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Cover Page Footnote

We would like to thank Hema Zbogar for her editorial assistance, Sarah Bonato for her help in the search strategy and Genevieve Ferguson, research analyst. We would like to acknowledge the reviewer who provided feedback that strengthened the manuscript. This project was made possible with a grant from the Arnold P. Gold Foundation.

Review

Relationship-centred care in health: A 20-year scoping review

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Abstract

Relationship-centred care (RCC) is a framework for conceptualizing health care which recognizes that the nature and quality of relationships in health care influence the process and outcomes of health care. Our goal was to undertake a scoping review of the peer-reviewed and grey literature on RCC in health. Using Arksey and O'Malley's scoping review methodology we identified literature about RCC in teaching, learning and clinical practice. Electronic databases were searched, and targeted searches were also conducted for grey literature to capture unpublished material. Subsequently, data abstraction tools were used with eligible studies for analysis. Sixty-nine publications originated mainly from the United States and the United Kingdom by authors from various academic disciplines, of which medicine and nursing were dominant. Thematic analysis revealed that the most commonly cited definition of RCC emerged from the Pew-Fetzer report and focused on the central role of relationships between practitioners and their patients, the community and other practitioners in providing quality care and improving outcomes. The concept of RCC was found to be influenced by theories of sociology, social psychology and psychiatry. The practice of RCC was demonstrated through organizational environments that model RCC, practice settings that focus on the patient or family in care planning, and health professional education that is based on RCC principles. RCC is important to: humanize health care and improve patient care. Our review identified three sub-categories that could add to the relational dimension of the practitionerorganization: practitioner-education, practitioner-profession, and practitioner-practice. Recommendations for future research include: outcome and process studies of health professions education and health care that focuses on RCC. The RCC approach provides a paradigm to move beyond the patient-centred care model by focusing on the central role of all relationships in the delivery and outcomes of care.

Keywords

Relationship-centred care, scoping review, health professions education, clinical practice, patient experience, professionalism

Acknowledgement

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Introduction

Although tremendous strides have been made in health professions education and clinical practices, critics argue that the field needs to better incorporate relational, psychological, social, and spiritual, with biological dimensions of health and illness. The notion of "patient-centred medicine" was derived from the need to operationalize the biopsychosocial model. [2]. The approach was divided into "patient-centred process" (e.g., patient wishes, concerns and emotions) and the "doctor-centred process" (i.e., information relevant to the patient's

illness). This biopsychosocial approach, taught in most medical schools still fails in part to address the importance of relationships and personhood.³ Several studies have reported that empathy declines among medical students^{4, 5} and residents as they mature within the system.⁶ Yet factors such as empathy and a good therapeutic relationship have been shown to improve patient outcomes, satisfaction and treatment adherence.⁷

Relationship-centred care (RCC) in health provides an alternative framework to patient-centred care, for understanding how relationships can influence health care experiences and outcomes. The practice of medicine is an

interpersonal process in which a central health-enabling component is the nature of the relationship. RCC is founded on four principles: 1) Personhood matters 2) Affect and emotion are important 3) Relationships do not occur in isolation and 4) Maintaining genuine relationships is necessary for health and recovery, and is morally valuable. Relationships in healthcare include: practitioner—patient, a practitioner with colleagues, themselves, and their community with a parallel, and sometimes intersecting web of relationships that the patient has with their healthcare practitioner, family, colleagues, self and community. This paper presents the results of a scoping review that synthesizes the literature on RCC in health.

Methods

Scoping reviews examine the existing literature to map the extent and range of a field. 10-12 Because there is a paucity of primary research in RCC, we adapted Arksey and O'Malley's 12 methodology to review the breadth and depth of the literature of this field as represented by all publications including research, commentaries and opinion papers.

Our research question was: What is known from the existing literature about relationship-centred care in health? We included studies about how the concept of RCC was used in policy and practice within hospitals, private medical practices, clinics, and other health care institutions internationally. Thus, our target population included all hospitals and health care institutions internationally. All study designs were eligible for inclusion.

The following electronic databases for 1994 to June 2014 were searched: Medline/Medline-In-Process, CINAHL, EMBASE, PsycInfo, and All EMB Review (Cochrane DSR, ACP Journal Club, DARE, CCTR, CMR, HTA,

NHSEED) with the terms: relationship-centred care, health, treatment, therapy, counselling, health care, outcomes, practice, and models (see Figure 1).

Articles were screened using a three-part process. First, titles and abstracts were reviewed by the first author to determine eligibility. At this stage of the review, any uncertainty regarding inclusion of an article was resolved by keeping it for consideration. In the second stage, we conducted a calibration exercise to ensure reliability among the authors in selecting articles for inclusion. This entailed an independent screening by the research team of a random sample of 5% of the included citations to help clarify the eligibility criteria. Finally, the first author reviewed all articles to ensure eligibility and divided them among the three authors for review.

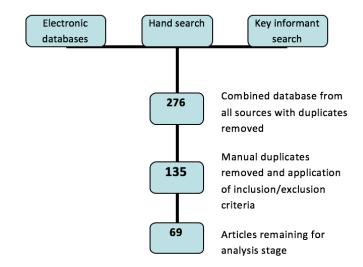
For data abstraction, titles and abstracts were reviewed by the first author to determine eligibility followed by an independent screening by the research team of a random sample of 5% of the included citations to further clarify eligibility criteria for data extraction using two forms- one for research and the other for theoretical articles. Key dimensions and thematic findings were identified from the data extracted, to synthesize an overview of the literature on RCC in health.

Results

Quantitative results

Sixty-nine publications originated from the United States (71%, n=49), United Kingdom (16.2%, n=11), Canada (5.9%, n=4), and Australia (2.9%, n=2) (see Appendix A). New Zealand, Taiwan, and Japan each published one paper. Most publications were theoretical or conceptual (e.g., editorials, interviews) (54%, n= 37) with 25% being research (n=17). There were seven books and seven

Figure 1. Results of the search strategy



reviews. The foci of these publications were on geriatric care (n=12), health care systems (n=7), medical education (n=4), health profession education (n=4), and interprofessional education and collaboration (n=3). Authors' professions came from medicine (n=33), nursing (n=17), research (n=8), occupational and physical therapy (n=2), midwifery (n=2), and counselling (n=2). Key informants were consulted and subsequent targeted searches for grey literature through Google captured non-peer reviewed literature (see table 1).

Thematic Analysis

Definition of RCC

The most common definition of RCC originated in the report of the Pew-Fetzer Task Force on Advancing Psychosocial Health Education.⁶⁹ The report focused on

three relational dimensions of RCC: patient-practitioner, community-practitioner, and practitioner-practitioner for putting into action a paradigm of health that integrates caring, healing and community. Words like "reciprocal," "mutual," "non-paternalistic," and "collaborative" were used by various authors to describe authentic communication between HPs and their patients, patients' families, and communities. 1, 25, 29, 41, 45, 46, 47 Beach et al.'s9 definition of RCC, that built on the work of the Pew-Fetzer Task Force, was the second most commonly cited article. 19, 22, 30, 61, 63 Although the Pew-Fetzer report recognized the importance of HPs' self-awareness and self-growth, it situated those characteristics within the patient-practitioner dimension of RCC. In contrast, Beach et al.9 categorized self-awareness and self-knowledge under a separate dimension: clinical relationship with self.

Some authors expanded the definition of RCC to include the role of organizational culture and proposed a model of

Table 1. Summary of websites and online publications about RCC

Creator(s), publication year	Name of website/publication	Website/publicatio n type	URL	Description
Caring Matters (n.d.) [80]	Caring Matters	Consultancy organization	http://caringmatters.ca	Organizes events and seminars to teach families how to support loved ones through aging and illness.
Nolan (2012) [81]	Relationship-Centred Care: Improving Outcomes for Patients, Staff and Family Carers	PowerPoint presentation	www.kingsfund.org.uk/ sites/files/kf/mike- nolan-relationship- centred-care- improving-outcomes- for-patients-familes- carers-and-staff- nov12.pdf.pdf	Describes RCC interactions as based in continuity, belonging, security.
Nolan et al. (2006) [82]	The Senses Framework: Improving Care for Older People through a Relationship-Centred Approach	Report	http://shura.shu.ac.uk/ 280/1/PDF_Senses	Explores a practice framework and outlines lessons from case studies and personal experiences.
Relationship Centered Health Care (n.d.) [83]	Relationship Centered Health Care	Consultancy/progr ams organization	www.rchcweb.com	Offer courses, workshops, private consultancy.
Relationship Centered Health Care (2014) [84]	Relationship Centered Administration: Partnership Process for Clinical and Organizational Work	Annotated bibliography	http://rchcweb.com/Portals/0/Files/RCAdmin%20annotated%20bibliography%2012-13.pdf	Lists publications about administrative processes and their effect on health care interactions.

relationship-centred organizations^{44, 57} and relationship-centred administration.^{63, 66} Weiner⁷⁵ and Ventres and Frankel⁷¹ added an information technology component to RCC. They argued that developing and maintaining relationships depends on the effective exchange of information, which can originate in and be influenced by many sources, including the Internet, mass media, and medical records.

Most articles distinguished RCC from patient-centred care⁷⁸, in the following ways: 1) RCC focuses on how patients and HPs relate to one another 2) RCC views relationships as therapeutic and as the medium of care 3) RCC values patients and HPs as active participants who bring important aspects to the relationship 4) RCC focuses on HPs being present for themselves and others and 5) RCC recognizes that interactions influence the course and outcomes of care. 46, 85 While acknowledging the impact of the term "person-centred care," Nolan et al.⁵² identified "relationship-centered care" as more appropriately affirming "the centrality of relationships in contemporary health care and their importance in the context of any healthcare reform debate".52 One article combined the two paradigms into "patient- and relationship-centred care," which focuses on communication among patients, families, and HPs.⁷¹ Overall, whether RCC was explicitly defined or not, all reviewed articles focused on the centrality of interactions and the importance of personhood.

Theoretical approaches/paradigms

To organize the various theoretical approaches of RCC, we examined each one and traced it to its origins. Using this method, we identified that the concept of RCC was influenced by theories based in sociology, psychology and psychiatry. One of the greatest theoretical contributions to RCC comes from psychiatry. The psychiatrist George Engel proposed the biopsychosocial model in what became a paradigm shift.^{86, 87} Before that, the biomedical model, with its focus on disease, prevailed. Indeed, contemporary research has established links between relationship experiences (psychosocial) and gene expression (biological).⁸⁸ The majority of reviewed articles referred to this model.^{16, 28, 30, 55, 58, 65, 69, 75}

Several other theories were integrated into the literature on RCC (see table 2). For example, social construction theory illustrates how experiences are continually socially constructed and can have a more significant effect on care than the nature of the illness. This theory was used to understand how race and ethnicity influence relationships in health care¹⁹ and to reveal communication patterns and interactions between HPs, carers, and people with dementia.¹³ Suchman⁶⁶ applied complexity theory to

capture the responsive processes involved in RCC through appreciative enquiry. The non-linear, reciprocal nature of human interactions can account for the emergence of selforganizing patterns of meaning and behavior. 66, 89 Safran et al.⁵⁷ used a similar theory to describe relationship-centred organizations, within a "dynamic local ecology" considering the circumstances of patients and the web of relationships within families, HPs, and communities. Interprofessional collaboration in health care with its grounding in organizational theory and organizational sociology⁸⁹ was a focus in several articles from an RCC framework.^{21, 31, 52, 53, 73, 74} Social psychology's focus on the basis of the relationships between individuals and groups and how these relationships are affected by cognition, motivation, personality, and moralities was applied in studies that used appreciative inquiry and selfdetermination theory. Dewar and Nolan²⁰ used appreciative inquiry with older patients, their families, and staff to promote RCC in an acute hospital setting. Selfdetermination theory supports RCC-informed HPs need for self-awareness and growth as a foundation for caring and healing relationships. 9, 15, 19, 42, 69 Using an RCC framework and the self-in-relation theory⁹², Knight et al.³⁹ described an intervention at a residential substance abuse treatment centre that aimed to improve treatment outcomes by helping women develop healthy relationships with family and friends. Finally, the use of narratives⁹¹ is prominent in the RCC literature, spanning from early childhood to elder care. 20, 24, 51, 68

Relational themes

All reviewed articles described one or more of the following relational dimensions of RCC: practitioner—patient (including the patient's family and carers), self, practitioner, community and organization. The thematic analysis uncovered a more fulsome description of the practitioner-organization dimension, which includes three sub-categories: practitioner—education, profession and practice.

Practitioner-education relationship

The Pew-Fetzer report outlines principles for designing curricular and programming activities in health professions education that are grounded in an RCC framework. 69 According to Brody 16, the current approach to health professions education – students first learn "real" medicine and then take token courses in humanities – ignores the fact that health care is essentially about human relationships, not anatomy, physiology, and biochemistry. He argued that educators must "view healthcare as the effort to help restore, maximize or expand function and meaningfulness in all aspects of life, rather than only to cure pathology". 16

Table 2. Theoretical approaches in RCC literature

Theoretical Approach	Definition	Articles	
Sociology			
Social Construction	Social construction refers to the way we present ourselves to other people and how that is shaped by our interactions with others, our life experiences and beliefs, and how we believe others perceive us.	[13, 19, 92, 93]	
Complexity Theory	Complexity theory seeks to understand how order emerges in non-linear systems, such as social systems and biospheres. These systems continuously seek to balance the tension between forces for innovation with the competing need for stability and structure.	[57, 63, 66, 89]	
Organizational Theory	Organizations are described as social systems attempting to "survive" in their environment. Studies by anthropologists and sociologists revealed patterns of cooperation, shared norms, and conflicts between and among managers and workers.	[21, 31, 52, 53, 73, 74]	
Social Psychology			
Appreciative Inquiry	Appreciative inquiry focuses on the "best" in people, their organizations, and their social system.	[20, 63]	
Self Determination Theory	Psychologists Edward Deci and Richard Ryan developed a theory of motivation positing that people are driven by a need to grow and gain fulfillment. The self-determination theory posits that individuals are actively directed toward growth and through gaining mastery over challenges develop a deep and cohesive sense of self.	[9, 15, 19, 42, 69]	
Psychiatry			
Self-relationship	The self-relationship approach looks within the unconscious to enter into dialogue with one's deepest self. It is an approach to therapy and personal change that reconnects mind-body processes.	[39]	
Narrative Therapy	Narrative theorists draw on fields such as rhetoric, philosophy, cognitive science, and gender theory to explore how narratives work as both texts and strategies for navigating experience.	[20, 24, 51, 68]	

Frankel et al.³⁰ proposed five key areas for faculty development in patient- and relationship-centred care: 1) Make RCC a central competency in all health care interactions 2) Develop a national curriculum framework 3) Require performance metrics for professional development 4) Partner with national health care organizations to disseminate a curriculum framework and 5) Preserve face-to-face methods for delivering key elements of the curriculum. Other articles describe various approaches to teaching RCC.^{48, 67}

The emphasis on interprofessional education (IPE) in health professions training provides opportunities for teaching RCC through an IPE lens. RCC provides a new vision of IPE and rekindles the spirit of cooperation and collaboration.³³ IPE programs must support HPs in developing the knowledge and skills they need to become competent in RCC.^{21, 31, 33}

Practitioner-profession relationship

In a health care system that emphasizes symptom-based and technical aspects of care, HPs risk losing the "art" of therapeutic practice in the context of a relationship. 15, 37

The focus on cure can be dispiriting for HPs charged with the care of individuals who cannot be "cured," such as the very elderly or people with chronic illness. 94 An RCC approach shifts the focus from cure to care. With its emphasis on nurturing relationships to improve quality of life, RCC provides a clearer sense of therapeutic direction for HPs and recognizes the contribution that patients and families can make toward an enriched environment of care. 46, 51 For example, RCC can provide a valuable framework for improving respite services for family carers of people with dementia by providing care in a way that maintains the loved one's personhood. 56 Essentially, an RCC lens informs and shifts our perceptions of what is meaningful, important, and impactful in health care.

Practitioner-practice relationship

Several authors discussed how the HPs' relationship with their own practice, including type of interactions (individual/group, technology) and space (physical, as well as mental space for reflection), influences the care they provide. The practice relationship also affects the relationships HPs have with their colleagues, the organization where they practice, and the health care

system. One article illustrated how prenatal care is best provided to women in groups facilitated by a HP. The learning and support that emerge in a group context can be difficult to achieve within the traditional structure of individual examination room visits.⁴⁵

Electronic health records and information technology can both facilitate and impede RCC.^{71,75} The expansion of the Internet is increasing people's access to health-related information, which makes those with computer literacy to be more active participants in care. Patients who help to generate their medical records where possible may initiate discussions and actively engage in collaborative care. However, information technology can be a barrier to RCC if it is poorly integrated and designed. An inadequate IT system can frustrate even the most competent health professional's efforts to provide quality care.⁷⁵ The relationship between electronic health records and RCC requires further exploration.⁷¹

Several authors discussed ways to implement RCC with a need to protect time and space in the clinic schedule. 95 Without the time for building and sustaining therapeutic relationships, physicians face a threat of moral erosion. 55, 85 The Senses framework used in geriatric care promotes practitioners acknowledging and incorporating the contributions and needs of older people, family caregivers, and paid carers. 50, 51 This approach moves beyond personcentred care, to embrace a holistic and inclusive vision. 46 Similarly, Miller 47 describes how one primary care practice developed a relationship-centred model in clinical care that includes mindfulness, heedful interrelating, and trust.

The practice of RCC

Several articles discussed incorporating RCC into practice in three ways: 1) Create an organizational environment that models RCC 2) Establish practice settings that focus on the patient/family in care planning and 3) Emphasize the importance of basing health professions education on RCC.

Suchman⁶³ described an organization-wide RCC implementation in a community hospital that established RCC as a core operating principle. RCC is enacted in the hospital's governance models, organizational rituals, selection and recruitment methods, and assessment processes. The overall RCC environment includes considerations around psychological safety and comfort; conflict-free experiences; empathetic resonance; and the experiences of being seen, heard, and listened to.¹⁵ Challenges to implementing RCC included institutional cost and an organizational bureaucracy based in the spirit of individualism rather than social responsibility.⁶⁹

HPs can incorporate an RCC philosophy by creating space and time to connect with patients at a deeper level. 45, 55 Specific RCC competencies, include self-awareness and

continuing self-growth; understanding the patient's experience of health and illness; developing and maintaining relationships with patients, families, and the community; and communicating well with colleagues, patients and their families, and the community. 1, 13, 27, 40, 66, ⁶⁹ Practicing these competencies involves listening to emotional tone; being less self-conscious; developing appropriate relationships with patients; learning to ask for help; accepting limitations; being collegial; dealing effectively with one's own feelings; and becoming comfortable with the unknown.⁴² RCC can be enacted through "autonomy support": acknowledging patients' perspectives, affording them choice, offering information, encouraging self-initiation, explaining reasons for recommended actions, and accepting patients' decisions.^{20,} 49, 50, 51, 76

Proposed strategies to base health professions education on RCC included using narrative and reflective teaching methodologies with specific prompts for learners²²; ensuring time and space for thoughtful reflection during medical school and residency¹⁶; providing non-competitive and formative assessments, journal writing and peer mentoring opportunities, and wellness programs⁴²; and using community-based clinics or practices as fundamental components of teaching social responsibility and health advocacy.⁶⁹

The importance, impact, and outcomes of RCC

The rationales for practicing RCC include: humanizing health care, improving patient care, and strengthening interpersonal relationships. RCC offers a non-paternalistic, collaborative approach to care³⁸ that is also individualized.^{32, 58} It balances science-based practice with empathy for the patient's subjective experience of illness and acknowledgment of the personhood of the practitioner and of the patient in partnership.⁶⁶ Many authors argued that recognizing the centrality of relationships is essential to addressing the manifestations, impacts, and causes of illness and the well-being of the whole person.^{15, 38, 40, 50, 69} RCC moves caring one step further, emphasizing acts of relating in therapeutic or healing activities.⁴⁴

RCC can humanize health care and support a successful business model with measurable outcomes.⁶³ Suchman⁶³ coined the term *relationship-centred administration* to describe the impact and outcomes of RCC as a successful business strategy.

Improving patient care was the most frequently cited reason for practicing RCC.^{1,61} Several articles explained how the approach yielded positive outcomes for both patients and HPs.^{22,42,43} For example, patients were more likely to maintain healthy behaviour change; had greater satisfaction, higher rates of medication adherence, better physical and mental health, and fewer health care visits;

and were less likely to initiate legal action against physicians. ^{76, 85} HPs experienced more personal satisfaction with their work. ^{1, 26} Massey et al. ⁴⁵ identified specific outcomes related to RCC in perinatal and pediatric medicine: compared to standard prenatal care, attending an RCC-based prenatal care group was linked to significantly higher birth weight, increased patient satisfaction, and greater likelihood that teenage mothers accessed a pediatric health care professional prior to the birth.

Several articles described how RCC promoted cohesion, supportive work environments, and collegiality among HPs. 19, 24, 56, 66 Suchman 66 described RCC as transforming hierarchical patterns into partnerships. Specifically, RCC has been used as a framework for nurturing relationships among families and young children at risk²⁴ and with older people, family carers, care assistants, and HPs.⁵⁰ RCCbased counselling has been shown to reduce negative emotions; improve interpersonal relationships; build social support networks; and enhance a sense of internal control. self-esteem, and life satisfaction.⁴¹ Entwistle et al.²⁵ argued that RCC facilitates the development of respectful, bilateral relationships within and beyond health care. With its emphasis on relationships and self-reflection, RCC plays a potential role in reducing disparities in health care based on ethnicity and race.¹⁹ Tresolini⁷⁰ described RCC as essentially human activity undertaken and given meaning by people in relationships with one another and their communities, both public and professional.

The direct benefits of RCC include improved quality of care, more successful interventions, increased patient and HP satisfaction, and lowered mortality. 45, 76, 85 Indirect benefits include improved decision making and teamwork; higher morale among staff, patients, and carers; decreased costs and hospitalizations; and improved trainee competence. 22, 23, 62, 70, 73, 74, 75

Recommendations for Future Research

Recommendations in the reviewed articles revolved around three themes: 1) reforming health professions education 2) focusing on research and evaluation of RCC and 3) reforming the health care system.

Reforming health professions education

Many authors called for health professions education that includes RCC^{42, 62, 73, 74}, focusing on the relational dimensions of practitioner—patient, practitioner—practitioner, and practitioner—community. Educational reform is needed in: 1) curriculum development 2) faculty and practitioner development 3) partnering with patients and their communities and 4) education research.⁶⁸ Sprague⁶¹ advocates for educational reform in undergraduate, post-graduate and continuing medical education for all trainees and practicing HPs to be trained in RCC and read the Pew-Fetzer report.¹⁶ Frankel et al.³⁰

advocated that in the same way that interprofessional education is now a training requirement, RCC can also be established as a central competency across health care professions. Other authors posited that an entirely new curriculum is not necessary and that RCC can be integrated into existing curricula, from medical school to post-graduate residency programs, delivered by engaged and well-trained faculty.²²

Focusing on RCC research and evaluation

Qualitative research and assessment of specific RCC frameworks is needed on RCC.^{33, 44} Ventres and Frankel⁷¹ proposed observing how physicians interact face-to-face with patients when they use exam room information technology. More research and assessment of specific RCC frameworks is needed, for example on the Senses framework^{50, 51}, the Complex Responsive Processes of Relating framework⁶³, sautogenesis⁵⁵, and CenteringPregnancy.⁴⁵

In terms of specific relational dimensions of RCC, Beach et al.9 indicated that the practitioner's "relationship with self' warrants further study. It involves the practitioner's capacity for self-awareness, as well as for integrity grounded in a sense of well-being. In contrast, the practitioner-colleague dimension can be studied by focusing on team processes.³¹ Knight et al.³⁹, who evaluated an intervention at a residential substance abuse treatment centre that helps women to develop healthy relationships with family and friends, called for further research about how improved relationships affect longterm outcomes. Although most RCC research focuses on the practitioner-patient relationship, new areas of study are emerging, for example, how information technology affects the practitioner-patient relationship, as well as health care in general.⁷⁵ Williams et al.⁷⁶ suggested research on the practitioner-family dimension, specifically around autonomy support. Other authors called for further research on all relational dimensions of RCC.^{13, 43, 69} The relationship domain should be measured in all process and outcome research to verify the conceptual and pragmatic soundness of a relationship-centred approach.^{19, 37} Manning-Walsh et al.⁴³ proposed research between relational dimensions, examining, for instance, whether increasing capacity in one dimension affects other dimensions.

Reforming the health care system

Focusing on relationship-centred theory and practice in health care holds promise for improving the quality of care, the quality of life of those who provide care, and organizational performance. This means identifying the features of a relationship-centred culture⁵⁷ and using the language of RCC to promote system-wide change.⁵² Embracing RCC requires redesigning clinical processes and transforming health care organizations.^{64, 65, 66} Since we live in a world where HPs are still considered the experts,

the perceived threat to their identity in moving toward a partnership model must be acknowledged.⁵⁰

Discussion

There is a growing interest in humanism in health professions education and in clinical practice. ^{96, 97} Most articles were published in the past 10 years, but a particularly large number appeared in the late 1990s, 2004, and 2006. These spikes were perhaps due to the Pew Fetzer Report and the special issue on RCC in the Journal of General and Internal Medicine. The articles identified in this scoping review examined the scope, range, and nature of RCC. Although definitions of RCC vary, the underlying principles remain constant: the centrality of relationships and the importance of personhood.

All reviewed articles described one or more of the following dimensions of RCC: practitioner—patient (including family and carers), practitioner—self, practitioner—practitioner and practitioner—community. Gaps in the literature were in the relational dimensions of practitioner—patient in the area of family/carer role and practitioner—community, which was the least researched dimension. Although there was literature about practitioner—self, there were also several identifiable gaps in knowledge, particularly in the area of self-reflection.

The importance of RCC is embedded in humanizing, improving and offering a collaborative approach to health care. Outcomes focused on improvements to both patient care and organizational performance.

This scoping review examined various theoretical RCC approaches from sociology, psychology and psychiatry. The thematic analysis identified three sub-categories within the social ecology of relationships, a systems approach that focuses on interrelations among personal and environmental factors⁹⁸ of a practitioner in an organization, education system, profession, and practice.

Scoping reviews provide an overall scan of the literature in a specific area. Therefore, it is likely that some relevant publications were not included in the current review. The area of relational coordination^{99, 100}, which has its roots in RCC, was not included. Nor did we include psychoanalytic contemporary psychodynamic psychotherapy relational theories (e.g. attachment theory). Additionally, only English language publications were reviewed. A limitation of this paper is that we do not evaluate or exclude papers according to their quality. However, this is in compliance with the methodological guidelines for scoping reviews.¹² As the field develops and more research is published on RCC, systematic reviews can be conducted such as metanalyses to calculate for example effect sizes and to inform RCC educational and practice guidelines in medicine.

Key recommendations emerging from this scoping review articles are to emphasize RCC in health professionals' education, conduct further research on specific relational dimensions of RCC, and change the terminology of patient-centred care to that of RCC redesigning clinical processes and reforming the health care system.

Conclusion

Health care is becoming more specialized and complex. We thus need a more nuanced approach to understand an individual's interactions with the health care system to make improvements to patient care. How health care is delivered and received depends on how we define ourselves and others within a multitude of relationships and social circumstances.

Beyond patient-centred care, an RCC approach focuses on how relationships influence the course and outcome of care- relationships *among* patients, HPs, families, the self and communities *within* the larger social system. RCC views relationships as the medium of care. To inspire new ways of conceptualizing clinical care, RCC "poses a provocative counterpoint" to the pervasive concept of patient centred care in health.⁷⁸

References

- Engel JD, Pethtel LL, Zarconi J. Developing Clinicians' Career Pathways in Narrative and Relationship-Centered Care: Footprints of Clinician Pioneers. London, UK: Radcliffe 2012.
- Levenstein JH, McCracken EC, McWhinney IR, Stewart MA, Brown JB. The patient-centered clinical method. 1. A model for the doctor-patient interaction in family medicine. *J Fam Pract.* 1986; 3:24–30
- Novack DH, Volk G, Drossman DA, Lipkin MJ. Medical interviewing and interpersonal skills teaching in US medical schools. JAMA. 1993; 269:2101–5
- Hojat M, Mangione S, Nasca TJ, et al. An empirical study of decline in empathy in medical schools. *Med Educ.* 2004; 38:934–941.
- Chen D, Lew R, Hershman W, Orlander J. A crosssectional measurement of medical student empathy. *J Gen Intern Med.* 2007; 22:1434-1438.
- Bellini LM, Shea JA. Mood change and empathy decline persist during three years of internal medicine training. *Acad Med.* 2005 80:164–167.
- Saultz JW, Lochner J. Interpersonal continuity of care and care outcomes: A critical review. *Annals of Fam Med.* 2005; 3:159-166.

- 8. Constantino MJ, Schwaiger EM, Smith JZ, DeGeorge J, McBride C, Ravitz P. Patient interpersonal impacts and the early therapeutic alliance in interpersonal therapy for depression. *Psychother Theor Res Pract Train.* 2010; 47:418-424.
- Beach MC, Inui T; Relationship-Centered Care Research Network. Relationship-centered care: A constructive reframing. *J Gen Intern Med.* 2006; 21 Suppl 1:S3–8.
- 10. Levac D, Colquhoun H, O'Brian K. Scoping studies: advancing the methodology. *Implement Sci.* 2010; 5:69.
- 11. Mays N, Roberts E, Popay J. Synthesising research evidence. In: Fulop N, Allen P, Clarke A, Black N, editors. Studying the Organisation and Delivery of Health Services: Research Methods. London, UK: Routledge 2001.
- 12. Arksey H, O'Malley L. Scoping studies: towards a methodological framework. *Int J Soc Res Meth.* 2005; 8:19–32.
- 13. Adams T, Gardiner P. Communication and interaction within dementia care triads: developing a theory for relationship-centred care. *Dementia*. 2005; 4:185–205.
- 14. Bauer M, Nay R. Improving family-staff relationships in assisted living facilities: the views of family. *J Adv Nurs.* 2011; 67:1232–41.
- Bolles S, Maley M. Designing relational models of collaborative integrative medicine that support healing processes. *J Altern Complement Med.* 2004; 10 Suppl 1:S61–9.
- 16. Brody H. Relationship-centered care: beyond the finishing school. *J Am Board Fam Med.* 1995; 8:416–8.
- Brown Wilson C, Swarbrick C, Pilling M, Keady J.
 The senses in practice: enhancing the quality of care for residents with dementia in care homes. J Adv. Nurs. 2013; 69:77–90.
- 18. Cappabianca A, Julliard K, Raso R, Ruggiero J. Strengthening the nurse–patient relationship: what is the most important thing I can do for you today? *Creat Nurs.* 2009; 15:151–6.
- Cooper L, Beach M, Johnson R, Inui T. Delving below the surface: understanding how race and ethnicity influence relationships in health care. *J Gen Intern Med.* 2006; 21 Suppl 1:S21–7.
- 20. Dewar B, Nolan M. Caring about caring: developing a model to implement compassionate relationship centred care in an older people care setting. *Int J Nurs Stud.* 2013; 50:1247–58.
- 21. Dix L, Steggles E, Baptiste S, Risdon C. A processorientated approach to enhancing interprofessional

- education and collaborative relationship-centered care: the PIER project. *J Interprof Care*. 2008; 22:321–4.
- 22. Dobie S. Reflections on a well-traveled path: self-awareness, mindful practice, and relationship-centered care as foundations for medical education. *Acad Med.* 2007; 82:422–7.
- 23. Duffy D. Complexity and healing relationships. *J Gen Intern Med.* 2006; 21:45–7.
- Ensher GL, Clark DA. Relationship-Centered Practices in Early Childhood: Working with Families, Infants, and Young Children at Risk. Baltimore, MD: Brookes 2011.
- Entwistle VA, Carter SM, Cribb A, McCaffery K. Supporting patient autonomy: the importance of clinician–patient relationships. *J Gen Intern Med.* 2010; 25:741–5.
- 26. Epstein RM. Virtual physicians, health systems, and the healing relationship. *J Gen Intern Med.* 2003; 18:404–6.
- 27. Eubank D. Leading change in health care: transforming organizations using complexity, positive psychology and relationship-centered care [book review]. *Fam Syst Health*. 2012; 30:352–3.
- 28. Frankel RM, Quill T. Integrating biopsychosocial and relationship-centered care into mainstream medical practice: a challenge that continues to produce positive results. *Fam Syst Health*. 2005; 23:413–21.
- 29. Frankel RM. Relationship-centered care and the patient–physician relationship. *J Gen Intern Med.* 2004; 11:1163–5.
- Frankel RM, Eddins-Folensbee F, Inui TS. Crossing the patient-centered divide: transforming health care quality through enhanced faculty development. *Acad Med.* 2011; 86:445–52.
- 31. Gaboury I, Lapierre LM, Boon H, Moher D. Interprofessional collaboration within integrative healthcare clinics through the lens of the relationship-centered care model. *J Interprof Care*. 2011; 25:124–30.
- 32. Guy I. Relationship-centred care: what's in a name? *Br J Nurs.* 2001; 10:1026.
- 33. Hebblethwaite S. "I think that it could work but...": tensions between the theory and practice of personcentred and relationship-centred care. *Ther Recreation J.* 2013; 47:13–34.
- 34. Hughes JC, Bamford C, May C. Types of centredness in health care: themes and concepts. *Med Health Care Philos.* 2008; 11:455–63.

- 35. Inui TS. What are the sciences of relationship-centered primary care. *J Fam Pract.* 1996; 42:171–7.
- 36. James G. Winning in the Women's Health Care Marketplace: A Comprehensive Plan for Health Care Strategists. San Francisco: Jossey-Bass 2000.
- 37. Kelly EW. Relationship-centered counseling: a humanistic model of integration. *J Couns Dev.* 1997; 75:337–45.
- Kelly EW. Relationship-Centered Counseling: An Integration of Art and Science. New York: Springer 1994.
- Knight DK, Wallace GL, Joe GW, Logan SM. Change in psychosocial functioning and social relations among women in residential substance abuse treatment. J Subst Abuse. 2001; 13:533–47.
- Lampe F, Snyder S, Hays B. Inspiring healthy living through relationship-centered care. *Altern Ther Health Med.* 2008; 14:60–73
- 41. Lin JL, Fang SC, Chuang WJ. A social capital perspective in knowledge accumulation and application of interorganizational relationship. Proceedings of the Sixth International Conference of Inter-discipline Management; 2002; Soochow University, Taipei.
- 42. Madigan MM. Relationship-centered care: what do the Fetzer Institute and physician well-being have to do with it? *Mich Med.* 2001; 100:36–8.
- 43. Manning-Walsh J, Wagenfeld-Heintz E, Asmus A, Chambers M, Reed W, Wylie JL. Relationship-centered care: the expanding cup model. *Int J Hum Caring.* 2004; 8:26–31.
- 44. Marvel K, Bailey A, Pfaffly C, Gunn W, Beckman H. Relationship-centered administration: transferring effective communication skills from the exam room to the conference room. J Healthe Manag. 2003;4 8:112–23.
- Massey Z, Rising SS, Ickovics J. CenteringPregnancy group prenatal care: promoting relationship-centered care. J Obstet Gynecol Neonatal Nurs. 2006; 35:286–94.
- 46. McGilton K, Bowers B. Relationship-centred care in residential settings. In: Abstracts: The Gerontological Society of America 61st Annual Scientific Meeting, November 21–25, 2008, National Harbor, MD. Gerontologist, 2008; 48 (Special issue III).
- 47. Miller WL, Carbtree BF, Nutting PA, Stange KC, Jaen CR. Primary care practice development: a relationship-centered approach. *Ann Fam Med.* 2010; 8:568–79.

- 48. Miller WL. The clinical hand: a curricular map for relationship-centered care. *Fam Pract.* 2004; 36:330–5.
- Nolan M. Relationship-centred care: towards a new model of rehabilitation. *Int J Ther Rehabil.* 2002; 9:472–7.
- 50. Nolan M, Davis S, Brown J, Keady J, Nolan J. Beyond "person-centred" care: a new vision. *Int J Older People Nurs.* 2004; 13:45–53.
- 51. Nolan M, Davis S, Brown J. Transitions in care homes: towards relationship-centred care using the "Senses Framework." *Qual Ageing*. 2006; 7:5–14.
- 52. Nolan M, Keady J, Aveyard B. Relationship-centred is the next logical step. *Br J Nurs.* 2001; 10:757.
- Panel on Interdisciplinary/Transdisciplinary
 Education. Building community: developing skills
 for interprofessional health professions education
 and relationship-centered care. Fam Syst Health. 1997;
 15:393–400.
- 54. Rabinowicz S. Relationship-centered practices in early childhood: working with families, infants, and young children at risk [book review]. *Phys Occup Ther Pediatr.* 2012; 32:450–1.
- 55. Rakel D. The salutogenesis-oriented session: creating space and time for healing in primary care. *Explore-NY*. 2008; 4:42–7.
- Ryan T, Nolan M, Reid D, Enderby P. Using the Senses Framework to achieve relationship-centred dementia care services: a case example. *Dementia*. 2008; 7:71–93.
- 57. Safran DG, Miller W, Beckman H. Organizational dimensions of relationship-centered care. *J Gen Intern Med.* 2006; 21:9–15.
- 58. Scherger JE. The biopsychosocial model is shrink wrapped, on the shelf, ready to be used, but waiting for a new process of care. *Fam Syst Health.* 2005; 23:444–7.
- 59. Slingsby BT. Professional approaches to stroke treatment in Japan: a relationship-centred model. *J Eval Clin Pract.* 2005; 12:218–26.
- Smith S, Dewar B, Pullin S, Tocher R. Relationship centred outcomes focused on compassionate care for older people within in-patient care settings. *Int J Older People Nurs.* 2010; 5:128–36.
- 61. Sprague S. Relationship centered care. *J S C Med Assoc.* 2009; 105:135–6.
- 62. Strodtbeck F, Trotter C, Lott JW. Coping with transition: neonatal nurse practitioner education for the 21st century. *J Pediatr Nurs.* 1998; 13:272–8.

- 63. Suchman AL, Sluyter DJ, Williamson PR. Leading Change in Healthcare: Transforming Organizations Using Complexity, Positive Psychology and Relationship-Centered Care. Abingdon, UK: Radcliffe 2011.
- Suchman AL, Williamson PR, Litzelman DK, Frankel RM, Mossbarger DL, Inui TS. Toward an informal curriculum that teaches professionalism. *J* Gen Intern Med. 2004; 19:501–4.
- 65. Suchman AL. The current state of the biopsychosocial approach. Fam Syst Health. 2005; 23:450–2.
- Suchman AL. A new theoretical foundation for relationship-centered care. J Gen Intern Med. 2006; 21:40–4.
- 67. Summer AM, Toney CM, Rudenberg E, MacRae N. Turf, team, and town: learning an interdisciplinary team approach to relationship-centered care for the elderly. 134th Annual Meeting of the American Public Health Association; 2006 Nov 4–8; Boston. Available from:

 https://apha.confex.com/apha/134am/techprogram/paper_136034.htm
- 68. Thomasma DC. The ethics of managed care: challenges to the principles of relationship-centered care. *J Allied Health.* 1996; 25:233–46.
- 69. Tresolini CP; Pew-Fetzer Task Force. Health Professions Education and Relationship-Centered Care. San Francisco: Pew Health Professions Commission 1994.
- 70. Tresolini CP. Relationship-centered care: its time has come! *Aspens Advis Nurse Exec.* 1997; 12:7–8.
- 71. Ventres WB, Frankel RM. Patient-centered care and electric health records: it's still about the relationship. *Fam Pract.* 2010; 42:364–6.
- 72. Venturato L, Moyle W, Steel A. Exploring the gap between rhetoric and reality in dementia care in Australia: could practice documents help bridge the great divide? *Dementia*. 2013; 12:251–67.
- 73. Walker PH, Baldwin D, Fitzpatrick JJ, Ryan S, Bulger R, DeBasio N, et al. Building community: developing skills for interprofessional health professions education and relationship-centered care. *I Gerontol Nurs.* 1998; 24:45–9.
- 74. Walker PH, Baldwin D, Fitzpatrick JJ, Ryan S, Bulger R, DeBasio N, et al. Building community: developing skills for interprofessional health professions education and relationship-centered care. *J. Am Acad Nurse Pract.* 1997; 9:413–9.

- Weiner M, Biondich P. The influence of information technology on patient–physician relationships. *J Gen Intern Med.* 2006;21:35–9.
- 76. Williams GC, Frankel RM, Campbell TL, Deci EL. Research on relationship-centered care and healthcare outcomes from the Rochester biopsychosocial program: a self-determination theory integration. Fam Syst Health. 2000; 18:79–90.
- 77. Witrogen-McLeod B. Relationship-centered care. *Noetic Sci Rev.* 1999; 48:36–42.
- 78. Wyer PC, Silva SA, Post SG, Quinlan P. Relationship-centred care: antidote, guidepost or blind alley? The epistemology of 21st century health care. *J Eval Clin Pract.* 2014; 20:881-119.
- Wylie JL, Wagenfeld-Heintz E. Development of relationship-centered care. J Healthc Qual. 2004; 26:14–21.
- 80. Caring Matters [Internet]. Toronto, ON: Caring Matters; c2014 [cited 2015 Mar 5]. Available from: http://caringmatters.ca
- 81. Nolan M. Relationship-centred care: improving outcomes for patients, staff and family carers. King's Fund Annual Conference; 2012 Nov 28; Sheffield, UK. Available from:

 www.kingsfund.org.uk/sites/files/kf/mike-nolan-relationship-centred-care-improving-outcomes-for-patients-familes-carers-and-staff-nov12.pdf.pdf
- 82. Nolan M, Brown J, Davies S, Nolan J, Keady J. The Senses Framework: Improving Care for Older People through a Relationship-Centred Approach. Getting Research into Practice (GRiP) Report No 2. Sheffield, UK: Sheffield University 2006. Available from: http://shura.shu.ac.uk/280/1/PDF Senses
- 83. Relationship Centered Health Care [Internet].
 Rochester, NY: Relationship Centered Health Care,
 LLC & Anthony Suchman, MD; c2014 [cited 2015
 Mar 5]. Available from: www.rchcweb.com
- 84. Relationship Centered Health Care. Relationship Centered Administration: Partnership Process for Clinical and Organizational Work An Annotated Bibliography. Rochester, NY: Relationship Centered Health Care 2014. Available from: http://rchcweb.com/Portals/0/Files/RCAdmin%2 Oannotated%20bibliography%2012-13.pdf
- Rider EA. Advanced communication strategies for relationship-centered care. *Ped Anals*. 2011;40:447– 53.
- 86. Engel GL. The need for a new medical model: a challenge for biomedicine. *Science*. 1977; 196:129–36.

- 87. Engel GL. The clinical application of the biopsychosocial model. *Am J Psychiatry*. 1980; 137:535–44.
- 88. DeBellis MD, Fisher PA, Gunnar M, Skelton K, Weiss T, Bradley B. On developmental neurobiology and gene by environment interactions. In: Lanuis RA, Vermetten E, Pain C, editors. The Impact of Early Life Trauma on Health and Disease: The Hidden Epidemic. Cambridge, UK: Cambridge University Press 2010.
- 89. Haken H. Synergetics. In: Yates FE, Garfinkel A, Walter D, Yates G, editors. Self-Organizing Systems: The Emergence of Order. New York: Plenum Press 1987.
- Gilligan SG. The Courage to Love: Principles and Practices of Self-Relations Psychotherapy. New York: Norton 1997.
- 91. Greenhalgh T, Hurwitz B. Why study narrative? In: Greenhalgh T, Hurwitz B, editors. Narrative Based Medicine: Dialogue and Discourse in Clinical Practice. London, UK: BMJ Books 1998.
- 92. Buckley W. Sociology and Modern Systems Theory. Oxford, UK: Prentice-Hall 1967.
- 93. Buckley W. Society as a complex adaptive system. In: Buckley W, editor. Modern Systems Research for the Behavioral Scientist. Chicago: Aldine 1968.
- 94. Meier DE, Back AL, Morrison SR. The inner life of physicians and care of the seriously ill. *JAMA*. 2001; 286:3007-3014.
- 95. Berwick DM. Escape Fire: Designs for the Future of Health Care. San Francisco: Jossey-Bass 2003.
- 96. Talbott JA, Mallot DB. Professionalism, medical humanism, and clinical bioethics: The new wave-Does psychiatry have a role? *J Psychiatr Pract.* 2006;12: 384-390.
- 97. Kilpatrick AO. The health care leader as humanist. *J Health Hum Serv Adm.* 2009; 31:451-65.
- 98. Bronfenbrenner U. The Ecology of Human Development: Experiments by Nature and Design. Cambridge, MA: Harvard University Press 1979.
- 99. Gittell JH. High Performance Healthcare: Using the Power of Relationships to Achieve Quality,

- Efficiency and Resilience. New York: McGraw Hill 2009.
- 100. Gittell JH, Fairfield KM, Bierbaum B, Head W, Jackson R, Kelly M, et al. Impact of relational coordination on quality of care, postoperative pain and functioning and length of stay. *Med Care*. 2000; 38:807–19.

Appendix A. Descriptive characteristics of the literature

Author(s), year of publication	Type of article	Country	Discipline(s) of author(s)	Health care issue
Adams, Gardiner (2005) [13]	Theoretical/conceptual	UK	Medicine	Geriatric care
Bauer, Nay (2011) [14]	Research	Australia	Nursing	Geriatric care
Beach et al. (2006) [9]	Theoretical/conceptual	USA	Medicine	Not specified – general internal medicine
Bolles, Maley (2004) [15]	Theoretical/conceptual	USA	Chiropractic, research	Health care system
Brody (1995) [16]	Theoretical/conceptual	USA	Family medicine	Health professions education
Brown Wilson et al. (2012) [17]	Research	UK	Nursing, research	Geriatric care
Cappabianca et al. (2009) [18]	Research	USA	Nursing	Rehabilitation – orthopedic and neurological
Cooper et al. (2006) [19]	Theoretical/conceptual	USA	Medicine	Race/ethnicity in health care
Dewar, Nolan (2013) [20]	Research	UK	Nursing	Geriatric care
Dix et al. (2008) [21]	Research / short report	Canada	Occupational therapy, medicine	Interprofessional education and collaboration
Dobie (2007) [22]	Theoretical/conceptual	USA	Medicine	Medical education
Duffy (2006) [23]	Theoretical/conceptual	USA	Medicine	Not specified
Engel et al. (2012) [1]	Book	USA	Medicine	Physician development
Ensher, Clark (2011) [24]	Book	USA	Education, medicine	Early childhood
Entwistle et al. (2010) [25]	Theoretical/conceptual	UK and Australia	Research	Not specified
Epstein (2003) [26]	Theoretical/conceptual	USA	Medicine	Medicine
Eubank (2013) [27]	Book review	USA	Medicine	Organizational change
Frankel, Quill (2005) [28]	Theoretical/conceptual	USA	Research, medicine	Medicine
Frankel (2004) [29]	Theoretical/conceptual	USA	Medicine	Medicine
Frankel et al. (2011) [30]	Theoretical/conceptual	USA	Research, medicine	Health professions education
Gaboury et al. (2011) [31]	Research	Canada	Research	Interprofessional collaboration

Author(s), year of publication	Type of article	Country	Discipline(s) of author(s)	Health care issue
Guy (2001) [32]	Theoretical/conceptual	New Zealand	Nursing	Humanistic medicine
Hebblethwaite (2013) [33]	Research	Canada	Recreation and leisure studies	Not specified
Hughes et al. (2008) [34]	Research	UK	Research, psychology	Not specified
Inui (1996) [35]	Research	USA	Medicine	Primary care
James (2000) [36]	Book	USA	Consultancy	Health care systems
Kelly (1997) [37]	Theoretical/conceptual	USA	Counselling	Not specified
Kelly (1994) [38]	Book	USA	Counselling	Counselling / human and organizational studies
Knight et al. (2001) [39]	Research	USA	Research, social work	Addictions
Lampe et al. (2008) [40]	Theoretical/conceptual	USA	Medicine	Obstetrics, gynecology
Lin (2002) [41]	Theoretical/conceptual	Taiwan	Research	Counselling
Madigan (2001) [42]	Research	USA	Medicine	Physician well-being and medical education
Manning-Walsh et al. (2004) [43]	Theoretical/conceptual	USA	Research	Nursing
Marvel et al. (2003) [44]	Research	USA	Research, medicine	Organizational theory
Massey et al. (2006) [45]	Theoretical/conceptual	USA	Nursing, psychology, research	Prenatal care
McGilton, Bowers (2008) [46]	Abstracts	Canada and USA	Nursing	Not specified
Miller et al. (2010) [47]	Theoretical/conceptual	USA	Medicine	Primary care
Miller (2004) [48]	Theoretical/conceptual	USA	Family medicine	Medical education
Nolan (2002) [49]	Symposium paper	UK	Nursing	Geriatric care
Nolan et al. (2004) [50]	Theoretical/conceptual	UK	Nursing, research, midwifery	Geriatric care
Nolan et al. (2006) [51]	Theoretical/conceptual	UK	Nursing, midwifery	Geriatric care
Nolan et al. (2001) [52]	Theoretical/conceptual	United Kingdom	Nursing	Not specified

Author(s), year of publication	Type of article	Country	Discipline(s) of author(s)	Health care issue
Panel on Interdisciplinary/ Transdisciplinary Education (1997) [53]	Discussion paper	USA	Nursing	Health professions education
Rabinowicz (2012) [54]	Book review	USA	Physical therapy	Pediatric rehabilitation
Rakel (2008) [55]	Theoretical/conceptual	USA	Medicine	Primary care
Ryan et al. (2008) [56]	Theoretical/conceptual	UK	Research, nursing	Geriatric care
Safran et al. (2006) [57]	Theoretical/conceptual	USA	Research, medicine	Organizational theory
Scherger (2005) [58]	Theoretical/conceptual	USA	Medicine	Primary care
Slingsby (2005) [59]	Research	Japan	Medicine	Rehabilitation
Smith et al. (2010) [60]	Research	UK	Nursing	Geriatric care
Sprague (2009) [61]	Theoretical/conceptual	USA	Research	Not specified
Strodtbeck et al. (1998) [62]	Theoretical/conceptual	USA	Nursing	Nurse education
Suchman et al. (2011) [63]	Book	USA	Medicine	Organizational theory
Suchman et al. (2004) [64]	Research	USA	Medicine	Health professions education
Suchman (2005) [65]	Theoretical/conceptual	USA	Medicine	Medical education
Suchman (2006) [66]	Research	USA	Medicine	Communication research
Summer et al. (2007) [67]	Poster abstract	USA	Medicine	Geriatric care and education
Thomasma (1996) [68]	Theoretical/conceptual	USA	Research	Health care system
Tresolini, Pew-Fetzer Task Force (1994) [69]	Report	USA	Medicine	Health professions education
Tresolini (1997) [70]	Theoretical/conceptual	USA	Nursing	Health care system
Ventres, Frankel (2010) [71]	Theoretical/conceptual	USA	Family medicine	Health care system / communication
Venturato et al. (2013) [72]	Research	Australia	Nursing, research	Geriatric care
Walker et al. (1998) [73]	Theoretical/conceptual	USA	Nursing	Interprofessional education
Walker et al. (1997) [74]	Theoretical/conceptual	USA	Nursing, research	Health professions education
Weiner, Biondich (2006) [75]	Theoretical/conceptual	USA	Medicine	Health care system / communication
Williams et al. (2000) [76]	Not specified	USA	Medicine, research	Health care outcomes / programmatic

Author(s), year of publication	Type of article	Country	Discipline(s) of author(s)	Health care issue
Witrogen-McLeod (1999) [77]	Review article	USA	Consultancy	Geriatric/aging care
Wyer et al. (2014) [78]	Theoretical/conceptual	USA	Medicine	Health care system
Wylie, Wagenfeld-Heintz (2004) [79]	Literature review	USA	Nursing, research	Not specified