

BMJ Open Association between person-centred care and healthcare providers' job satisfaction and work-related health: a scoping review

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ABSTRACT

Objective This scoping review aimed to explore and describe the research on associations between person-centred care (PCC) and healthcare provider outcomes, for example, job satisfaction and work-related health.

Design Scoping review.

Eligibility criteria Studies were included if they were empirical studies that analysed associations between PCC measurement tools and healthcare providers outcomes.

Search strategy Searches in PubMed, CINAHL, Psychinfo and SCOPUS databases were conducted to identify relevant studies published between 2001 and 2019. Two authors independently screened studies for inclusion.

Results Eighteen studies fulfilled the inclusion criteria. Twelve studies were cross-sectional, four quasi-experimental, one longitudinal and one randomised controlled trial. The studies were carried out in Sweden, The Netherlands, the USA, Australia, Norway and Germany in residential care, nursing homes, safety net clinics, a hospital and community care. The healthcare provider outcomes consisted of job satisfaction, burnout, stress of conscience, psychosocial work environment, job strain and intent to leave. The cross-sectional studies found significant associations, whereas the longitudinal studies revealed no significant effects of PCC on healthcare provider outcomes over time.

Conclusion Most studies established a positive association between PCC and healthcare provider outcomes. However, due to the methodological variation, a robust conclusion could not be generated. Further research is required to establish the viability of implementing PCC for the improvement of job satisfaction and work-related health outcomes through rigorous and consistent research.

INTRODUCTION

Healthcare providers play a key role in the development of a sustainable population health. The WHO has repeatedly highlighted the importance of well-educated and trained healthcare workers at a relevant level of density and distribution geographically and over professional specialities. The WHO emphasise the recruitment and retention of healthcare workers as particularly important in low-income and middle-income

Strengths and limitations of this study

- A transparent and rigorous search strategy was employed.
- The person-centred care measurement tool underwent scrutiny for applicability in affecting healthcare provider outcomes.
- We applied a range of healthcare provider outcome possibilities.
- The included studies were only written in English.
- We did not assess the quality of the outcome measures.

countries, and countries where competing labour markets have led to both recruitment and retention challenges.¹ It is noteworthy that the United Nations has pointed out healthcare workers as essential to reaching the sustainable development goal three to 'ensure healthy lives and promote well-being for all at all ages'.²

The quality of the provided care is influenced by the attraction and retention of qualified and committed healthcare staff.³ However, the work environment for healthcare staff is currently characterised by high demands, low control, ethical stress, scheduled working hours, low salary and for most groups, limited possibilities for career development.⁴⁻⁶ The healthcare providers experience increased stress and dissatisfaction due to high expectations and job pride coupled with insufficient time, skills and social support at work.^{3 6}

According to two systematic reviews, interventions containing changes in working conditions, organising support, changing care, increasing communication skills and changing work schedules are most effective for improving the work environment.^{6 7} In a recent review, a good work environment was found a defining factor for higher patient satisfaction with the provided care.⁵ Therefore,

interventions focused on improving patient safety and satisfaction should first consider improving employees' health and creating safer work environments.^{8,9}

The Model of Care (MoC) provided by the healthcare staff can largely influence the work environment for healthcare personnel.¹⁰ An MoC can be defined most broadly as 'the way health services are delivered as it aims to ensure people get the right care, at the right time, by the right team and in the right place' (p3).¹¹ Improved patient outcomes and cost-effectiveness are the general objectives in implementing MoCs, according to a recent review of systematic reviews on MoC interventions.¹² This same review revealed that only 13% of the included reviews had healthcare provider outcomes (eg, well-being, fatigue, stress and satisfaction). However, healthcare professionals should be considered defining factors in the effects of implementing an MoC as the model governs how healthcare personnel execute their work, which directly affects patients' treatment and health.

There is a growing interest in the model of person-centred care (PCC) since authorities, such as the WHO, have called for enabling patients to engage in their healthcare.¹³ PCC has also been endorsed by professional and patient organisations.^{14,15} The concept of PCC is based on ethical principles and has its roots in the holistic paradigm, which highlight the importance of knowing the patient also as a capable human being with needs and resources.¹⁶⁻¹⁹ PCC is an approach to care in which relationships are formed and fostered with healthcare professionals, care providers and patients (often with relatives) and is supported by values of respect for the person, individual right to self-determination, mutual respect and understanding.²⁰ Application of PCC in practice contains core components such as: inclusion of patients narratives, cocreating a health plan, and documentation and follow-up of the health plan.^{19,21} PCC can form a critical component for effective change in the work environment of healthcare professionals.²² The work environment often suffers under ethical conflicts and lack of support and control in daily tasks,^{4,5,23} which could be abated by working in a person-centred manner. Thus, there is reason to look closer into how implementing PCC influences the work environment for healthcare professionals.

Although person-centred and patient-centred care differ, they are often used interchangeably in the literature.^{18,24} Patient-centred care is more focused on the need of care patients have in common regarding their disease and treatment while PCC, besides needs, emphasises the capabilities and strengths that each person possess as valuable resources in a collaborative partnership between the patient (often including relatives) and healthcare professionals.¹⁷ A concept review of the difference has highlighted how PCC differed to patient-centred care on a deeper level of a meaningful (person) versus a functional (patient) life.²⁵ Certain contexts require specific types of 'centredness' such as family-centred, relationship-centred, client-centred, patient-focused and person-focused care.²⁶ Therefore, this scoping review

accepted all concepts when they followed the PCC properties highlighted earlier.

Most studies of PCC analysed patients' point of view and showed positive results such as shorter hospital stay, reduced symptoms, improved care experiences and increased self-efficacy.²⁷⁻³⁰ Three reviews have focused on PCC and healthcare provider outcomes.³¹⁻³³ The reviews found limited indications of a positive association between PCC and healthcare provider outcomes. However, these reviews only focused on the association in nursing homes and among elderly care.³¹⁻³³ There have been PCC implementations across healthcare sectors, and there is a need for an overview of how PCC and staff outcomes are connected.

Aim

This scoping review aimed to explore and describe the research on associations between PCC and healthcare provider outcomes.

METHODS

A scoping review methodology was applied to allow for mapping of the main concepts and a way to give an idea of what evidence is available for the research area.³⁴ This methodology was chosen over a systematic review as the study aimed to clarify the PCC concept and identify its relation to key characteristics within healthcare provider outcomes rather than answer a clinically meaningful question.³⁵

Search strategy

The search engines PubMed, CINAHL, Psycinfo and SCOPUS were accessed in February 2020 for studies published in academic journals between 2001 and 2019.

The search terms included "person centred" OR "person centredness" OR "client centred" OR "patient centred" OR "relationship centred" OR "family centred" OR "patient focused" OR "person focused". AND "Job Satisfaction" OR "Absenteeism" OR "presentism" OR "Occupational Stress" OR "Personnel Turnover" OR "Sick Leave" OR "Stress, Psychological" OR "Dyssomnias" OR "sleep disorder" OR "sleep disturbances" OR "occupational health" OR "moral stress". Most terms were overarching concepts (MESH terms), and the search captured both British and American spellings. See online supplemental appendix 1 for the entire search strategy.

Selection of studies

There is no established consensus on the operationalisation of PCC.^{16,36} To prevent an array of related terms and to increase the possibility to compare, we applied a more narrow definition than those used in earlier reviews. The eligibility criteria in this scoping review were guided by the six PCC dimensions created in 2001 by the Institute of Medicine, now called National Academy of Medicine. These six dimensions are respect for patients' values, preferences and expressed needs; coordination

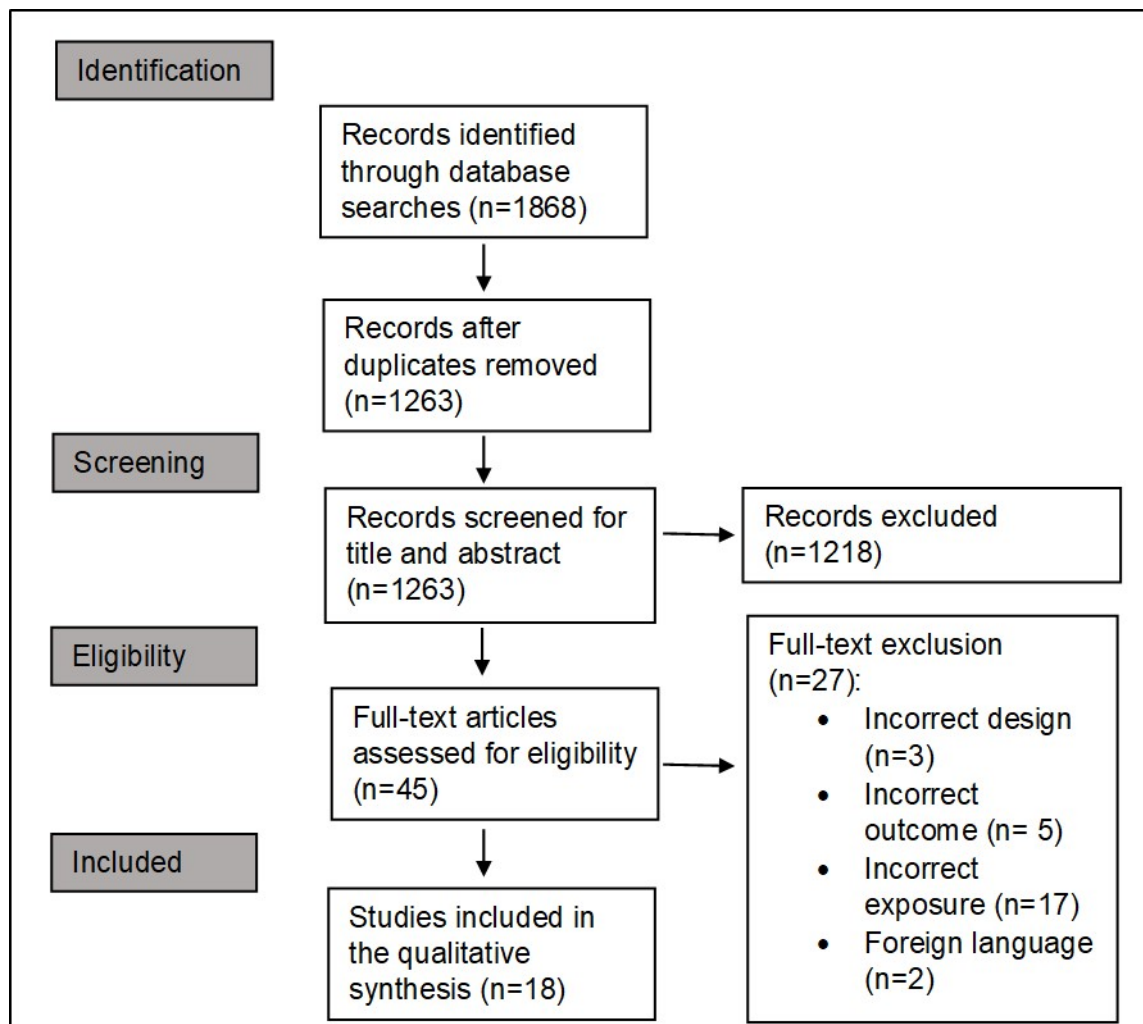


Figure 1 Flow chart for study inclusion.

and integration of care; information, communication and education; physical comfort; emotional support—relieving fear and anxiety; involvement of family and friends.³⁷ The relevant studies needed to display a connection to these dimensions of PCC.

Types of participants included all healthcare personnel in contact with patients such as registered nurses (RNs), licenced practical nurses and physicians.

Types of outcomes included healthcare provider outcomes such as job satisfaction and work-related health outcomes.

Data extraction and synthesis of results

The data extraction and synthesis of results are presented in the flowchart (figure 1). The results obtained from the online search engines were collected and duplicates removed by the first author (CvD). The search and collection yielded 1263 titles and abstracts, which were subsequently screened for relevance by two authors (CvD and AF) through the research software program for systematic reviews ‘Rayyan’.³⁸ All studies with one author deeming possible relevance were discussed, and a selection of 45

studies for full-text review was created in agreement by both authors.

The full text of the potentially relevant studies was obtained and first reviewed based on the PCC measurement tool to be associated with any healthcare provider outcome in the results. Disagreements were resolved by consensus between the two authors. Second, the six dimensions of PCC were compared with the PCC measurement tool used in the studies. The first dimension ‘respect for patients’ values, preferences and expressed needs’ is the core of PCC and needed to be addressed in the tool. PCC is a broad concept affecting different elements to care,³⁹ and that needed to be reflected in the PCC measurement tool. Therefore, the authors decided that at least two of the other five dimensions needed to be present in order for the tool to be considered to measure a model of PCC that could affect healthcare provider outcomes. The two authors did this inclusion process together. When a PCC dimension was present in the PCC measurement tool, a ‘+’ sign was inserted, and a ‘-’ was inserted when that particular dimension was absent. As a result, table 1 shows the included studies and their reference to the six dimensions.



Table 1 The presence of the six dimensions of person-centred care³⁷ within the person-centred care measurement tools in the included studies

Person-centred care measurement tool	Dimensions*						
	Tool subscales	Authors	Respect for patients' values, and preferences and integration of expressed needs care	Coordination	Information, communication and education	Physical comfort and anxiety	Emotional support— involvement of family and friends
Person-centred Care Assessment Tool (P-CAT) 13 items	<ul style="list-style-type: none"> ▲ Personalising care. ▲ Organisational support. ▲ Environmental accessibility. 	Edvardsson <i>et al.</i> , ⁵³ Wallin <i>et al.</i> , ⁴⁴ Røen <i>et al.</i> , ⁵⁵ Schaap <i>et al.</i> , ⁴⁸ Silén <i>et al.</i> , ⁴² Sjögren <i>et al.</i> , ⁴³ Vassbø <i>et al.</i> ⁵⁷	+	+	+	+	-
Person-centred Climate Questionnaire- Staff version (PCQ-S) 14 items	<ul style="list-style-type: none"> ▲ Safety. ▲ Everydayness. ▲ Hospitality. 	Edvardsson <i>et al.</i> , ⁴⁰ Lehluante <i>et al.</i> , ⁴¹ Wallin <i>et al.</i> , ⁴⁴ Sjögren <i>et al.</i> , ⁴³ Vassbø <i>et al.</i> , ⁵⁷ Åhlin <i>et al.</i> ⁴⁵	+	-	+	+	+
Patient Centred Medical Homes (PCMH) rating 24 items	<ul style="list-style-type: none"> ▲ Access to care and communication with patients. ▲ Communication with other providers. ▲ Tracking data. ▲ Care management. ▲ Quality improvement. ▲ Work environment. 	Lewis <i>et al.</i> , ⁵¹ Nocon <i>et al.</i> ⁶²	+	+	-	-	-
The subscale 'recognition of personhood' of the Approach to Dementia Questionnaire (ADQ) 11-items		Dichter <i>et al.</i> , ⁵⁶ Willemse <i>et al.</i> ⁶⁰	+	-	+	+	-

Continued

Table 1 Continued

Person-centred care measurement tool	Tool subscales	Authors	Dimensions*					
			Respect for patients' values, preferences and expressed needs care	Coordination of care and integration of care	Information, communication and education	Physical comfort	Emotional support—relieving fear and anxiety	Involvement of family and friends
8 dimensions Person-Centred Care Questionnaire 35 items	<ul style="list-style-type: none"> ▲ Respect for clients' values, preferences and expressed needs. ▲ Provision of information and education. ▲ Access to care. ▲ Emotional support. ▲ Involvement of family and friends. ▲ Continuity and secure transition of care. ▲ Physical comfort. ▲ Coordination of care. 	van der Meer <i>et al</i> ⁴⁹	+	+	+	+	+	+
Patient-Centred Care Questionnaire 35 items	<ul style="list-style-type: none"> ▲ Taking patients' preferences into account. ▲ Coordination of care. ▲ Information and education provided to patients. ▲ Level of patient's physical comfort. ▲ Emotional support for patients. ▲ Involvement of patient's family and friends. ▲ Continuity and transition. ▲ Access to care. 	den Boer <i>et al</i> ⁴⁷	+	+	+	+	+	+

Continued



Table 1 Continued		Dimensions*					
Person-centred care measurement tool	Tool subscales	Authors	Respect for patients' values, and preferences and integration of expressed needs care	Coordination of communication and education	Physical comfort	Emotional support – relieving fear and anxiety	Involvement of family and friends
Individualized Care Inventory (ICI) 43 items	<ul style="list-style-type: none"> ▲ Knowing the person. ▲ Resident autonomy. ▲ Staff-to-resident communication. ▲ Staff-to-staff communication. 	Elfstrand Corlin and Kazemi ⁴⁶	+	+	+	+	+
The Bradford University's Dementia Care Mapping and Person-Centred Care training manual		Jeon et al ⁶⁴	+	+	-	+	-

*+, - indicates the presence and absence of this person-centred care (PCC) dimension within the PCC measurement tool.

After scrutinising the full-text of 45 studies for relevance, five studies did not have a healthcare provider outcome connected to a PCC measurement tool. Seventeen studies were excluded for not following our set criteria for PCC. Three studies were reviews, and two were excluded due to language. Finally, all four authors confirmed the decision to include or exclude a study.

The following details of the included studies were extracted and summarised: authors, year of publication, country, study design, setting and participants, PCC measurement tool, staff outcome measures, and main results (see table 2). Given the variability of the study designs that are included in this scoping review, a qualitative analysis was used to synthesise the results, and the results are presented in a narrative form.

Patient and public involvement statement

This research was designed without patient involvement. However, patient care and healthcare organisations were involved in the interpretation of the results through a workshop.

RESULTS

This scoping review aimed to explore and describe the research on associations between PCC and healthcare provider outcomes. Eighteen studies fulfilled the inclusion criteria (table 2).

Characteristics of the included studies

Seven studies were conducted in Sweden,⁴⁰⁻⁴⁶ four in the Netherlands,⁴⁷⁻⁵⁰ two in the USA,^{51 52} two in Australia,^{53 54} one in Norway,⁵⁵ one in Germany⁵⁶ and one study was conducted in three countries (ie, Sweden, Norway and Australia).⁵⁷

The included studies consisted of twelve cross-sectional studies,^{41-44 46 47 49-51 53 55 57} four quasi-experiments,^{40 48 52 56} one longitudinal study⁴⁵ and one randomised controlled trial (RCT).⁵⁴ The six studies with a longitudinal design had a follow-up duration between 8 months in the RCT⁵⁴ and 4 years in a quasi-experimental study.⁵²

The setting for the studies was residential care (homes with care availability) for eight studies,^{40 43-45 48 49 53 54} nursing homes (homes with 24 hours medical care) for six studies,^{42 46 50 55-57} safety net clinics (primary care for uninsured persons) for two studies,^{51 52} hospital for one study⁴¹ and community care (care for independent living persons) for the last study.⁴⁷

In 12 studies, the participants were all healthcare staff.^{40 42 43 46 48-54 57} In the other studies, participants were specified as RNs,^{41 47} managers, unit head nurses, and staff,⁵⁵ caregivers,⁵⁶ nurse assistants and nurse's aides,⁴⁴ and RNs and nurse assistants.⁴⁵

Measurement for PCC

The rationale for measuring PCC and healthcare provider outcomes was for 13 studies to examine the extent to which staff members rated their provided care

Table 2 Characteristics and results of included studies

Authors (country)	Study design	Setting, participants	Person-centred care measure	Staff outcomes: measurement tool	Results
den Boer <i>et al</i> ⁴⁷ (Netherlands)	Cross-sectional	Community care, registered nurses (RNs) n=153	Adapted version of the Patient-Centred Care Questionnaire 35 items	Job satisfaction: a 38-item job satisfaction questionnaire	Job satisfaction: significant positive association with PCC
Dichter <i>et al</i> ⁵⁶ (Germany)	Quasi-experimental 6-month and 18-month follow-up	Nursing home, caregivers n=201	The subscale 'recognition of personhood' of the Approach to Dementia Questionnaire (ADQ) 11 items	Job satisfaction: Copenhagen Psychosocial Questionnaire 4-items Burnout: Copenhagen Burnout Inventory (CBI) 6-items	Job satisfaction: significant positive effect of PCC intervention Burnout: no significant effect of PCC intervention
Edvardsson <i>et al</i> ⁵³ (Australia)	Cross-sectional	Residential aged care, all staff n=297	Person-Centred Care Assessment Tool (P-CAT), 13 items	Job satisfaction: measure of job satisfaction (MJS) 22 items	Job satisfaction: significant positive association with PCC
Edvardsson <i>et al</i> ⁴⁰ (Sweden)	Quasi-experimental 12 months follow-up	Residential aged care, all staff n=171 (baseline) n=143 (follow-up)	P-CAT 13 items Person-Centred Climate Questionnaire-Staff version (PCQ-S) 14 items	Stress of conscience: Stress of Conscience questionnaire (SCQ) 9 items Job strain: Demand-Control-Support Questionnaire (DCSQ) 11 items	Stress of conscience: significant negative effect of PCC intervention Job strain: no significant effect of PCC intervention
Elfstrand Corlin and Kazemi ⁴⁶ (Sweden)	Cross-sectional	Nursing homes, all staff n=322	Individualized Care Inventory (ICI) 43 items	Job satisfaction: a single question	Job satisfaction: significant association to subscales of PCC
Jeon <i>et al</i> ⁵⁴ (Australia)	Cluster randomised controlled trial 8 months follow-up	Residential aged care, all staff n=194		Burnout: Maslach Burnout Inventory (MBI) 22 items	Burnout: significant effect of DCM intervention but not the PCC intervention
Lehluante <i>et al</i> ⁴¹ (Sweden)	Cross-sectional	Hospital, RNs n=206	PCQ-S 14 items	Job satisfaction: satisfaction with nursing care and work scale 34 items	Job satisfaction: significant association to subscales of PCC
Lewis <i>et al</i> ⁵¹ (USA)	Cross-sectional	Safety net clinic, all staff n=603	5 PCMH subscales 22 items	Job satisfaction: a single question Burnout: a single question	Job satisfaction: significant association to subscales of PCC Burnout: significant association to subscales of PCC

Continued

Table 2 Continued

Authors (country)	Study design	Setting, participants	Person-centred care measure	Staff outcomes: measurement tool	Results
Nocon <i>et al</i> ⁴² (USA)	Quasi-experimental 4-year follow-up	Safety net clinic, all staff n=536 (baseline) n=589 (postintervention)	5 PCMH subscales 24 items	Job satisfaction: a single question Burnout: a single question	Job Satisfaction: no significant effect of PCC intervention Burnout: no significant effect of PCC intervention
Wallin <i>et al</i> ⁴⁴ (Sweden)	Cross-sectional	Residential aged care, nurse assistants and nurse's aides n=225	P-CAT 13 items, PCQ-S 14 items	Job satisfaction: Job Satisfaction Questionnaire 20 items	Job satisfaction: significant positive association with PCC
Røen <i>et al</i> ⁴⁵ (Norway)	Cross-sectional	Nursing homes, unit head nurses and staff n=175	P-CAT 13 items	Job satisfaction: a single question work-related psychosocial factors: the General Nordic Questionnaire for Psychosocial and Social Factors at Work 32 items	Job satisfaction: significant association to PCC Work-related psychosocial factors: significant association to PCC
Schaap <i>et al</i> ⁴⁸ (Netherlands)	Quasi-experimental 14 months follow-up	Residential aged care, all staff n=227	P-CAT 13 items	Job satisfaction: the Maastricht Work Satisfaction Scale in Health Care 21 items Burnout: MBI 6 items	Job satisfaction: no significant effect of PCC intervention Burnout: no significant effect of PCC intervention
Silén <i>et al</i> ⁴² (Sweden)	Cross-sectional	Nursing home, all staff n=212	P-CAT 13 items, PCQ-S 14 items	Work-related psychosocial factors: Swedish version of the Conditions of Work Effectiveness Questionnaire 19 items	Work-related psychosocial factors: significant association with PCC
Sjögren <i>et al</i> ⁴³ (Sweden)	Cross-sectional	Residential aged care, all staff n=1169	P-CAT 13 items, PCQ-S 14 items	Job satisfaction: Satisfaction with Nursing Care and Work Scale 34 items Stress of Conscience: SCQ 9 items Job strain: DCSQ 11 items	Job satisfaction: significant positive association with PCC Stress of conscience: significant negative association with PCC Job stress: significant negative association with PCC
Van der Meer <i>et al</i> ⁴⁹ (Netherlands)	Cross-sectional	Residential aged care, all staff n=466	8 dimensions Person-Centred Care Questionnaire 35 items	Job satisfaction: MJS 38 items	Job satisfaction: significant positive association with PCC

Continued

Table 2 Continued

Authors (country)	Study design	Setting, participants	Person-centred care measure	Staff outcomes: measurement tool	Results
Vassbø <i>et al</i> ⁵⁷ (Sweden, Norway, Australia)	Cross-sectional	Nursing homes, all staff n=341	P-CAT 13 items, PCQ-S 14 items	Job satisfaction: MJS 37 items	Job satisfaction: significant positive association with PCC
Willems <i>et al</i> ⁶⁰ (Netherlands)	Cross-sectional	Nursing homes, all staff n=1147	The subscale 'recognition of personhood' of ADQ 11 items	Job satisfaction: 3-item scale derived from the Leiden Quality of Work Questionnaire. Burnout: MBI 8 items. Intent to leave: Subscale Leiden Quality of Work Questionnaire 3 items	Job satisfaction: significant association to PCC Burnout: significant association to PCC Intent to leave: significant association to PCC
Åhlin <i>et al</i> ⁴⁵ (Sweden)	Longitudinal cohort study 1-year follow-up	Residential aged care, RNs and nurse assistants n=488	PCQ-S 14 items	Stress of conscience: SCQ 9 items	Stress of conscience: no significant association to PCC

PCC, person-centred care.

as person-centred.^{41–47 49–51 53 55 57} The other four quasi-experimental studies and the RCT analysed the effect of specific interventions designed to increase the level of PCC.^{40 48 52 54 56} Three out of these five intervention studies measured the effect of the Dementia Care Mapping (DCM) intervention.^{48 54 56} DCM is an internationally recognised complex intervention in dementia research and care containing a developmental evaluation cycle to monitor and revise action plans.⁴⁸ The RCT⁵⁴ applied the Bradford University's PCC training manual in addition to the DCM training manual as the intervention model. The study from the USA⁵² measured PCC after the Patient-Centred Medical Home (PCMH) intervention. Core components of the PCMH include comprehensive primary care, quality improvement, care management and enhanced access.⁵¹ Finally, the implementation of the Swedish national guidelines was tested for PCC properties in combination with the effect of the implementation on staff.⁴⁰

The PCC measurement tool differed, as there were seven questionnaires and one intervention. The most applied tool in the included studies was the Person-centred Care Assessment Tool (P-CAT), which was used on its own in two quasi-experimental studies^{40 48} and two cross-sectional studies.^{53 55} Four studies combined the P-CAT with the Person-centred Climate Questionnaire–Staff version (PCQ-S).^{42–44 57} The PCQ-S was used by itself in one cross-sectional⁴¹ and one longitudinal study.⁴⁵ The other seven studies applied different PCC measurement tools: PCMH subscales questionnaire,^{51 52} the subscale 'recognition of personhood' of the Approach to Dementia Questionnaire,^{50 56} eight dimensions of PCC measure,⁴⁹ an adapted version of the Patient-Centred Care Questionnaire⁴⁷ and Individualized Care Inventory (ICI).⁴⁶ The Bradford University's DCM and PCC training manual was applied as the PCC measurement tool in the RCT.⁵⁴

Six PCC measurement tools were constructed of subscales. The eight dimensions PCC questionnaire and Patient-Centred Care Questionnaire had subscales that followed the Picker Institute dimensions of PCC,⁵⁸ but with different subscale titles. The other four tools followed their own subscales, which varied in number and concepts. All tools with the subscales and reference to the six dimensions of PCC are presented in [table 1](#).

Measurement of staff outcomes

The included studies contained six healthcare provider outcomes: job satisfaction, burnout, psychosocial work environment, stress of conscience, job strain and intent to leave.

Job satisfaction was estimated in 14 studies with 10 different measurement tools. Three out of these used the Measure of Job Satisfaction.^{49 53 57} In two studies, job satisfaction was measured with the Satisfaction with Nursing Care and Work Scale.^{41 43} Four studies applied a single question approach: 'Overall, I am satisfied with my current job',^{51 52} 'How will you describe your general experience of your job satisfaction?'⁵⁵ or 'I am happy at



work'.⁴⁶ Five studies used different job satisfaction questionnaires: Copenhagen Psychosocial Questionnaire,⁵⁶ a 38-item job satisfaction questionnaire,⁴⁷ the Maastricht Work Satisfaction Scale in Health Care,⁴⁸ 3-item scale derived from the Leiden Quality of Work Questionnaire (LQWQ)⁵⁰ and Job Satisfaction Questionnaire.⁴⁴

Six studies estimated burnout. Three studies applied the Maslach Burnout Inventory or a setting-appropriate version.^{48 50 54} The two studies from the USA had their measure stated as 'Using your own definition of burnout, please check one' with a 5-option scale.^{51 52} The German study used the Copenhagen Burnout Inventory.⁵⁶

Three studies^{40 43 45} assessed stress of conscience. All these studies were set in Sweden and applied the Stress of Conscience Questionnaire.

Psychosocial work environment was measured in two studies, which applied different constructs: the General Nordic Questionnaire for Psychosocial and Social Factors at Work⁵⁵ and a Swedish version of the Conditions of Work Effectiveness Questionnaire.⁴²

Job strain was estimated in two studies and measured in both through the Demand-Control-Support Questionnaire.^{40 43}

Finally, intent to leave was assessed in one study⁵⁰ by a 3-item scale that was derived from the LQWQ.

Results from the included studies

This section presents the results based on the six healthcare provider outcomes and their association with PCC and is a synthesis of the results presented in [table 2](#).

Job satisfaction was positively associated with PCC in eight studies.^{41 43 44 47 49 50 55 57} Three cross-sectional studies by Edvardsson *et al*,⁵³ Elfstrand Corlin and Kazami⁴⁶ and Lewis *et al*⁵¹ showed an association between job satisfaction and only subscales of PCC, that is, 'personalising care' and 'organisational support',⁵³ 'knowing the person' and 'resident autonomy',⁴⁶ and 'quality improvement subscale' and 'work environment covariate'.⁵¹ Three quasi-experiment studies by Dichter *et al*,⁵⁶ Nocon *et al*⁵² and Schaap *et al*⁴⁸ found no significant improvement in job satisfaction after the PCC implementation.

There were mixed results in the association between burnout and PCC. Two cross-sectional studies by Lewis *et al*⁵¹ and Willemse *et al*⁵⁰ found negative associations between PCC and burnout levels. The quasi-experimental studies by Nocon *et al*⁵² and Schaap *et al*⁴⁸ found no significant results. The quasi-experimental study by Dichter *et al*,⁵⁶ the longitudinal study by Åhlin *et al*⁴⁵ and the RCT by Jeon *et al*⁵⁴ found non-significant results but nonetheless an increase in burnout levels over time.

The stress of conscience was negatively associated with PCC in the cross-sectional study by Sjögren *et al*.⁴³ In the quasi-experimental study by Edvardsson *et al*,⁴⁰ the PCC intervention significantly reduced stress of conscience. However, the longitudinal study by Åhlin *et al*⁴⁵ found no significant results.

The association between PCC and the psychosocial work environment was analysed in two cross-sectional

studies. Røen *et al*⁵⁵ found that PCC was positively associated with most psychosocial and social factors included in the study, except for the subscale of decision demands. Silén *et al*⁴² found that PCC mediated the association between higher access to structural empowerment and higher psychological empowerment, which improved the psychosocial work environment significantly.

Job strain was not affected by the intervention in the quasi-experimental study by Edvardsson *et al*.⁴⁰ The cross-sectional study by Sjögren *et al*⁴³ did find a negative association between job strain and PCC.

The one study that measured intent to leave by Willemse *et al*⁵⁰ showed a negative association with PCC, meaning that staff were less likely to leave with higher perceived PCC.

DISCUSSION

This scoping review explored and described the research performed to assess the associations between PCC and healthcare provider outcomes. Eighteen studies fulfilled the inclusion criteria. The healthcare provider outcomes measured in the studies were job satisfaction, burnout, stress of conscience, psychosocial work environment, job strain and intent to leave. The main findings of this review support an association between PCC and healthcare provider outcomes as the cross-sectional studies had mostly significant results. However, the longitudinal studies showed, with two exceptions, no significant improvement in the healthcare provider outcomes.

The review identified eight PCC measurement tools that were scrutinised through the six PCC dimensions and only included if they addressed the first and at least two other dimensions. The quality assessment of the PCC tools was applied to capture PCC as a multifaceted framework, which is necessary when there is the expectation of an improvement in the work environment.^{6 7}

A strength in this study is the approach applied here, which might have restricted the number of included studies, but created a quality assessment of the tools that ensured the results could be compared within the healthcare provider outcomes. To confirm the occurrence of the PCC dimensions in the tools and interventions, additional research needed to be performed to find the complete questionnaires or details on the interventions, as the included studies did not disclose more on the PCC measurement tool beyond the subscales.

This scoping review did not exclude studies based on the healthcare facility. Many healthcare facilities, particularly nursing homes and residential care, have incorporated elements of PCC.^{22 59} Thus far, there is no golden standard for PCC, and previous studies have stressed the importance of being aware of the normative relations and cultural aspects as well as practical hindrances such as routines for documentation and suitable premises when implementing more PCC.^{60 61} This review provided an overview of the research done across healthcare settings,

and interestingly, similar results were found across the incorporated healthcare facilities and type of participants.

A limitation of the included studies was the occurrence of a 'ceiling effect'. A 'ceiling effect' occurs when only well-functioning healthcare facilities want to implement PCC and participate in research.⁶² The baseline measurements in the included intervention studies were already considerably high, which made a substantial improvement unachievable. Moreover, the cross-sectional studies were, with one exception,⁵¹ performed in healthcare facilities that did not undergo an intervention.

Additionally, all PCC measurement questionnaires were self-reported, and the included studies revealed a 'perceived' occurrence of PCC. This occurrence could be overestimated as with the growing interest in PCC healthcare providers might want to appear more person-centred in their work than they are, which was also considered a possibility in other PCC studies.^{19 40 49} PCC is based on ethics that can be summarised as 'aiming at the good life with and for others in just institutions'.⁶³ This implies that also managers in their leadership form a partnership with their staff and listen to their narratives and formulate a plan, aiming at good working conditions for them. Operationalisation of person-centred ethics in healthcare is not a quick fix, but rather a process of developing the professional role and changing the clinical mind set through reflection on theory and practice.¹⁹

Healthcare providers experience job pride and high expectations of being a healthcare professional.^{3 6} This makes it likely that there is an overestimation of PCC and job satisfaction, and an underestimation of job strain, ethical stress and burnout. These overestimations have the consequence that in the cross-sectional studies, the PCC and healthcare provider outcomes were significant and, for the quasi-experimental studies, with high baseline measurements, a significant improvement was unattainable.

The scoping review approach allowed for all possible job satisfaction and occupational health-related outcomes to be included. Still, the results only provided a limited range of six healthcare provider outcomes. Moreover, the lack of quality assessment of these outcomes formed a limitation to the review. The six outcomes with different measurement tools among them impeded the comparison of the importance of the results of the included studies. For example, 14 studies had job satisfaction as a measure in their studies, and 10 different measures were used. This variation suggests that the healthcare provider outcomes do not have an established measurement tool which makes the relative importance of one measure compared with another unclear in this context.^{7 33}

The variation in measures caused difficulty in asserting if PCC could be an MoC that can attract and retain qualified healthcare professionals, as was suggested by McCormack and McCance.²² Similar to the results of the scoping review by Jessup *et al*,¹² most research focused on the patients and financial gain rather than the healthcare provider outcomes. This is despite the healthcare

providers being a defining factor in ensuring patient safety and hospital care quality.⁴ Interventions should aim at improving both patient and healthcare provider outcomes,^{5 8} which can be achieved with PCC as one of its cornerstones is the collaboration between professionals and staff and respect for each other's knowledge and experiences.¹⁹ Other reviews on the improvement of healthcare provider outcomes emphasised that the intervention needs to be well-defined and continue for an extended period.^{6 7} When research into healthcare providers becomes more established in the area of MoC interventions, more consistent scrutinisation can be achieved, and a better prediction can be made into the benefits of implementing an MoC, such as PCC, on the entire healthcare system.

CONCLUSION

This scoping review showed, to a limited extent, a positive association between PCC and healthcare provider outcomes. With a significant variation of measurement tools and conflicting findings across the studies, it is difficult to provide an overall conclusion.

The implications for future research is the necessity for increasing the focus on healthcare providers in analysing the effect of implementing PCC. More specifically, a better understanding of the impact of the different dimensions of PCC on staff and how PCC can contribute to improving the healthcare work environment.

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Appendix 1. Search strategy

Database		Search terms	Number of Studies
PubMed	PCC	("Person centered"[tiab]) OR ("person centred"[tiab]) OR ("person centeredness"[tiab]) OR ("personcenteredness"[tiab]) OR ("person centredness"[tiab]) OR ("client centered"[tiab]) OR ("client centred"[tiab]) OR ("patient centered"[tiab]) OR ("patient centred"[tiab]) OR ("Patient-Centered Care"[Mesh]) OR ("relationship centered"[tiab]) OR ("relationship centred"[tiab]) OR ("family centered"[tiab]) OR ("patient focused"[tiab]) OR ("person focused"[tiab])	41345
	Work-related terms	("Job Satisfaction"[Mesh]) OR ("job satisfaction"[tiab]) OR ("Absenteeism"[Mesh]) OR ("absenteeism"[tiab]) OR ("presenteeism"[Mesh]) OR ("presenteeism"[tiab]) OR ("Occupational Stress"[Mesh]) OR ("occupational stress"[tiab]) OR ("Personnel Turnover"[Mesh]) OR ("personnel turnover"[tiab]) OR ("Sick Leave"[Mesh]) OR ("sick leave"[tiab]) OR ("Stress Psychological"[Mesh]) OR ("stress psychological"[tiab]) OR ("Dyssomnias"[Mesh]) OR ("sleep disorder"[tiab]) OR ("sleep disorders"[tiab]) OR ("sleep disturbances"[tiab]) OR ("occupational health"[Mesh]) OR ("occupational health"[tiab]) OR ("moral stress" [tiab])	138520
	Combination		600
Cinahl	PCC	("Person centered") OR ("person centred") OR ("person centeredness") OR ("personcenteredness") OR ("person centredness") OR ("client centered") OR ("client centred") OR ("patient centered") OR ("patient centred") OR (MH "Patient Centered Care") OR ("relationship centered") OR ("relationship centred") OR ("family centered") OR ("family centred") OR ("patient focused") OR ("person focused")	11168
	Work-related terms	(MH "Sleep Disorders+") OR (MH "Stress, Psychological+") OR (MH "Job Satisfaction+") OR (MH "Occupational Health+") OR (MH	53933

		"Psychology, Occupational+" OR ("moral stress")	
	Combination		414
SCOPUS	PCC	TITLE-ABS-KEY(("Person centered") OR ("person centred") OR ("person centeredness") OR ("personcenteredness") OR ("person centredness") OR ("client centered") OR ("client centred") OR ("patient centered") OR ("patient centred") OR (MH "Patient Centered Care") OR ("relationship centered") OR ("relationship centred") OR ("family centered") OR ("family centred") OR ("patient focused") OR ("person focused"))	48324
	Work-related terms	TITLE-ABS-KEY(("occupational stress") OR ("staff outcomes") OR ("job strain") OR ("sickness absence") OR ("job satisfaction") OR ("presentism") OR ("presenteeism") OR ("job stress") OR ("sleep disturbances") OR ("personnel turnover") OR ("moral stress") OR ("sick leave") OR ("sleep disturbances"))	73958
	Combination		566
PsychINFO	PCC	("Person centered") OR ("person centred") OR ("person centeredness") OR ("personcenteredness") OR ("person centredness") OR ("client centered") OR ("client centred") OR ("patient centered") OR ("patient centred") OR (MH "Patient Centered Care") OR ("relationship centered") OR ("relationship centred") OR ("family centered") OR ("family centred") OR ("patient focused") OR ("person focused")	25306
	Work-related terms	("occupational stress") OR ("staff outcomes") OR ("job strain") OR ("sickness absence") OR ("job satisfaction") OR ("presentism") OR ("presenteeism") OR ("job stress") OR ("sleep disturbances") OR ("personnel turnover") OR ("moral stress") OR ("sick leave") OR ("sleep disturbances")	68187
	Combination		271
Total			1869