interactive storytelling learning in the academic year 2015/16 were invited to complete the education evaluation tool. 43 of the 58 students who took part in the online role-play completed the questionnaire.” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “68 students took part in the web based interactive storytelling learning. All online role-play posts made during the academic years 2014/15 were analyzed for the audit. All the students who took part in the second running of the web based interactive storytelling learning in the academic year 2015/16 were invited to complete the education evaluation tool. 43 of the 58 students who took part in the online role-play completed the questionnaire.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.

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Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

88. Waugh A, Donaldson J. Students' perceptions of digital narratives of compassionate care. Nurse Educ Pract. 2016;17:22–29.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “A convenience sample was used. All students present at a second year tutorial were invited to participate. All students agreed to participate...” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “A convenience sample was used. All students present at a second year tutorial were invited to participate. Four short stories in different media formats were used. Data was gathered from an evaluation questionnaire...” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “A convenience sample was used. All students present at a second year tutorial were invited to participate. All students agreed to participate...” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Students (n = 13) listened to all four stories and provided feedback on their learning from these using the questionnaire. Data were analyzed using a 6-phase approach of thematic analysis.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.

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Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “Students (n = 13) listened to all four stories and provided feedback on their learning from these using the questionnaire.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

89. Begley AM, Glackin M, Henry R. Tolstoy, stories, and facilitating insight in end of life care: Exploring ethics through vicarious experience. Nurse Educ Today. 2011;31:516–520.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Tolstoy's book was used with post-graduate nursing students (n=24) undertaking an ethics module.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Tolstoy's book was used with post-graduate nursing students (n=24) undertaking an ethics module. Students were given the novella as part of their pre-course reading so that it could be used as a stimulus for discussion throughout the module.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Tolstoy's book was used with post-graduate nursing students (n=24) undertaking an ethics module.” Comment: Unable to blind participation.

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Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Students were asked to read the novella and discuss the insights and understanding that they gained and the implications these might have for their nursing practice. Comments from evaluations were analyzed and significant themes emerged.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “Tolstoy's book was used with post-graduate nursing students (n=24) undertaking an ethics module.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

90. Deloney LA, Graham CJ. Wit: Using drama to teach first-year medical students about empathy and compassion. Teach Learn Med. 2003;15(4):247–251.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “...the ICM course was able to “buy the house” for 3 nights to send all first-year medical students and their faculty to a performance.” Comment: No randomization.

Allocation concealment (selection bias)	High risk	Quote: "...the ICM course was able to "buy the house" for 3 nights to send all first-year medical students and their faculty to a performance. To prepare students for the performance, a pre-play lecture to the ICM class was delivered. Faculty were briefed on the project 2 months in advance." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "...the ICM course was able to "buy the house" for 3 nights to send all first-year medical students and their faculty to a performance." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "Post-play discussions, or "talk backs," followed each performance. At the end of the evenings, each member of the audience was asked to complete an evaluation survey." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: "A total of 138 first-year students (99% of the class) ...attended an ICM performance of <i>Wit</i> . An evaluation was completed and returned by 138 first-year medical students (100% response rate). All students who attended the play answered the journal questions." Comment: All participants completed the study
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "A total of 138 first-year students (99% of the class) attended an ICM performance of <i>Wit</i> ." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.

Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.
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91. Adam D, Taylor R. Compassionate care: Empowering students through nurse education. Nurse Educ Today. 2014;34(9):1242–1245.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “A second year personal tutor group of thirty students in the adult undergraduate nursing programme took part in the teaching sessions. The facilitator was also their personal tutor for the duration of their programme; the group thus formed a learning community.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “A second year personal tutor group of thirty students in the adult undergraduate nursing programme took part in the teaching sessions. The facilitator was also their personal tutor for the duration of their programme; the group thus formed a learning community. The teaching and learning strategy discussed below is delivered within a module entitled ‘Understanding self in relation to others in professional practice’.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “A second year personal tutor group of thirty students in the adult undergraduate nursing programme took part in the teaching sessions. The facilitator was also their personal tutor for the duration of their programme; the group thus formed a learning community.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Rather than planning the module delivery in advance, the tutor and students jointly explored reflective accounts of their individual experiences of building relationships in practice to discover the gaps in their knowledge and skills that should be addressed through the sessions to follow.” Comment: No information on blinding of outcome assessments.

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Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "A second year personal tutor group of thirty students in the adult undergraduate nursing programme took part in the teaching sessions." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

92. Wiklund Gustin L, Wagner L. The butterfly effect of caring - Clinical nursing teachers' understanding of self-compassion as a source to compassionate care. Scand J Caring Sci. 2013;27(1):175–183.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "Four persons were voluntarily recruited among clinical nursing teachers." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "Four persons were voluntarily recruited among clinical nursing teachers. The project was based on principles for experiential and reflective learning." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Four persons were voluntarily recruited among clinical nursing teachers." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "The project was based on principles for experiential and reflective learning." Comment: No information on blinding of outcome assessments.

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Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “The study was carried out in a small group. A small group is vulnerable when it comes to a project that occurs over time. In this particular study, there was originally a fifth participant who was absent the first session, and thus excluded from the project.” Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “Four persons were voluntarily recruited among clinical nursing teachers.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: “Four persons were voluntarily recruited among clinical nursing teachers.” Comment: May be inherent differences in individuals who volunteered to participate - may be more motivated to understand self-compassion as a source to providing compassion.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

93. Reisman AB, Hansen H, Rastegar A. The craft of writing: A physician-writer's workshop for resident physicians. J Gen Intern Med. 2006;21(10):1109–1111.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “All 114 postgraduate year (PGY)-2 through 4 internal medicine and medicine/pediatric residents from 3 Yale-New Haven Medical Center training programs received a letter that described the workshop and invited them to submit a piece of writing (fiction or



		nonfiction, up to 4,000 words, on the topic “being a doctor”). Eighteen expressed interest and 15 submitted pieces. All 15 were invited to participate...” Comment: No randomization - pre/post.
Allocation concealment (selection bias)	High risk	Quote: “A group of 15 residents from 3 training programs affiliated with 1 institution. The authors collected qualitative data through 2 focus group discussions.” Comment: No randomization – pre/post
Blinding of participants and personnel (performance bias)	High risk	Quote: “A group of 15 residents from 3 training programs affiliated with 1 institution.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “The authors collected qualitative data through 2 focus group discussions. In the first focus group, 1 month before the workshop, we solicited participants’ motivations and expectations for the workshop. The second focus group (4 months after the workshop) centered on participants’ impressions of how the workshop affected their professional and personal lives as well as the environment of the internal medicine department. Our analysis was exploratory in nature and was done through an iterative consensus-building process” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “Of the 15 residents who participated in the workshop, 10 attended each focus group.” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “A group of 15 residents from 3 training programs affiliated with 1 institution.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.

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Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (gender bias; selection bias)	Unclear risk	Quote: "All 15 were invited to participate; 10 were female." Comment: Gender-related factors may have affected study outcomes.
Other Bias: (other)	Unclear risk	Quote: "All 114 postgraduate year (PGY)-2 through 4 internal medicine and medicine/pediatric residents from 3 Yale-New Haven Medical Center training programs received a letter that described the workshop and invited them to submit a piece of writing... Eighteen expressed interest and 15 submitted pieces. All 15 were invited to participate." Comment: May be inherent differences in individuals who expressed an interest - may be more motivated to deepen interactions with peers and patients.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

94. Fresa-Dillon KL, Cuzzolino RG, Veit KJ. Professionalism: Orientation exercises for incoming osteopathic medical students and developing class vision statements. J Am Osteopath Assoc. 2004;104(6):251–259

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "...vision statements created by the Philadelphia College of Osteopathic Medicine classes of 2003, 2004, 2005, and 2006." Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: "The classes of 2003 and 2004 were assigned readings focusing on professional issues to be completed during the summer preceding the first academic term. The classes of 2005 and 2006 did not have assigned summer reading before matriculation." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Each class was divided into 20 groups of approximately 12 students who discussed their thoughts over lunch. Representatives from each group met with

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		key faculty members for dinner that evening or breakfast the next morning.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “Each class was divided into 20 groups of approximately 12 students who discussed their thoughts over lunch. The appointment of a “scribe” was suggested to collate each group’s thoughts. Representatives from each group met with key faculty members for dinner that evening or breakfast the next morning. The thoughts from each group were coalesced into a class vision statement at this meeting.” Comment: Unable to blind outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

95. Jack K. The use of poetry writing in nurse education: An evaluation. Nurse Educ Today. 2015;35:e7–e10.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “A cohort of 42 first year nursing students enrolled on the BSc (Hons) Adult Nursing programme at a UK university were asked to participate in this exercise as part of the teaching for the module ‘Nursing in a Contemporary Society’.” Comment: No randomization.

Allocation concealment (selection bias)	High risk	Quote: “The cohort was given directed study time to create their poem and then in small groups of ten–twelve they were required to read out their poem and listen to their colleagues reading theirs.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “... in small groups of ten–twelve they were required to read out their poem and listen to their colleagues reading theirs. Each group was facilitated by one lecturer with an interest in arts based approaches to teaching.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “The cohort was given directed study time to create their poem and then in small groups of ten–twelve they were required to read out their poem and listen to their colleagues reading theirs. Each group was facilitated by one lecturer with an interest in arts based approaches to teaching. The following ... areas were analysed.... Student written evaluations...Qualitative follow up interviews” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “The evaluations were completed by 40 students on a voluntary basis.” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “A cohort of 42 first year nursing students enrolled on the BSc (Hons) Adult Nursing programme at a UK university were asked to participate in this exercise as part of the teaching for the module ‘Nursing in a Contemporary Society’.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.

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Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.
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96. Shapiro J, Rucker L. Can poetry make better doctors? Teaching the humanities and arts to medical students and residents at the University of California, Irvine, College of Medicine. Acad Med. 2003;78(10):953–957.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Program in Medical Humanities & Arts...the primary focus of the program has been medical students. However, required humanities- based curricular components have been introduced to both the Family Medicine and Physical Medicine & Rehabilitation residencies. Further, special events and projects... have involved community physicians, patients, nurses and other hospital staff, and members of the general public.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “The Program in Medical Humanities & Arts contains required and elective components.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “The Program in Medical Humanities & Arts at the University of California, Irvine, College of Medicine has been in existence for five years. ...the primary focus of the program has been medical students. However, required humanities- based curricular components have been introduced to both the Family Medicine and Physical Medicine & Rehabilitation residencies. Further, special events and projects... have involved community physicians, patients, nurses and other hospital staff, and members of the general public. The program director is a clinical psychologist. Approximately seven physician faculty and three nonphysician faculty are involved with the program on a regular basis. Approximately 15 physician faculty and two nonphysician faculty participate in the program in a more limited way.” Comment: Unable to blind participation.

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Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "...students are required to complete the projects, and are strongly encouraged, although not required, to share them with classmates during the group discussions." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

97. Shapiro J, Rucker L, Robitshek D. Teaching the art of doctoring: An innovative medical student elective. Med Teach. 2006;28(1):30–35.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "The Art of Doctoring was planned as a two-week third and fourth-year elective, structured over an eight-month period (October–May)." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "There were 25 small-group contact hours; an estimated 15 hours of reading; the remainder of the approximately 80 required hours was spent on completion of a variety of self-monitoring and writing assignments, as well as a personal project, and on application of course skills while in clinic and onwards." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "...a longitudinal third- and fourth-year elective, 'The Art of Doctoring.'" Comment: Unable to blind participation.

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Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “The course involved regular in-class exercises and homework assignments, as well as a personal project...class discussions... Quantitative and qualitative student evaluations.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

98. Coleman D, Willis DS. Reflective writing: The student nurse's perspective on reflective writing and poetry writing. Nurse Educ Today. 2015;35(7):906–911.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “A purposeful sampling strategy was used to recruit participants from both the BSc (Hons) Adult Nursing and Mental Health Nursing programmes.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “A qualitative study using two focus groups was employed to explore reflective writing by undergraduate nurses.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “A purposeful sampling strategy was used to recruit participants from both the BSc (Hons) Adult Nursing and Mental Health Nursing programmes.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “Two focus groups were conducted.” Comment: Unable to blind outcome assessments.
Incomplete outcome data	Low risk	Quote: “The total number of students recruited was 10

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addressed (attrition bias)		participants (n = 4, group 1; n = 6, group 2) who were all female. Only one participant was drawn from the mental health field.” Comment: The study was completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “The total number of students recruited was 10 participants.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

99. De Souza JM. Using family sculpting as an experiential learning technique to develop supportive care in nursing. A contemporary issue paper. Nurse Educ Today. 2014;34(9):1214–1218.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “...part of a post qualification course for cancer nurses...” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “The sculpt is introduced to the students with discussion around group rules and emotional safety issues as the process can trigger associations with prior experiences. Each student is given a character and some information about their character that they share with the group and some information that they do not disclose, but use to condition their responses. The characters, once in role introduce themselves and a



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		genogram is drawn to help clarify relationships. Two students are asked to be observers.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “...part of a post qualification course for cancer nurses...” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “Evaluation questionnaires and verbal feedback session offered to students.” Comment: Unable to blind outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

100. Petkari E. Building beautiful minds: Teaching through movies to tackle stigma in psychology students in the UAE. Acad Psychiatry. 2017 41:724–773.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Out of about 170 students of a BSc in Psychology program belonging to a private university in the UAE, 26 (22 female and 4 male) students participated voluntarily in the study at baseline (T1).” Comment: No randomization - pre/post.
Allocation concealment (selection bias)	High risk	Quote: “Five movies focusing on content related to mental illnesses or psychological difficulties were shown to students biweekly.” Comment: No randomization – pre/post
Blinding of participants and personnel (performance bias)	High risk	Quote: “Out of about 170 students of a BSc in Psychology program belonging to a private university in the UAE, 26 (22 female and 4 male) students participated voluntarily in the study at baseline (T1).”

Comment: Unable to blind participation.		
Blinding of outcome assessment (detection bias)	High risk	Quote: "By means of mixed methods approach, students were assessed at two time points by the Opening Minds Stigma Scale for Health Care Providers [OMS-HC] (T1-T2) and by qualitative questions only at the end of the intervention (T2). Conventional Content Analysis was used to analyze answers to the open-ended questions" Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Only 18 of them completed the assessments 10 weeks later (T2)." Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "Out of about 170 students of a BSc in Psychology program belonging to a private university in the UAE, 26 (22 female and 4 male) students participated voluntarily in the study at baseline (T1)." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (gender bias; selection bias)	Unclear risk	Quote: "Out of about 170 students of a BSc in Psychology program belonging to a private university in the UAE, 26 (22 female and 4 male)..." Comment: Gender-related factors may have affected study outcomes.
Other Bias: (other)	Unclear risk	Quote: "Out of about 170 students of a BSc in Psychology program belonging to a private university in the UAE, 26 (22 female and 4 male) students participated voluntarily in the study at baseline (T1)."

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		Comment: May be inherent differences in individuals who volunteered - may be more motivated to change stigmatizing attitudes.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

101. Arnold BL, Lloyd LS, Von Gunten CF. Physicians' reflections on death and dying on completion of a palliative medicine fellowship. J Pain Symptom Manag. 2016;51(3):633–639.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “This study is a retrospective qualitative analysis of visual reflections narratives created by physicians at the conclusion of a one year palliative medicine fellowship at San Diego Hospice and The Institute for Palliative Medicine (2006-2011).” Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: “At the end of their training, fellows were encouraged to express their thoughts and feelings about death and dying through the arts and humanities” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “This study is a retrospective qualitative analysis of visual reflections narratives created by physicians at the conclusion of a one year palliative medicine fellowship at San Diego Hospice and The Institute for Palliative Medicine (2006-2011).” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “A qualitative visual analysis was conducted on 75 images created by physicians completing a one year palliative medicine fellowship. Grounded theory principles and procedures appropriate for analyzing the large number of images in our visual narrative data set were used” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.

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Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

102. Karkabi K, Wald HS, Castel OC. The use of abstract paintings and narratives to foster reflective capacity in medical educators: A multinational faculty development workshop. Med Humanit. 2014;40:44–48.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Twenty-three family physicians or physicians-in-training from 10 countries participated in the workshop.” Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: “Twenty-three family physicians or physicians-in-training from 10 countries participated in the workshop.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Twenty-three family physicians or physicians-in-training from 10 countries participated in the workshop.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “In the final part of the workshop, the participants were asked to share their feedback and take-home messages with the group. The discussion was recorded and transcribed. Emerging themes were coded by the authors independently and discussed to achieve mutual agreement.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.

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Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “Twenty-three family physicians or physicians-in-training from 10 countries participated in the workshop.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

103. Newell GC, Hanes DJ. Listening to music: The case for its use in teaching medical humanism. Acad Med 2003;78(7):714–719.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Eight-session “music and medicine” course for residents given at their institution as part of an ongoing humanism-in-medicine initiative. Fifteen to 20 residents attended each session.” Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: “Fifteen to 20 residents attended each session.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Eight-session “music and medicine” course for residents given at their institution as part of an ongoing humanism-in-medicine initiative. Fifteen to 20 residents attended each session.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “At the end of the eight weeks, a questionnaire was collected from all the participants.” Comment: No information on blinding of outcome assessments.

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Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

104. Penson RT, Schapira L, Mack S, Stanzler M, Lynch TJ. Connection: Schwartz Center Rounds at Massachusetts General Hospital Cancer Center. Oncologist. 2010;15:760–764.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Currently, >50,000 clinicians attend monthly Schwartz Rounds at 195 sites in 31 states, numbers that are rapidly growing.” Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: “Currently, >50,000 clinicians attend monthly Schwartz Rounds at 195 sites in 31 states, numbers that are rapidly growing.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Currently, >50,000 clinicians attend monthly Schwartz Rounds at 195 sites in 31 states, numbers that are rapidly growing.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “The Rounds focus on caregivers’ experiences, and encourage staff to share insights, own their vulnerabilities, and support each other.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.

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Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

105. Farr M, Barker R. Can staff be supported to deliver compassionate care through implementing Schwartz Rounds in community and mental health services? Qual Health Res. 2017;27(11):1652–1663.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Schwartz Rounds are evidence-based interdisciplinary discussions where health care staff can share experiences of the emotional and social aspects of care, to support improvements in patient care” Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: “Schwartz Rounds are evidence-based interdisciplinary discussions where health care staff can share experiences of the emotional and social aspects of care, to support improvements in patient care.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Schwartz Rounds are evidence-based interdisciplinary discussions where health care staff can share experiences of the emotional and social aspects of care, to support improvements in patient care.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Three community and mental health case studies of Round implementation, involving Round observations ( $n = 5$ ), staff interviews ( $n = 22$ ), and post-Round evaluation sheets ( $n = 206$ ).” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.

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Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

106. Gishen F, Whitman S, Gill D, Barker R, Walker S. Schwartz Centre Rounds: a new initiative in the undergraduate curriculum - what do medical students think? BMC Med Educ. 2016;16:246.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "Two 60-minute pilot Schwartz Centre Rounds (SCRs) were undertaken at a UK medical school. The first SCR involved Year 5 medical students and was integrated into an introductory week during the start of their academic year. The second pilot SCR took place with Year 6 students and followed the same format as the first. Students' attendance at the pilot SCRs was encouraged but not mandated." Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: "Two 60-minute pilot SCRs were undertaken at a UK medical school. Students' attendance at the pilot SCRs was encouraged but not mandated." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Students' attendance at the pilot SCRs was encouraged but not mandated. A multidisciplinary panel of doctors and nurses presented a series of stories with the theme "A Patient I Will Never Forget". Subsequently, two facilitators who had attended training on leading SCRs led a confidential whole group discussion lasting 35 minutes." Comment: Unable to blind participation.



Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “A simple, evaluative questionnaire based on the feedback form employed by the Point of Care Foundation was administered immediately after each student SCR. Following the first SCR, seven students from Year 5 volunteered to participate in a focus group.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Quote: “Of the 334 Year 5 students invited to the first SCR, 258 students attended (77 %) and 247 of these participants (96 %) answered the questionnaire. Of the 343 Year 6 students invited to the second pilot, 180 attended (52 %) and 126 of these participants (70 %) answered the questionnaire.” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: The students who elected to participate in the focus groups may have been more motivated to enhance their communication and compassion.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

## Simulation

107. Loomis J, De Natale ML. Teaching compassion for impoverished patients through simulation. Nursing. 2017;47(8):20–23.

Entry	Judgement	Support for judgement
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Random sequence generation (selection bias)	High risk	Quote: “In this poverty simulation, participants came together one Saturday afternoon.” Comment: No randomization – pre post
Allocation concealment (selection bias)	High risk	Quote: “Approximately 110 people participated in the afternoon simulation. Participants were assigned to a predefined role in one of 26 family groups or various community resource centers.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Approximately 110 people participated in the afternoon simulation. Participants were assigned to a predefined role in one of 26 family groups or various community resource centers.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “During debriefing, participants were asked: What did you learn from this experience and how will it change your interaction with patients and clients in the future? Their responses were grouped into five major themes and summarized.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

108. Johnson KE, Guillet N, Murphy L, Horton SEB, Todd AT. “If only we could have them walk a mile in their shoes”: A community-based poverty simulation exercise for baccalaureate nursing students. J Nurs Educ. 2015;54(9):S116–S119.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “This article describes one such exercise, <i>In Their Shoes</i> , that was developed by a team of undergraduate public health nursing faculty at a large public university in the southwestern United States” Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: “Students were assigned a case scenario and sent out into the community in small groups of three to five students on a “scavenger hunt” to acquire resources for the person or family in their scenario.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Students were assigned a case scenario and sent out into the community in small groups of three to five students on a “scavenger hunt” to acquire resources for the person or family in their scenario.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Students shared their reflections from their case scenario, and the group wrote down five insights or experiences that were common across case scenarios.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

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109. Mal FF. A Comparison of Methodologies Used to Teach End-of-Life Care to Baccalaureate Nursing Students: Which Provides the Best Outcome? [dissertation]. Madison, NJ: Drew University; 2016.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Students were randomly placed in either the case study Group A, or the simulation Group B. Both groups attended a one hour information seminar." Comment: No details on randomization procedure .
Allocation concealment (selection bias)	High risk	Quote: "Students were randomly placed in either the case study Group A, or the simulation Group B. Both groups attended a one hour information seminar." Comment: No information on allocation concealment.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Students were randomly placed in either the case study Group A, or the simulation Group B. Both groups attended a one hour information seminar." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "A computerized twenty-seven question exam was developed by the Health Education Systems, Inc. researcher developed Case Study and Simulation Evaluation Tool was used to evaluate student perceptions of the educational experiences." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "Student research group initially consisted of thirty students. Fifteen for the case study group and fifteen for the simulation group. The actual number of students who participated was twenty-four." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.

Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
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110. Betcher D. Elephant in the room project: Improving caring efficacy through effective and compassionate communication with palliative patients. Medsurg Nurs. 2010;19(2):101–115.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: “An educational project at a 208-bed hospital in the south-west United States. Eight nurses from the hospital participated in this project.” Comment: No randomization – pre post
Allocation concealment (selection bias)	High risk	Quote: “The nurses were divided into pairs to increase their comfort level and allowed to utilize each other's knowledge during the simulation.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “An educational project at a 208-bed hospital in the south-west United States.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “After all conversations were completed, the videotaped sessions were watched one at a time to allow debriefing. Outcomes for the nurses were measured using the Caring Efficacy Scale (CES)...” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “All nurse participants for the specific scenario, "patients" and "family members," and facilitators participated in the debriefing.” Comment: All participants completed the study.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “Eight nurses from the hospital participated in this project.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.

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Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

111. Ross AJ, Anderson JE, Kodate N, et al. Simulation training for improving the quality of care for older people: An independent evaluation of an innovative programme for interprofessional education. BMJ Qual Saf. 2013;22:495–505.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “This study took place in a tertiary hospital trust providing a range of specialist older persons’ services.” Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: “Each day ran multiple times to accommodate all staff on the unit in groups of n=20–30.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “This study took place in a tertiary hospital trust providing a range of specialist older persons’ services.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “A mixed methods evaluation included observations of the programme, precourse and postcourse confidence rating scales and follow-up interviews with staff at 7–9 weeks post-training.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	High risk	Quote: “We took care to collect data about all aspects of the programme and have reported only the data relating to simulation in this paper...” Comment: It is difficult to isolate the effects of the simulation training alone.

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Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: "...the lack of a control group which did not receive the training." Comment: Results were attributed to the program, but there was no control arm.

112. Kalish R, Dawiskiba M, Sung YC, Blanco M. Raising medical student awareness of compassionate care through reflection of annotated videotapes of clinical encounters. Educ Health (Abingdon). 2011;24(3):490.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "The exercise was implemented at the Tufts Medical Center Rheumatology Clinic from October 2007 through March 2008. All 12 third-year medical students, who were assigned to complete their Internal Medicine core clerkship at this clinical site by Tufts University School of Medicine via a lottery system, were invited to participate." Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: "The exercise was implemented at the Tufts Medical Center Rheumatology Clinic from October 2007 through March 2008. ...an outpatient rheumatology patient-partner exercise." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "The exercise took place during the ambulatory block of students' Internal Medicine clerkship at this clinical site. Additionally, the preceptor selected 10 patient-partners from his rheumatologic practice." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "We designed a mixed-method study...tags of video segments on student compassionate care interactions were generated.... students completed the student compassionate care interactions questionnaire... students participated in a focus group."

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		Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: "Eleven students volunteered. One student was intimidated by the videotaping component of the exercise and chose not to participate." Comment: One student did not complete the study.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "...our study occurred in a single school with a single group of students." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: "...students who participated voluntarily with a preceptor who is passionate about the topic." Comment: May be inherent differences in individuals who volunteered to participate - may be more motivated to provide humanistic care
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

113. Riches S, Khan F, Kwieder S, Fisher H. Impact of an auditory hallucinations simulation on trainee and newly qualified clinical psychologists: A mixed-methods cross-sectional study. Clinical psychology & psychotherapy. 2019;26(3):277-290. <https://dx.doi.org/10.1002/cpp.2349>.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "Due to limited time and financial constraints, it was not possible to include a control group" Comment: No randomization.



Allocation concealment (selection bias)	High risk	Quote: “Due to limited time and financial constraints, it was not possible to include a control group” “Actors could therefore personalize “voices” to participants who they viewed through gallery cameras from a concealed adjacent production area.” Comment: No randomization. Also, certain participants could be targeted with respect to their “hallucination” experience.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Participants attended the London-based immersive art exhibition...which included an auditory hallucinations simulation” Comment: Unable to blind participation. No randomization.
Blinding of outcome assessment (detection bias)	Low risk	Quote: “Phase 2 includes quantitative follow-up data and a qualitative study” “Questions were designed to be as open-ended as possible to avoid biasing answers”. “Interviews were audio recorded, transcribed, and anonymized”. Comment: Interviews were anonymized.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “There were 25 participants” in the simulation. In the phase 2 interview “There were 15 participants”. Comment: Portions of the study were not completed by all participants resulting in attrition bias.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: With qualitative interviews conducted, there is potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (maturation bias)	Unclear risk	Quote: In the phase 2 interview, “Results indicated a slight increase in mean attitude change, the compassion increase appeared to be maintained, and although understanding and comfort scores reduced, some increase in scores was present at follow-up” Comment: With the follow-up interview being conducted six months after the simulation, natural change/improvement in time may have influenced results.

Other Bias: (other)	High risk	Quote: “Tailoring voices to individuals meant participants heard a different type of voice...which may affect the validity of our results... This approach...may restrict the extent to which we can compare participant outcomes, given that they did not have identical experiences” Comment: Results were attributed to the program, but there was no control arm.
Other Bias: (small sample size)	High risk	Quote: “Other limitations include the small sample size...which limits the conclusion that can be drawn about the impact of the simulation...” Comment: Small sample size means possibility that results are of limited generalizability.

114. Hayes C, Jackson D, Davidson PM, Daly J, Power T. Pondering practice: Enhancing the art of reflection. J Clin Nurs. 2018;27(1-2):e345–e353.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Students were recruited to provide reflective data using convenience sampling.” Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: “The role-play was embedded as a routine learning activity for 2nd year undergraduate nursing students (n=528) enrolled in a medical-surgical nursing subject at two campuses of a large urban Australian University during 2013.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “The role-play was embedded as a routine learning activity for 2nd year undergraduate nursing students (n=528) enrolled in a medical-surgical nursing subject at two campuses of a large urban Australian University during 2013.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “...data were collected from nonassessable student written reflections. All data were gathered by the first author and de-identified at the time of collection. Thematic content analysis was used to identify, analyse and inform emerging patterns or themes within the data.” Comment: No information on blinding of outcome

		assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “Of the 528 students enrolled, 451 submitted a written reflection.” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “As this study took place in a single urban university further work would be required in different settings to enhance potential for generalizability.” Comment: Single site increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

### Role modeling

115. Blanco MA, Maderer A, Price LL, Epstein SK, Summergrad P. Efficiency is not enough; you have to prove that you care: role modelling of compassionate care in an innovative resident-as-teacher initiative. Educ Health (Abingdon). 2013;26(1):60-65.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Programme Directors forwarded the invitation to participate in the programme to their residents; total population of approximately 400 residents. Residents were promised that by participating in the programme they would: be trained in practicing and teaching compassionate, relationship-centred care through role modelling; develop and deliver a scholarly

		<p>communication about their experience with the programme to their peers at their sites and add this scholarly work to their curriculum vitae; and receive a US\$500 honorarium. The final pool of participants consisted of 41 residents across the six sites, representing seven specialties.”</p> <p>Comment: No randomization.</p>
Allocation concealment (selection bias)	High risk	<p>Quote: “The final pool of participants consisted of 41 residents across the six sites, representing seven specialties.”</p> <p>Comment: Participants were volunteers. Allocation was unconcealed. There was no randomization, and no control arm.</p>
Blinding of participants and personnel (performance bias)	Unclear risk	<p>Quote: “Residents were promised that by participating in the programme they would: be trained in practicing and teaching compassionate, relationship-centred care through role modelling; develop and deliver a scholarly communication about their experience with the programme to their peers at their sites and add this scholarly work to their curriculum vitae; and receive a US\$500 honorarium.”</p> <p>Comment: No information on blinding of participants.</p>
Blinding of outcome assessment (detection bias)	Unclear risk	<p>Comment: No information on blinding of outcome assessments.</p>
Incomplete outcome data addressed (attrition bias)	High risk	<p>Quote: “For quantitative analytical purposes, we used a subset of the sample of participating residents based on the number of participants who completed all the questions so that we could calculate total scores.”</p> <p>Comment: Portions of the study were not completed by all participants.</p>
Selective reporting (reporting bias)	Unclear risk	<p>Quote: “In this brief communication, we describe the programme implementation and main short-term outcomes of our evaluation of the programme.” (and) “We anticipated that resident’s performances on the SP exercises and questionnaires would improve after their participation in the programme. We also expected that journal writing would raise resident’s awareness of their demonstrations or failures to demonstrate compassionate, relationship-centred care in their daily practice.”</p> <p>Comment: Main outcome measures not specified; subjectivity in their plan for evaluating outcome.</p>

Other Bias: (other)	Unclear risk	Comment: The students who elected to participate in the training may have been more motivated to learn and master the empathy / compassionate care material.
Other Bias: (other)	Unclear risk	Comment: Results of pre- and post testing are attributed to the course, but there was no control arm of students matriculating through the semester without this course.

### Contemplative practices

116. Bell T, Dixon A, Kolts R. Developing a compassionate internal supervisor: compassion-focused therapy for trainee therapists. Clin Psychol Psychother. 2017;24(3):632–648.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “The current study therefore focused on gaining a homogenous sample of participants from a single cohort of CBT trainees, all of whom had no experience of CFT prior to the study...Selection bias may have been operating in that participants were drawn from a single setting...” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “The current study therefore focused on gaining a homogenous sample of participants from a single cohort of CBT trainees, all of whom had no experience of CFT prior to the study...Selection bias may have been operating in that participants were drawn from a single setting...” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “The sample size of the study was limited to students able to attend the training and interviews (n=7)...Following the training an open invitation was made to course students to volunteer for the research study” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “Participants initially attended a 5-h workshop introducing CFT....data was collected via semi-structured one-to-one interviews...The participants had not previously met the interviewer and the resulting transcripts were anonymized before analysis...”

		Comment: The interviews were conducted by the second author of the study. Although the transcripts were anonymized, the analysis was also undertaken by the lead and second author, which could introduce bias in the interpretation of data.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “The sample size of the study was limited to students able to attend the training and interviews (n=7).” Comment: All participants completed all aspects of the study.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: “Participants initially attended a 5-h workshop introducing CFT. The training included an outline of the basic CFT model and practices, with experiential and reflective exercises...” Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: “Data was collected via semi-structured one-to-one interviews...Despite precautions made to ensure anonymity, and the use of an interviewer not part of the university, the participants were still students of one of the researchers. This could potentially have influenced both the participant’s willingness to engage in the process and their reporting of experience”. Comment: There is potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm. The sample size was also very small (n=7), which limits generalizability.

117. Gale C, Schröder T, Gilbert P. ‘Do you practice what you preach?’ A qualitative exploration of therapists' personal practice of compassion focused therapy. Clin Psychol Psychother. 2017;171–185.

Entry	Judgement	Support for judgement
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Random sequence generation (selection bias)	High risk	Quote: “A maximum variation sampling strategy was adopted for this study, with individuals deliberately sampled to provide a heterogeneous group” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “A maximum variation sampling strategy was adopted for this study, with individuals deliberately sampled to provide a heterogeneous group” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “A maximum variation sampling strategy was adopted for this study, with individuals deliberately sampled to provide a heterogeneous group” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “A qualitative approach was selected for this study...Data were collected through semi-structured interviews and subjected to thematic analysis.” Comment: The interviews were conducted by the first author of the study. Although the transcripts were anonymized, the interviews were transcribed and analyzed by the first author
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “Ten participants took part in the study...” Comment: All participants completed all aspects of the study.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: “A qualitative approach was selected for this study...data were collected through semi-structured interviews...by the first author”. Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: “Participants were recruited from CFT supervision groups and through a compassion conference, where the first author presented on a similar topic”. Comment: There is potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others – particularly the first author.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm. The sample size was also very small (n=10), which limits generalizability.

118. Mascaro JS, Kelley S, Darcher A, et al. Meditation buffers medical student compassion from the deleterious effects of depression. J Posit Psychol. 2016; 13(2):133–142.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: “Anonymity of data was ensured by identifying all data by a randomly generated participant ID number”. Comment: Participants were randomized to the intervention group (10-week course) or control group (waitlisted for the course).
Allocation concealment (selection bias)	Low risk	Quote: “Participants were randomized into either the 10-week CBCT course or a wait-list control condition”...There was no exclusion criteria”. Comment: Although participants were allocated to either group, the lack of exclusion criteria prevents allocation bias.
Blinding of participants and personnel (performance bias)	Low risk	Quote: “All study participants were blind to group assignment at the Time 1 assessments and all experimenters were blind throughout the entirety of data collection, data entry, and statistical analysis” Comment: Low risk of performance bias due to blinding of participants and personnel.
Blinding of outcome assessment (detection bias)	Low risk	Quote: “All study participants were blind to group assignment at the Time 1 assessments and all experimenters were blind throughout the entirety of data collection, data entry, and statistical analysis” Comment: Low risk of detection bias due to blinding of participants and personnel.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “59 students (33 female) enrolled in the study and a total of 32 participants completed the study [CBCT = 21 (13 female), wait-list = 11 (7 female)]. Significantly, more participants in the wait-list control group dropped out than did participants enrolled in CBCT. Comment: All participants did not complete all aspects of the study.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias:	High risk	Quote: “Participants were recruited ...via an optional



(Hawthorne effect)		face-to-face presentation that was advertised using class emails and flyers.” Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	Low risk	Quote: “The fact that self-reported meditation and efficacy was not correlated with any changes minimizes the demand characteristics confound, because we would expect that individuals altering their responses to fit the experiment’s perceived purpose would also report high levels of CBCT efficacy.” Comment: While there is potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others, the likelihood is low as per the aforementioned.
Other Bias: (other)	High risk	Quote: “...the CBCT dropouts did show a trend toward having less initial interest in meditation than did CVCT completers”. Comment: Those who participated in the study seemed to have a greater interest in meditation.

119. Beaumont E, Rayner G, Durkin M, Bowling G. The effects of compassionate mind training on student psychotherapists. J Ment Health Train Educ Pract. 2017;12(5):300–312.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “A non-random convenience sample consisting of thirty-five participants...agreed to take part in the research project”. Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “A non-random convenience sample consisting of thirty-five participants...agreed to take part in the research project”. Nine of the thirty five participants agreed to be part of the control group, however, only three sets of pre and post questionnaires were completed”. Comment: No randomization or allocation concealment.
Blinding of participants and personnel (performance bias)	High risk	Quote: “A non-random convenience sample consisting of thirty-five participants...agreed to take part in the research project”. Nine of the thirty five participants agreed to be part of the control group, however, only

		<p>three sets of pre and post questionnaires were completed...”</p> <p>“Information sheets and consent forms were given to each student followed by a brief presentation and question and answer session”.</p> <p>Comment: No randomization or blinding of participants and personnel.</p>
Blinding of outcome assessment (detection bias)	Unclear risk	<p>Quote: “Following participation in CMT, changes between pre and post scores were assessed using repeated measures paired sample t-tests.</p> <p>Comment: No randomization. No information on anonymity.</p>
Incomplete outcome data addressed (attrition bias)	High risk	<p>Quote: “Two of the nine participants from the control group interrupted their studies to take a break before starting their second module, and four participants did not attend the final session where data were collected post training.”</p> <p>Comment: Portions of the study were not completed by all participants.</p>
Selective reporting (reporting bias)	Unclear risk	<p>Comment: Study protocol not available.</p>
Other Bias: (Hawthorne effect)	High risk	<p>Quote: “A non-random convenience sample consisting of thirty-five participants...agreed to take part in the research project”. Nine of the thirty five participants agreed to be part of the control group...”</p> <p>“Information sheets and consent forms were given to each student followed by a brief presentation and question and answer session”.</p> <p>Comment: Participants were aware of the study, which could have affected their behavior and responses.</p>
Other Bias: (social-desirability)	Unclear risk	<p>Quote: “A non-random convenience sample consisting of thirty-five participants...agreed to take part in the research project”. Nine of the thirty five participants agreed to be part of the control group...”</p> <p>“Qualitative data was collected via a focus group a month after the training”</p> <p>Comment: Participants were aware of the study, which could have affected their responses in a way that would be viewed favorably by others.</p>

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Other Bias: (maturation bias)	High	Quote: “Qualitative data was collected via a focus group a month after the training” Comment: Natural change/improvement in time may have influenced results in a one-month time span.
Other Bias: (small sample size)	High risk	Quote: “Although nine students volunteered to be part of a control group only three completed pre and post questionnaires were collected...” Comment: Small sample size means possibility that results are of limited generalizability.

120. McEwan K, Minou L, Moore H, Paul G. Engaging with distress: Training in the compassionate approach. J Psychiatr Ment Health Nurs. 2020;27:718-727

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “A purposive sample of mental health professionals took part in standardized two-day CMT training.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “A purposive sample of mental health professionals took part in standardized two-day CMT training.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “A purposive sample of mental health professionals took part in standardized two-day CMT training.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “One year after training...three focus groups with participants which were audio recorded” were conducted. Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “Three NHS teams of front-line mental health nurses (n=28) took part in standardized two-day CMT training. In total, 17 mental health professionals...attended a focus 1 year later.” Comment: Portions of the study were not completed by all participants resulting in attrition bias.
Selective reporting (reporting)	Unclear risk	Comment: Study protocol not available.

bias)		
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: With focus groups were conducted, there is potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (maturation bias)	Unclear risk	Comment: With the focus groups being conducted one year after the CMT intervention, natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.
Other Bias: (small sample size)	High risk	Quote: "At present, results from this evaluation study are not generalizable. Although 28 professionals received training, only 17 were available to attend the focus groups on the day" Comment: Small sample size increased the possibility that results are of limited generalizability.

121. Weingartner LA, Sawning S, Shaw MA, Klein JB. Compassion cultivation training promotes medical student wellness and enhanced clinical care. BMC Med Educ. 2019;19(1):139.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "Preclinical second-year (M2) students were eligible to participate in the 2015 course while both M2 and fourth-year (M4) students were eligible to participate in 2016 and 2017." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "Preclinical second-year (M2) students were eligible to participate in the 2015 course while both M2 and fourth-year (M4) students were eligible to participate in 2016 and 2017." "Students self-selected into the elective and therefore may have been more likely to find benefit in this training" Comment: No randomization.

Blinding of participants and personnel (performance bias)	High risk	Quote: "Preclinical second-year (M2) students were eligible to participate in the 2015 course while both M2 and fourth-year (M4) students were eligible to participate in 2016 and 2017." "Study participants were given a preamble with information regarding study aim, data confidentiality, and voluntary nature" Comment: Unable to blind participation. No information available on anonymity.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "De-identified qualitative response data from all three years were evaluated independently by two authors." "Study participants were given a preamble with information regarding study aim, data confidentiality, and voluntary nature" Comment: No randomization. No information on anonymity.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Forty-five students from M2 and M4 participated in the CCT elective over three years. Respondent sample sizes are noted and indicate that not all students answered all questions because of variation in surveying and the optional nature of the data collection. In the full-length course, 44% of students completed identified pre- and post-test...Thirty-eight students total provided qualitative feedback on course evaluations..." Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	Unclear risk	Quote: "Study participants were given a preamble with information regarding study aim, data confidentiality, and voluntary nature" Comment: Participants were aware of the study, which could have affected their responses in a way that would be viewed favorably by others. No information available on whether responses were anonymous. Only confidentiality was ensured.

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Other Bias: (maturation bias)	High	Quote: “The follow-up with the 2015 cohort occurred over one year later...” Comment: Natural change/improvement in time may have influenced results.
Other Bias: (small sample size)	High risk	Quote: “This study was limited by its small sample size and short-term analysis...” Comment: Small sample size means possibility that results are of limited generalizability.

122. Fortney L, Luchterhand C, Zakletskaia L, Zgierska A, Rakel D. Abbreviated mindfulness intervention for job satisfaction, quality of life, and compassion in primary care clinicians: A pilot study. Ann Fam Med. 2013;11(5):412–420.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “All study participants received the intervention – an abbreviated version of the 8-week MBSR program...” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “All study participants received the intervention – an abbreviated version of the 8-week MBSR program...” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “All study participants received the intervention – an abbreviated version of the 8-week MBSR program...” “The study’s intervention was...led by UW mindfulness instructors who have completed professional training...” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Medium risk	Quote: “Completed survey questionnaires were saved to the Qualtrics Web site anonymously. Asking 3 innocuous questions on each resulted in responses unique to each participant. This approach allowed us to identify the 4 questionnaires answered by the same respondent without revealing identity”. “Participants were encouraged to report their experiences in a shared group setting”. Comment: With regards to the survey information, the approach allowed for blinding of the information, however, there was no blinding in the sharing of

		experiences in the shared group setting.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "We recruited 30 primary care clinicians from the UW-Madison departments of family medicine, internal medicine, and pediatrics." "During follow-up, 28 (93%) of the participants gave responses for survey 2, and 23 (77%) gave responses for surveys 3 and 4." Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: "Participants were encouraged to report their experiences in a shared group setting". Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "Participants were encouraged to report their experiences in a shared group setting". Comment: Because the study was a participative approach, this could have affected their behavior and responses.
Other Bias: (maturation bias)	High risk	Quote: "This approach allowed us to estimate changes in the outcome measures during the postintervention period and ascertain whether the changes persisted in the 9-month follow-up period". Comment: Natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Quote: "Lack of a control group makes it challenging to know whether improvements were due to the mindfulness intervention or related to normalizing trends over time". Comment: Results were attributed to the program, but there was no control arm.
Other Bias: (other)	High risk	Quote: "Generalizability is limited as study participants were self-selected, many have enrolled because of increased symptoms of burnout and stress and may be those who find meditation more appealing than do their peers".

Supplemental digital content for Sinclair S, Kondejewski J, Jaggi P, Dennett L, Roze des Ordons AL, Hack TF. What is the state of compassion education? A systematic review of compassion training in health care. Acad Med.

Comment: Results are of limited generalizability.		
Other Bias: (other)	High risk	Quote: "Limitations of this study include the lack of a control group and the small sample size". Comment: small sample size means results are of limited generalizability.

123. Kemper KJ, Yun J. Group online mindfulness training: Proof of concept. J Evid Based Complementary Altern Med. 2015;20(1):73–75.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "A group of medical students at our institution decided to pursue online training together...". Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "A group of medical students at our institution decided to pursue online training together...". Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "A group of medical students at our institution decided to pursue online training together...The peer facilitator attended all sessions". Comment: No randomization.
Blinding of outcome assessment (detection bias)	High risk	Quote: "Using an anonymous online survey, we asked the students to complete standard questionnaires..." Comment: No blinding of outcome assessment. No control group or randomization.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Of the 7 medical trainees (including the facilitator) who began the program, 1 dropped out and 2 did not complete post-training questionnaires" Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	Low risk	Quote: "A group of medical students at our institution decided to pursue online training together...The peer facilitator attended all sessions". Comment: Participants met together to review the



		online mindfulness-based stress reduction classes with a resident facilitator. Because the study was a participative approach, this could have affected their behavior and responses.
Other Bias: (social-desirability)	Unclear risk	Quote: "Using an anonymous online survey, we asked the students to complete standard questionnaires" The peer facilitator attended all sessions". Comment: Participants met together to review the online mindfulness-based stress reduction classes with a resident facilitator. Because the study was a participative approach, this could have affected their behavior and responses. Also because of such a small group, there is likelihood of social-desirability despite the anonymous nature of the surveys.
Other Bias: (other)	High risk	Quote: "The study was done at one academic medical center..." Comment: Results are of limited generalizability to nonacademic community settings.
Other Bias: (other)	High risk	Quote: "It's small sampled size precluded formal significance testing, and two of the participants who completed at least half the sessions did not complete outcome questionnaires." Comment: Small sample size means results are of limited generalizability.

124. Mahon MA, Mee L, Brett D, Dowling M. Nurses' perceived stress and compassion following a mindfulness meditation and self compassion training. J Res Nurs. 2017;22:572-583

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "A non-probability, convenience sample was used. All registered nurses working in three university hospitals were invited to...take part in the study." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "A non-probability, convenience sample was used. All registered nurses working in three university hospitals were invited to...take part in the study." Comment: No randomization.

Blinding of participants and personnel (performance bias)	High risk	Quote: "A non-probability, convenience sample was used. All registered nurses working in three university hospitals were invited to...take part in the study." "The intervention ran for a duration of 8 weeks at hospitals 1 and 3, and for 6 weeks' duration at hospital 2". Comment: No randomization.
Blinding of outcome assessment (detection bias)	Low risk	Quote: "In order to create a unique identifier code and ensure anonymity, each participant was asked two additional questions (What is your star sign? What are the last three digits of your mobile phone number)...The researchers had no direct contact with the participants and were not involved in the data collection". Comment: As above. There was no control group or randomization.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "A total of 90 completed pre-test questionnaires were received. However, the number of post-test questionnaires returned was lower (n=64)" Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	Low risk	Quote: "There is the possibility of bias as a result of positive group interaction and facilitator-participant dynamics following the mindfulness meditation intervention" Comment: Although data was collected ensuring participant anonymity, there is potential of Hawthorne effect.
Other Bias: (social-desirability)	Medium risk	Quote: "The researchers had no direct contact with the participants and were not involved in the data collection". "The exclusive use of self-report scales for data collection can result in response bias." Comment: Data was collected ensuring participant anonymity. However, self-report can result in social-desirability bias.
Other Bias: (other)	High risk	Quote: "A total of 90 completed pre-test questionnaires were received. However, the number of post-test questionnaires returned was lower (n=64)"

Comment: Small sample size means results are of limited generalizability.

125. Kemper KJ, Lynn J, Mahan JD. What is the impact of online training in mind-body skills. J Evid-Based Complementary Altern Med. 2015;20(4):275–282.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “The last page of the survey included a link to register for a free online course on herbs and dietary supplements (HDS) or mind-body skills (MBS) training...Survey participants were not required to enroll in either course”. Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “The last page of the survey included a link to register for a free online course on herbs and dietary supplements (HDS) or mind-body skills (MBS) training...Survey participants were not required to enroll in either course”. Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Among the 103 participants who completed both pre- and posttraining surveys, 60 engaged in MBS and 43 did not”. Comment: There was no blinding of participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “Data were de-identified and cleaned by a research assistant blind to the study question, exported into a spreadsheet, and exported into Statistical Analysis System (SAS 9.2) for scoring”. “Participants were asked to complete the posttraining survey regardless of whether they had registered for any course and regardless of how many modules they had completed to assist in program evaluation. Comment: It’s unclear as to whether investigators were blinded to the outcome of those who completed the modules vs. those who did not, as both groups were required to complete the posttraining survey.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “Overall, 103/180 (57%) eligible participants completed the posttraining survey...Among the 103 participants who completed both pre- and posttraining surveys, 60 engaged in MBS and 43 did not.”

		Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	Low risk	Quote: "Participants were eligible if they agreed to participate in a study evaluating new online curricula in integrative medicine" Comment: Participants were assured that the investigators were most interested in their feedback to improve the courses for future participants, as opposed to the <i>real</i> study objective, which was to assess the 12-week impact of the online elective in MBS on clinicians' mindfulness, empathy, compassion, and confidence in providing calm, compassionate care.
Other Bias: (social-desirability)	Low risk	Quote: "Participants were eligible if they agreed to participate in a study evaluating new online curricula in integrative medicine" Comment: Participants were assured that the investigators were most interested in their feedback to improve the courses for future participants, as opposed to the <i>real</i> study objective, which was to assess the 12-week impact of the online elective in MBS on clinicians' mindfulness, empathy, compassion, and confidence in providing calm, compassionate care.
Other Bias: (maturation bias)	Low risk	Comment: Natural change/improvement in time may have influenced results over the 12-week period are minimal, as both groups reported similar baseline levels, and any changes after the 12-week period could be attributed to the MBS course.
Other Bias: (other)	High risk	Quote: "It was a cohort study conducted at one academic health center and recruited a high proportion of female trainees". Comment: Results are of limited generalizability to nonacademic community settings with more experienced and/or male clinicians.
Other Bias: (other)	High risk	Quote: "Furthermore, although the sample size for this study was larger than many other studies of MBS training, it was too small to make meaningful comparisons..." Comment: small sample size means results are of

limited generalizability.

126. Kemper KJ, Rao N, Gascon G, Mahan JD. Online training in mind-body therapies: different doses, long-term outcomes. J Evid-Based Complementary Altern Med. 2017;22(4):696–702.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “We took advantage of a natural experiment...as we offered free, elective online training in integrative therapies to students, faculty, and staff between December 1, 2013 and November 30, 2015”. Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Participants were eligible if they enrolled in and completed one or more online modules in an elective online course for health professionals...” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Participants were eligible if they enrolled in and completed one or more online modules in an elective online course for health professionals...” Comment: No randomization or blinding of participants and personnel.
Blinding of outcome assessment (detection bias)	High risk	Quote: “The analysis was conducted for the first 10% who completed the anonymous online posttraining survey between December 1, 2015 and January 31, 2016”. “Using email addresses, survey data was matched to previously collected registration data about module completion...Identifiers were discarded prior to subsequent analysis”. Comment: Despite the anonymous nature of the surveys, there is no information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Quote: “The analysis was conducted for the first 10% who completed the anonymous online posttraining survey between December 1, 2015 and January 31, 2016”. Comment: Authors deliberately chose to analyze data for the 10% of participants who completed the surveys.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.

bias)		
Other Bias: (Hawthorne effect)	Low risk	Quote: "Participants were eligible if they enrolled in and completed one or more online modules in an elective online course for health professionals..." Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	Low risk	Quote: "Participants were eligible if they enrolled in and completed one or more online modules in an elective online course for health professionals..." Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (maturation bias)	High risk	Quote: "This study was conducted as an educational evaluation and did not routinely collect survey data at baseline, so we could not examine changes over time that might inform inferences about the impact of the curriculum itself". Comment: Natural change/improvement in time may have influenced results over the data collection period.
Other Bias: (other)	High risk	Quote: "This study was conducted in one academic institution...". Comment: Results are of limited generalizability to nonacademic community settings.
Other Bias: (other)	High risk	Quote: "The analysis was conducted for the first 10% who completed the anonymous online posttraining survey between December 1, 2015 and January 31, 2016". Comment: small sample size of the analyzed data means results are of limited generalizability.
Other Bias: (other)	High risk	Quote: "The analysis was conducted for the first 10% who completed the anonymous online posttraining survey between December 1, 2015 and January 31, 2016". Comment: Potential for self-selection bias.

127. Nguyen MC, Gabbe SG, Kemper KJ, Mahan JD, Cheavens JS, Moffatt-Bruce SD. Training on mind-body skills: Feasibility and effects on physician mindfulness, compassion, and associated effects on stress, burnout, and clinical outcomes. J Posit Psychol. 2020;15(2):194-207.

Entry	Judgement	Support for judgement
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Random sequence generation (selection bias)	High risk	Quote: “All faculty, fellows and residents from the Departments of Emergency Medicine (EM), Internal Medicine (IM), and Surgery at The Ohio State University Wexner Medical Center (OSUWMC) were eligible to enroll in the study.” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “All faculty, fellows and residents from the Departments of Emergency Medicine (EM), Internal Medicine (IM), and Surgery at The Ohio State University Wexner Medical Center (OSUWMC) were eligible to enroll in the study.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Once during each month in February, March, and April, in-person presentations were offered during the evenings as an additional resource” Comment: Despite that opportunity was given to attending additional resources, this was not mandatory; therefore, participants didn’t receive equal learning.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “We explored three additional outcomes: 30-day self-reported medical errors, 30-day self-reported medical errors resulting in patient mortality, and faculty-specific patient satisfaction scores obtained from the HCAHPS” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “66 participants enrolled in the study...Fifty (76%) completed pre-and post-intervention phase questionnaires and comprised the study cohort.” “Most (62%) of the study cohort completed at least 1 of 4 module or 1 of 3 discussion sessions.” “Participants on average attended 0.5 interactive sessions.” Comment: Not all enrolled participants completed all of the modules, discussion sessions, or intervention questionnaires.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their self-reports of medical errors.

Other Bias: (social-desirability)	High risk	Comment: As participants were not blinded to the goals of the study, there was potential for them to want to answer pre- and post-intervention questions in a way that would be viewed favorably by the researchers. Also, Participants were aware of the study, which could have affected their self-reports of medical errors.
Other Bias: (maturation bias)	High risk	Quote: “self-reports of primary and secondary outcome measures in non-controlled settings...can pose significant moment-by-moment variations depending on mood.” Comment: Natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.
Other Bias: (small sample size)	High risk	Quote: “66 participants enrolled in the study...Fifty (76%) completed pre-and post-intervention phase questionnaires and comprised the study cohort.” Comment: Small sample size increased the possibility that results are of limited generalizability.
Other Bias: (self-selection)	High risk	Quote: “Participation in the study was voluntary which poses concern for self-selection bias towards professionals with higher baseline stress and burnout levels...” Comment: The 50 participants who completed the pre-and post-intervention questionnaires might represent a non-random cohort of participants who are distinct from the general physician population = non-generalizable.

128. Boellinghaus I, Jones FW, Hutton J. Cultivating self-care and compassion in psychological therapists in training: The experience of practicing loving-kindness meditation. Train Educ Prof Psychol. 2013;7(4):267-277.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “The sample of TTs was recruited from trainee cognitive—behavioral therapists and trainee clinical psychologists studying at the same university in the South East of England. Only trainees who had previously attended an MBCT course were invited to



		<p>take part in the study, to ensure familiarity with mindfulness meditation practices, which are thought to facilitate the encounter with LKM.”</p> <p>Comment: No randomization.</p>
Allocation concealment (selection bias)	High risk	<p>Quote: “The pool of TTs from which the LKM participants originated had been through an ongoing screening process.”</p> <p>Comment: No randomization.</p>
Blinding of participants and personnel (performance bias)	High risk	<p>Quote: “The pool of TTs from which the LKM participants originated had been through an ongoing screening process. Sessions were led by FJ, who had also facilitated the MBCT course. The findings may be also limited by the fact that the LKM course facilitator was a member of the university staff and the interviewer a fellow TT, because these factors might have discouraged participants from sharing personal experiences”</p> <p>Comment: Unable to blind participation in the study.</p>
Blinding of outcome assessment (detection bias)	Unclear risk	<p>Quote: “A semistructured interview schedule was developed to explore a broad range of experiences of practicing LKM.”</p> <p>Comment: No information on blinding of outcome assessments.</p>
Incomplete outcome data addressed (attrition bias)	High risk	<p>Quote: “The LKM group size was restricted to 12 participants to ensure enough space for discussion. Thirty TTs who had completed an MBCT course at the university were informed about the study. Twelve trainees expressed an interest and consented to taking part in the study.”</p> <p>Comment: Not all trainees completed the study.</p>
Selective reporting (reporting bias)	Unclear risk	<p>Comment: Study protocol not available.</p>
Other Bias: (Hawthorne effect)	High risk	<p>Comment: Participants were aware of the study, which could have affected their behavior and responses.</p>
Other Bias: (social-desirability)	High risk	<p>Comment: As participants were not blinded to the goals of the study, there was potential for them to want to answer questions in a way that would be viewed favorably by the researchers.</p>
Other Bias: (other)	High risk	<p>Comment: The screening process may have selected participants more motivated to cultivate self-care and</p>

compassion.		
Other Bias: (small sample size)	High risk	Quote: “The homogeneity of the sample and methodology used may have limited the degree to which our findings can be transferred to other TTs and settings.” Comment: Small sample size increased the possibility that results are of limited generalizability.
Other Bias: (other)	Unclear risk	Quote: “The absence of comparison conditions means we cannot say with certainty whether participants' experiences are unique to LKM or merely reflect the sorts of things that can happen in groups in training (e.g., reflective practice groups).” Comment: Results were attributed to the program, but there was no control arm.

129. Rao N, Kemper KJ. Online training in specific meditation practices improves gratitude, well-being, self-compassion, and confidence in providing compassionate care among health professionals. J Evid-Based Complementary Altern Med. 2017;22(2):237–241.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Data were collected from 3 online meditation training modules offered to health professionals...” Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: “Data were collected from 3 online meditation training modules offered to health professionals...” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Data were collected from 3 online meditation training modules offered to health professionals...” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Quote: “Analysis was restricted to participants who completed both pre- and postmodule self-reflection assessments for one or more modules” Comment: Unclear whether portions of the study were not completed by all participants.

Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: "...information regarding the training was available online to any health care provider..." Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "...information regarding the training was available online to any health care provider..." Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (other)	High risk	Quote: "Participants were largely from one academic institution" Comment: Results are of limited generalizability to nonacademic community, or hospital and outpatient settings.
Other Bias: (other)	High risk	Quote: Participants' prior experiences with mindfulness techniques – including completion of 1 of the other 3 modules offered as part of our course – may have affected their responses to training. Comment: There was no control arm in the study to ensure that results were attributable to specific training.

130. Suyi Y, Meredith P, Khan A. Effectiveness of mindfulness intervention in reducing stress and burnout for mental health professionals in Singapore. *Explore*. 2017;13(5):319–326.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "The study utilized a pre-post study design with follow-up." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "The study utilized a pre-post study design with follow-up." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "The study utilized a pre-post study design with follow-up." Comment: Unable to blind participation.

Blinding of outcome assessment (detection bias)	High risk	Quote: "One year after training...three focus groups with participants which were audio recorded" were conducted. Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: "A total of 44 participants were initially recruited; however, seven withdrew from the study". "A total of 37 (84%) participants completed the program..." "All 37 participants also attended the 3 months follow-up assessment" Comment: Outcome data was assessed for those who completed the program.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: "There was also a discussion period where participants were invited to share stories about their mindfulness practice, or thoughts on the topics presented during the training". Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "There was also a discussion period where participants were invited to share stories about their mindfulness practice, or thoughts on the topics presented during the training". "One of the investigators of this study was the main instructor for the mindfulness program". Comment: There is potential for participants to reflect and want to answer questions in a way that would be viewed favorably by others.
Other Bias: (maturation bias)	Unclear risk	Quote: "The study utilized a pre-post study design with follow-up." Comment: With data being collected 3 months post-intervention follow-up, natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Quote: "Due to the lack of a control group in the present study, it is possible that the noted improvements are a result of non-specific effects of intervention" Comment: Results were attributed to the program, but there was no control arm.

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Other Bias: (small sample size)	High risk	Quote: “A total of 37 (84%) participants completed the program...” “All 37 participants also attended the 3 months follow-up assessment” Comment: Small sample size increased the possibility that results are of limited generalizability.
Other Bias: (other)	High risk	Quote: The study sample was drawn from healthcare professionals employed at the Institute of Mental Health (IMH), Singapore.” Comment: Results cannot be generalizable to other healthcare professionals from other disciplines.

131. Schroeder DA, Stephens E, Colgan D, Hunsinger M, Rubin D, Christopher MS. A brief mindfulness-based intervention for primary care physicians: A pilot randomized controlled trial. Am J Lifestyle Medicine. 2018;12(1):83–91.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: “At baseline participants created unique identification codes based on responses to 2 innocuous questions to allow for tracking of responses over time. After completing the baseline measures, participants were randomized 1:1 into the intervention or a waitlist control”. Comment: Participants were randomized.
Allocation concealment (selection bias)	High risk	Quote: “At baseline participants created unique identification codes based on responses to 2 innocuous questions to allow for tracking of responses over time. After completing the baseline measures, participants were randomized 1:1 into the intervention or a waitlist control”. Comment: Participants were randomized.
Blinding of participants and personnel (performance bias)	Unclear risk	Quote: After completing the baseline measures, participants were randomized 1:1 into the intervention or a waitlist control”. Comment: No information on blinding of participation.
Blinding of outcome assessment (detection bias)	High risk	Comment: No information on blinding of outcome assessments.

Incomplete outcome data addressed (attrition bias)	High risk	Quote: "A total of 33 physicians provided written consent to enroll...and were randomized..." "Two participants (1 MBI and 1 waitlist control) withdrew after randomization." "Two waitlist control group participants withdrew from the study before postintervention assessment, and 2 MBI participants and 1 waitlist control group participant did not complete 3-month follow-up". Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: "...the group interaction was considered an integral part of the practices and follow-up" Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "...the group interaction was considered an integral part of the practices and follow-up" Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (maturation bias)	Unclear risk	Quote: "The mindfulness retreat provided an opportunity for practitioners to come together and discuss topics unique to patient care issues...support from a group of like-minded physicians is likely partly responsible for some benefits..." Comment: With data being collected 3 months post-intervention follow-up, natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Quote: "...participants volunteered to participate in the study..." Comment: Potential for selection-bias.
Other Bias: (small sample size)	High risk	Quote: "The small sample size reduced statistical power..." Comment: Small sample size increased the possibility that results are of limited generalizability.
Other Bias: (other)	High risk	Quote: "Participants were primary care physicians recruited from the family medicine and internal medicine departments at Providence Health and Services in Portland, Oregon". Comment: Results cannot be generalizable to other

healthcare professionals from other disciplines.

132. Orellana-Rios CL, Radbruch L, Kern M, et al. Mindfulness and compassion-oriented practices at work reduce distress and enhance self-care of palliative care teams: a mixed-method evaluation of an "on the job" program. BMC Palliat Care 2017;1:3.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: "Observational, pre-post pilot study with a mix-method approach." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "Observational, pre-post pilot study with a mix-method approach." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Observational, pre-post pilot study with a mix-method approach." Comment: No randomization. No blinding of participants and personnel.
Blinding of outcome assessment (detection bias)	High risk	Quote: "Study packages were distributed in staff mailboxes of the respective participants before and after the training..." "Participants filled the questionnaires at home and returned them in a closed envelope together with the salivary samples at the introductory session and at the time of the qualitative interviews, respectively". Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Twenty-eight staff members were enrolled, with one discontinuing training after the first week. All other 27 participants participated in the course regularly and 26 of them returned post-intervention assessments". Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: "Semi-structured interviews were conducted with all participants by the first author to gain insight

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		into the subjective experience of the training” Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: “Semi-structured interviews were conducted with all participants by the first author to gain insight into the subjective experience of the training” “Staff members were interviewed individually by the first author during working hours in a private room at the palliative care unit”. Comment: Participants were interviewed in person, which could have affected their behavior and responses.
Other Bias: (other)	Unclear risk	Quote: “...participants volunteered to participate in the study...” Comment: Potential for selection-bias.
Other Bias: (small sample size)	High risk	Quote: “All other 27 participants participated in the course regularly and 26 of them returned post-intervention assessments.” Comment: Small sample size increased the possibility that results are of limited generalizability.
Other Bias: (other)	High risk	Quote: “Participants were primary care physicians recruited from the family medicine and internal medicine departments at Providence Health and Services in Portland, Oregon”. Comment: Results cannot be generalizable to other healthcare professionals from other disciplines.
Other Bias: (other)	High risk	Quote: ““Observational, pre-post pilot study with a mix-method approach.” Comment: Although results are attributable to the program, there is no control group to ensure causality.

133. Richards TA, Oman D, Hedberg J, Thoresen CE, Bowden J. A qualitative examination of a spiritually-based intervention and self-management in the workplace. Nurs Sci Q. 2006;19:231–239.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Participants were randomized into treatment or wait-list control groups. The treatment group began the 8-week training in September 2002 and the control



		group began the training the following spring” Comment: Participants were randomized, but no information on whether a random sequence generation was utilized.
Allocation concealment (selection bias)	High risk	Quote: “Participants were randomized into treatment or wait-list control groups. The treatment group began the 8-week training in September 2002 and the control group began the training the following spring” Comment: Participants were randomized, but no information on how individuals were allocated to each group.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Participants were recruited through in-service talks, flyers, and word of mouth” “Prospective participants attended one of three registration sessions in which study procedures were explained and informed consent was obtained” Comment: No blinding of participants and personnel.
Blinding of outcome assessment (detection bias)	High risk	Quote: “Semi-structured interviews were conducted with the treatment group...” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “Twenty-eight staff members were enrolled, with one discontinuing training after the first week. All other 27 participants participated in the course regularly and 26 of them returned post-intervention assessments”. “...the focus of this article is on the nurses who participated in the study, rather than the full sample” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: “Semi-structured interviews were conducted with all participants by the first author to gain insight into the subjective experience of the training” Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: “Semi-structured interviews were conducted with all participants by the first author to gain insight into the subjective experience of the training” “Staff members were interviewed individually by the

		first author during working hours in a private room at the palliative care unit”. Comment: Participants were interviewed in person, which could have affected their behavior and responses.
Other Bias: (maturation bias)	High risk	Quote: “Preintervention semistructured interviews were conducted approximately 4 weeks prior to the training and postintervention interviews were conducted an average of 7.8 weeks following the training.” Comment: Natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Quote: “...participants volunteered to participate in the study...” Comment: Potential for selection-bias.
Other Bias: (small sample size)	High risk	Quote: “The cohort consisted of 12 women nurses working in a variety of functions within the hospital setting...” Comment: Small sample size increased the possibility that results are of limited generalizability.
Other Bias: (other)	High risk	Quote: “The cohort consisted of 12 women nurses working in a variety of functions within the hospital setting...” Comment: Results cannot be generalizable to other healthcare professionals from other disciplines or men working in the same discipline.

134. Kemper KJ, Hill E. Training in integrative therapies increases self-efficacy in providing nondrug therapies and self-confidence in offering compassionate care. J Evid-Based Complementary Altern Med. 2017;22(4):618–623.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “...we conducted an evaluation of in-person educational interventions...” Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: “...we conducted an evaluation of in-person educational interventions...” Comment: No randomization

Blinding of participants and personnel (performance bias)	High risk	Quote: “The training was advertised to potential participants several ways. First, it was announced in the Center’s monthly newsletter. Second, it was sent to nursing leadership to distribute...Third, word of mouth advertising...” Comment: No randomization. No blinding of participants and personnel during the study or evaluation period.
Blinding of outcome assessment (detection bias)	High risk	Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “Of the 47 registrants for training...24 (51%) completed the optional pretraining surveys and 22/24 (92%) completed posttraining surveys” “Opportunity to obtain evaluation data on all participants were missed; although nearly all participants who completed pretraining surveys also completed posttraining surveys, nearly half of the training participants did not complete an optional pretraining survey...” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: Participants attended curriculum sessions in-person, which could have affected their behavior and responses to the evaluation surveys.
Other Bias: (other)	Unclear risk	Quote: “...participants volunteered to participate in the study...” Comment: Potential for selection-bias.
Other Bias: (small sample size)	High risk	Quote: “The small sample size precludes comparisons between the different types of complementary therapy training” Comment: Small sample size increased the possibility that results are of limited generalizability.
Other Bias: (other)	High risk	Quote: “The project occurred at an academic medical center with a strong culture of continuing education and a well-established integrative medicine clinic”

Comment: Results cannot be generalizable to other healthcare professionals from other disciplines or non-academic community centers.

135. Keng SL, Waddington E, Lin XB, Tan MSQ, Henn-Haase C, Kanter JW. Effects of Functional Analytic Psychotherapy Therapist Training on Therapist Factors Among Therapist Trainees in Singapore: A Randomized Controlled Trial. Clin. Psychol. Psychother. 2016;24(4):1014–1027.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Participants were stratified according to their year in clinical training program (first or second year) and then randomly assigned to the FAPTT program (n=13) or a WL condition (n=12). Comment: Participants were randomized, but no information on whether a random sequence generation was utilized.
Allocation concealment (selection bias)	High risk	Quote: “Participants were stratified according to their year in clinical training program (first or second year) and then randomly assigned to the FAPTT program (n=13) or a WL condition (n=12). Comment: Participants were randomized; they were allocated according to their year in clinical training.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Participants were stratified according to their year in clinical training program (first or second year) and then randomly assigned to the FAPTT program (n=13) or a WL condition (n=12). Comment: No information on blinding of participants and personnel.
Blinding of outcome assessment (detection bias)	High risk	Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “All 13 FAP participants completed the training program, with all except two having attended all eight weekly sessions” “Twelve FAP participants and 11 WL participants completed the time 2 and time 3 assessments. One from each group was lost at follow-up and did not complete both time 2 and 3 questionnaires”. Comment: Portions of the study were not completed by

		all participants, but this is not a large number, hence low risk.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: "Further, a trained FAP facilitator was available to provide training at the site where the study was carried out". "The content of the training program included provision of feedback about the previous training session..." "Participants were paired up each week to respond to their partner's homework logs, and one pair each week was selected to share their responses to the group". Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "The content of the training program included provision of feedback about the previous training session..." "Participants were paired up each week to respond to their partner's homework logs, and one pair each week was selected to share their responses to the group". Comment: Participant responses were being observed by the facilitators and their group, which could have affected their behavior and responses.
Other Bias: (maturation bias)	High risk	Quote: "Inclusion of a 2-month follow-up assessment enabled us to examine maintenance of gains from the training program" Comment: Natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Quote: "...participants volunteered to participate in the study..." Comment: Potential for selection-bias.
Other Bias: (small sample size)	High risk	Quote: "The FAP group consisted of 13 participants" Comment: Small sample size increased the possibility that results are of limited generalizability; it also reduces statistical power.
Other Bias: (other)	High risk	Quote: "Participants in this study were recruited through an invitation email sent to all first- and second-year students enrolled in National University of Singapore master's in clinical psychology programs"

Comment: Results cannot be generalizable to other students or healthcare professionals from other programs or disciplines, respectively.

136. Brathovde A. Teaching nurses reiki energy therapy for self-care. Int J Hum Caring. 2017;21(1):20–25.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “This study used methodological triangulation, with a descriptive design and semistructured interviews.” Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: “This study used methodological triangulation, with a descriptive design and semistructured interviews.” Comment: No randomization
Blinding of participants and personnel (performance bias)	High risk	Quote: “This study used methodological triangulation, with a descriptive design and semistructured interviews.” “Participants Comment: No randomization; no blinding of participants or personnel.
Blinding of outcome assessment (detection bias)	High risk	Quote: “The researcher examined the interview transcripts using a manual open-coding analysis of 24 transcripts...” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: “A convenience sample consisting of 25 baccalaureate-prepared registered nurses participated in the study. Twenty-four completed the study”. Comment: Portions of the study were not completed by all participants, but this is not a large number, hence low risk.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: “Semistructured interviews, lasting approximately 30 minutes, were held with each participant either in person or over the telephone once questionnaires were returned”.

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		Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Quote: "Semistructured interviews, lasting approximately 30 minutes, were held with each participant either in person or over the telephone once questionnaires were returned". Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (maturation bias)	High risk	Quote: "Those participants receiving Reiki training were contacted after 3 months." Comment: Natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Quote: "...participants volunteered to participate in the study... Comment: Potential for selection-bias.
Other Bias: (small sample size)	High risk	Comment: Small sample size increased the possibility that results are of limited generalizability; it also reduces statistical power.
Other Bias: (other)	High risk	Quote: "A convenience sample consisting of 25...registered nurses participated in the study. Twenty-four completed the study". Comment: Results cannot be generalizable to other healthcare professionals.

137. Moffatt-Bruce SD, Nguyen MC, Steinberg B, Holliday S, Klatt M. Interventions to reduce burnout and improve resilience: Impact on a health systems outcomes. Clinical Obstetrics & Gynecology. 2019;62(3):432-443. Doi: 10.1097/GRF.0000000000000458

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "The...training was completed...with an overall participation of 66 participants, both residents and faculty, enrolled in this study" Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "The...training was completed...with an overall participation of 66 participants, both residents and faculty, enrolled in this study" Comment: No randomization.

Blinding of participants and personnel (performance bias)	High risk	Quote: “The...training was completed...with an overall participation of 66 participants, both residents and faculty, enrolled in this study” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “Fifty (76%) completed preintervention and postintervention phase questionnaires and comprised the study cohort. Sixty-two percent of the study cohort completed at least 1 of 7 interventions” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “Fifty (76%) completed preintervention and postintervention phase questionnaires and comprised the study cohort. Sixty-two percent of the study cohort completed at least 1 of 7 interventions.” “No group completed all the modules and several reminders had to be sent to get fully engaged participation”. Comment: No group completed all of the modules and therefore not generalizable.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	Low risk	Comment: As participants are not blinded to the goals of the study, there is potential for them to want to answer pre- and post-intervention questions in a way that would be viewed favorably by the researchers.
Other Bias: (maturation bias)	Unclear risk	Comment: Natural change/improvement in time may have influenced results.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.
Other Bias: (small sample size)	High risk	Quote: “...an overall participation of 66 participants, both residents and faculty, enrolled in this study.”  “By profession, emergency medicine physicians completed the most modules, followed by internal medicine physicians and general surgery.” Comment: Small sample size increased the possibility that results are of limited generalizability.



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138. Verweij H, Waumans RC, Smeijers D, et al. Mindfulness-based stress reduction for GPs: Results of a controlled mixed methods pilot study in Dutch primary care. Br J Gen Pract. 2016;66:e99-e105.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "GP trainers affiliated with two Dutch training hospitals (the Radboud University Medical Center [Radboudumc] and VU University Medical Center [VUmc]) were invited to participate in the study." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "The study was designed as a pre-/postwaiting list-controlled study. Given their busy schedule, GPs showed a clear preference for the period they could attend and were allocated to the period of their choice." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "GP trainers affiliated with two Dutch training hospitals (the Radboud University Medical Center [Radboudumc] and VU University Medical Center [VUmc]) were invited to participate in the study. The MBSR training was taught by experienced MBSR trainers. At VUmc, the trainers were a GP/psychotherapist and a psychologist/psychotherapist; at Radboudumc the trainer was a consultant psychiatrist." Comment: Unable to blind participation in the study.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "Online self-report questionnaires were administered...." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Fifty GP trainers, 18 from VUmc and 32 from Radboudumc, participated and received the first online questionnaire. Due to the online system mistakenly operating on anonymous ratings, seven pre-test sets of questionnaires from the intervention group could not be attributed to an individual participant; therefore, these data had to be considered as missing." Comment: Missing data.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.

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Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: As participants were not blinded to the goals of the study, there was potential for them to want to answer questions in a way that would be viewed favorably by the researchers.
Other Bias: (other)	High risk	Quote: "Study participants were self-selected; they may have been very motivated to attend the MBSR course, thereby resulting in an exaggeration of the effect." Comment: The invitation process may have selected participants more motivated to enhance their wellbeing, performance, and patient care.
Other Bias: (small sample size)	High risk	Quote: "30 GPs were allocated to the MBSR group and 20 to the waiting list (control) group" Comment: Small sample size increased the possibility that results are of limited generalizability.

139. Verweij H, van Ravesteijn H, van Hooff M, Lagro-Janssen A,; Speckens A. Does Mindfulness training enhance the professional development of residents? A qualitative study. Acad Med. 2018;93(9):1335-1304.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "We selected participants based on a purposive sampling strategy taking into account gender, age, specialty, and levels of burnout symptoms." Comment: No randomization.
Allocation concealment (selection bias)	High risk	Quote: "We selected participants based on a purposive sampling strategy taking into account gender, age, specialty, and levels of burnout symptoms." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Residents participated in regular MBSR groups that were already offered to healthcare professionals and the public on a regular basis during the evening. The courses were taught by experienced mindfulness trainers." Comment: Unable to blind participation in the study.

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Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “We conducted the interviews at least 6 months after the MBSR training.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “In total 148 residents participated in the optional MBSR courses between October 2013 and October 2015, of which 36 were contacted for the interviews. All 148 residents had completed an online questionnaire before the start of the MBSR course, so.” Comment: Not all residents participated in interviews.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social-desirability)	High risk	Comment: As participants were not blinded to the goals of the study, there was potential for them to want to answer questions in a way that would be viewed favorably by the researchers.
Other Bias: (other)	High risk	Quote: “Participants in the MBSR training were self-selected, and thus motivated to participate. Second, some residents declined to participate in this interview study. Therefore, we are not certain that the full range of experiences was included.” Comment: The invitation process may have selected participants more motivated to enhance their wellbeing.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

### Other interventions

140. Crow SM, O'Donoghue D, Vannatta JB, Thompson BM. Meeting the Family: Promoting Humanism in Gross Anatomy. Teach Learn Med. 2012;24(1):49–54.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	Low risk	Quote: “During freshman orientation of 2005, incoming medical students ( $N = 157$ ) were asked to participate in this study. All students had been previously randomly assigned to a dissection

		<p>group with eight students, working on a single donor for the duration of the Gross Anatomy course. Assignment was done via a computer randomization program.”</p> <p>Comment: Randomization and procedure described.</p>
Allocation concealment (selection bias)	Unclear risk	<p>Quote: “Three groups were randomly selected not to have a donor family present at the Donor Luncheon. In addition to these 24 students, two additional families that had agreed to participate in the luncheon did not attend. Therefore, 40 students (five groups) served as the control group, whereas those whose families attended the luncheon were the intervention group (15 groups).”</p> <p>Comment: No information on allocation concealment blinding of outcome assessments.</p>
Blinding of participants and personnel (performance bias)	High risk	<p>Quote: “...40 students (five groups) served as the control group, whereas those whose families attended the luncheon were the intervention group (15 groups).”</p> <p>Comment: Unable to blind participation.</p>
Blinding of outcome assessment (detection bias)	Unclear risk	<p>Quote: This questionnaire was administered to students online within the first 2 weeks of the start of the Gross Anatomy course (T1), at 6 weeks (T2), and at the conclusion (T3) of the course to assess the impact of the Donor Luncheon on students’ attitudes toward their dissection experience.”</p> <p>Comment: No information on blinding of outcome assessments.</p>
Incomplete outcome data addressed (attrition bias)	High risk	<p>Quote: “Seventy-eight students completed all three questionnaires, for a response rate of 50%, with response rates of 64%, 59%, and 56% at T1, T2, and T3, respectively.”</p> <p>Comment: Portions of the study were not completed by all participants.</p>
Selective reporting (reporting bias)	Unclear risk	<p>Comment: Study protocol not available.</p>
Other Bias: (small sample size)	High risk	<p>Quote: “...our results reflect only 1 year of students at one medical school.”</p> <p>Comment: Single student cohort at one site increased the possibility that results were due to chance and</p>

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		limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.

141. Talarico EF. A change in paradigm: Giving back identity to donors in the anatomy laboratory. Clin Anat. 2013;26:161–172.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "...students at IUSM-NW are the only custodians of their first patients." Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: "...students at IUSM-NW are the only custodians of their first patients." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "...students at IUSM-NW are the only custodians of their first patients." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.

142. Chiou RJ, Tsai PF, Han DY. Effects of a "silent mentor" initiation ceremony and dissection on medical students' humanity and learning. BMC Res Notes. 2017;10:483.

Entry	Judgement	Support for judgement
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Random sequence generation (selection bias)	High risk	Quote: "Participants consisted of 158 third year medical students of a medical university in northern Taiwan. The sample included all the students who were willing to participate in this study in that term." Comment: No randomization - pre post
Allocation concealment (selection bias)	High risk	Quote: "In our course of Gross Anatomy Laboratory, students were divided into 8 groups, and each group further divided into 5 divisions. Each division of students was responsible for one dissection region, and each dissection region was supervised by one teacher" Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "Each division of students was responsible for one dissection region, and each dissection region was supervised by one teacher." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: Third-year medical students filled out a battery of questionnaires over 7 days before (T1, on November 4) and after (T2, on November 11) the "silent mentor" initiation ceremony in 2015." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Some participants quitted this study after they finished the first questionnaire. Eventually, there were 153 participants right after the ceremony and 137 participants in the follow-up session." Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (gender bias; selection bias)	Unclear risk	Quote: "There were 96 males and 62 females." Comment: Gender-related factors may have affected attitudes toward death.
Other Bias:	Unclear risk	Quote: "Although questionnaires were collected at the

(other)		<p>end of the semester, it was unknown whether the significant results at T3 came from post effects of the ceremony, learning from the silent mentors, or even other courses.”</p> <p>Comment: In the same term, students took Introduction to Social Medical Sciences, which is related to medical humanity development.”</p>
Other Bias: (other)	Unclear risk	<p>Quote: “The sample included all the students who were willing to participate in this study in that term.”</p> <p>Comment: May be inherent differences in individuals who volunteered to participate - may be more motivated to improve their attitudes towards death.</p>
Other Bias: (other)	Unclear risk	<p>Quote: “Because of the conditions of an educational circumstance, it was difficult to design a completely randomized control trial to demonstrate differences between students who joined the initiation ceremony and those who did not.”</p> <p>Comment: Results were attributed to the program, but there was no control arm.</p>

143. Han A, Kunik ME. Feasibility of Training and Delivering Compassionate Touch in Long-Term Care. Clin Gerontol. 2017;42(3):277–285.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	<p>Quote: “A total of 112 staff members who attended the CT coach training through the AGE-ucate Training Institute were invited for study participation through e-mails.”</p> <p>Comment: No randomization</p>
Allocation concealment (selection bias)	High risk	<p>Quote: “The potential participants received an e-mail with the electronic survey link posted on PsychData.”</p> <p>Comment: No randomization.</p>
Blinding of participants and personnel (performance bias)	High risk	<p>Quote: “A total of 112 staff members who attended the CT coach training through the AGE-ucate Training Institute were invited for study participation through e-mails.”</p> <p>Comment: Unable to blind participation.</p>

Blinking of outcome assessment (detection bias)	Unclear risk	Quote: "An online survey was sent via email to 112 staff who attended the CT coach training. Descriptive statistics and thematic analysis were used to analyze closed-and open-ended questions of the survey." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Twenty-four staff members completed the survey." Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "...these include a small sample size (response rate: 21.43%) and selection bias." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: "Opinions of participants who responded to the survey might be different from the opinions of those who did not respond to the survey, so there is a possibility that the participants of the present study do not represent the whole sample that attended the CT coach training." Comment: May be inherent differences in individuals who volunteered to participate - may be more motivated to incorporate a person-centered approach to care.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.



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144. Altamirano-Bustamante MM, Altamirano-Bustamante NF, Lifshitz A, et al. Promoting networks between evidence-based medicine and values-based medicine in continuing medical education. BMC Med. 2013;11:39.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "In 2009, healthcare personnel working in Mexico were invited to participate in a free, online clinical ethics course." Comment: No randomization – pre post
Allocation concealment (selection bias)	High risk	Quote: "Each participant responded to a set of online survey instruments before and after the CME program. Face-to-face semi-structured interviews were conducted with healthcare personnel," Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "In 2009, healthcare personnel working in Mexico were invited to participate in a free, online clinical ethics course." Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "Each participant responded to a set of online survey instruments before and after the CME program. Face-to-face semi-structured interviews were conducted with healthcare personnel." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: "Axiological situational diagnostic data were obtained for 2,891 healthcare professionals who were initially enrolled in the course (registration). The final sample included 973 healthcare professionals who successfully completed the course and who had also completed the before-and after survey instruments as well as the clinical vignettes" Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.

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Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

145. Hofmeyer A, Toffoli L, Vernon R, et al. Teaching compassionate care to nursing students in a digital learning and teaching environment. Collegian. 2018;25(3):307–312.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “Purposive sampling was used to recruit respondents from a final year cohort of 362 undergraduate nursing students...” Comment: No randomization – pre post
Allocation concealment (selection bias)	High risk	Quote: “Students received an email invitation and information letter outlining the study, consent process, and the link to questions in SurveyMonkey®.” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “Purposive sampling was used to recruit respondents from a final year cohort of 362 undergraduate nursing students... Students received an email invitation and information letter outlining the study, consent process, and the link to questions in SurveyMonkey®.” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: “The researchers undertook analysis of the data to ensure its trustworthiness, reach consensus, and verify coherence through-out the data analysis and reporting process.” Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “In September 2015, n = 17 respondents typed their responses to five open-ended pre-intervention questions. During late October and November 2015, n = 25 respondents provided responses to 12 open-ended post-intervention questions.” Comment: Portions of the study were not completed by all participants.

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Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: "Data collection was conducted at one higher education institution." Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: "...it is possible the study attracted respondents with a pre-existing interest in compassion." Comment: May be inherent differences in individuals who volunteered to participate - may be more interested in compassion.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

146. Turnbull P, Weeley FM. Service user involvement: Inspiring student nurses to make a difference to patient care. Nurse Educ Pract. 2013;13(5):454–458.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: "This paper reports on the evaluation of an innovation around the introduction of a student nurse pledge to enhance patient care." Comment: No randomization
Allocation concealment (selection bias)	High risk	Quote: "Following exposure to the service user stories in the classroom students documented a pledge, within their practice assessment documents, to improve one aspect of patient care." Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: "This paper reports on the evaluation of an innovation around the introduction of a student nurse pledge to enhance patient care."

Comment: Unable to blind participation.		
Blinding of outcome assessment (detection bias)	Unclear risk	Quote: "Following exposure to the service user stories in the classroom students documented a pledge, within their practice assessment documents, to improve one aspect of patient care." Comment: No information on blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	Unclear risk	Comment: No attrition
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.

147. Reynolds LM, Powell P, Lin Y, Ravi K, Chung, C, Consedine N. Fighting the flinch: Experimentally induced compassion makes a difference in healthcare providers. British Journal of Health Psychology. 2019;24(4):982-998. Doi: <https://dx.doi.org/10.1111/bjhp.12390>

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	Unclear risk	Quote: "Convenience sampling via social media and medical networks was used to recruit medical students and qualified healthcare professionals..." "Participants were randomized to either control or compassion conditions and, in both conditions, viewed a 2-min slideshow." Comment: Participants were randomized to an intervention and control arm, but no information on the generation of a random sequence.
Allocation concealment (selection bias)	Unclear risk	Quote: "Convenience sampling via social media and medical networks was used to recruit medical students and qualified healthcare professionals..." "Participants were randomized to either control or compassion conditions and, in both conditions, viewed a 2-min slideshow." Comment: Participants were randomized to an

		intervention and control arm, but no information on the randomization procedure.
Blinding of participants and personnel (performance bias)	Unclear risk	Quote: "Convenience sampling via social media and medical networks was used to recruit medical students and qualified healthcare professionals..." "Participants were randomized to either control or compassion conditions and, in both conditions, viewed a 2-min slideshow." Comment: No information on blinding of participants and personnel.
Blinding of outcome assessment (detection bias)	Low risk	Quote: "although anonymity reduces social desirability, the intentions of professionals may not always translate to action" Comment: Four different outcome measures were utilized, and it was mentioned in the discussion section that these were anonymous.
Incomplete outcome data addressed (attrition bias)	Low risk	Quote: "In total, 327 participants completed the online questionnaire." "Only participants who fully completed the survey were included in analyses." "There were some cases of missing data, and these were excluded pairwise and only available case analyses conducted." Comment: All study participants completed the online questionnaire. Missing data were handled appropriately.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (Hawthorne effect)	High risk	Quote: "It is also possible that health providers might report one thing and do another; although anonymity reduces social desirability, the intentions of professionals may not always translate to action" Comment: Participants were aware of the study, which could have affected their self-reports for each outcome measure.
Other Bias: (social-desirability)	High risk	Quote: "It is also possible that health providers might report one thing and do another; although anonymity reduces social desirability, the intentions of professionals may not always translate to action" Comment: Participants were aware of the study, which could have affected their self-reports of each outcome measure.

Other Bias: (sample size)	Low risk	Quote: “In total, 327 participants completed the online questionnaire.” “Only participants who fully completed the survey were included in analyses.” “There were some cases of missing data, and these were excluded pairwise and only available case analyses conducted.” Comment: Large sample size increases the possibility that results are generalizable.
Other bias: (other)	High risk	Quote “...our hypothetical scenarios necessarily restrict insight into how these findings might translate to real-world situations.” Comment: The implementation of hypothetical scenarios in the study may render less generalizability.

148. Bunyan M, Crowley J, Smedley N, et al. Feasibility of training nurses in motivational interviewing to improve patient experience in mental health inpatient rehabilitation: a pilot study. J Psychiatr Ment Health Nurs. 2017;24(4):221–231.

Entry	Judgement	Support for judgement
Random sequence generation (selection bias)	High risk	Quote: “All staff from the three wards (n = 60), including nurses, healthcare assistants (HCAs), psychiatrists, clinical psychologists, occupational therapists, social workers and administrators, attended the MI training sessions (delivered by six trainers, two nurses, two clinical psychologists, a social worker and an occupational therapist, who had attended an advanced MI training course).” Comment: No randomization – pre post
Allocation concealment (selection bias)	High risk	Quote: “All staff from the three wards (n = 60), including nurses, healthcare assistants (HCAs), psychiatrists, clinical psychologists, occupational therapists, social workers and administrators, attended the MI training sessions (delivered by six trainers, two nurses, two clinical psychologists, a social worker and an occupational therapist, who had attended an advanced MI training course).” Comment: No randomization.
Blinding of participants and personnel (performance bias)	High risk	Quote: “All staff from the three wards (n = 60), including nurses, healthcare assistants (HCAs), psychiatrists, clinical psychologists, occupational therapists, social workers and administrators, attended the MI training sessions (delivered by six trainers, two nurses, two clinical psychologists, a social worker and

		an occupational therapist, who had attended an advanced MI training course). Patients were invited to participate in the study at three time points...” Comment: Unable to blind participation.
Blinding of outcome assessment (detection bias)	High risk	Quote: “Patient interviewers were not blind to the condition, and one author (MB) was involved at several stages.” Comment: No blinding of outcome assessments.
Incomplete outcome data addressed (attrition bias)	High risk	Quote: “24, 26 and 30 patients declined participation at the three stages, respectively.” Comment: Portions of the study were not completed by all participants.
Selective reporting (reporting bias)	Unclear risk	Comment: Study protocol not available.
Other Bias: (small sample size)	High risk	Quote: “This pilot study was carried out in three wards from the same South London NHS Trust. The data gathered at the three time points were from groups which were a mixture of new and repeat participants, because new patients arrived and previously recruited participants left the rehabilitation ward during the study period.” Comment: Small sample size increased the possibility that results were due to chance and limited generalizability.
Other Bias: (Hawthorne effect)	High risk	Comment: Participants were aware of the study, which could have affected their behavior and responses.
Other Bias: (social desirability bias)	High risk	Comment: Potential for participants to want to answer questions in a way that would be viewed favorably by others.
Other Bias: (other)	Unclear risk	Quote: “The number of participants was reduced at each time point...” Comment: Potential researcher and participant fatigue.
Other Bias: (other)	Unclear risk	Comment: Results were attributed to the program, but there was no control arm.