


RESEARCH ARTICLE

# Effects of a person-centred and thriving-promoting intervention on nursing home staff job satisfaction: A multi-centre, non-equivalent controlled before–after study

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## Abstract

**Aim:** To evaluate the effects of a person-centred and thriving-promoting intervention in nursing homes on staff job satisfaction, stress of conscience and the person-centredness of care and of the environment.

**Design:** A multi-centre, non-equivalent control group, before–after trial design.

**Methods:** Staff ( $N = 341$ ) from six nursing homes in Australia, Norway and Sweden were assigned to the intervention or the control group and both groups were evaluated before the intervention, immediately after and by 6 months follow-up. Staff completed a questionnaire about job satisfaction (primary endpoint), stress of conscience and the person-centredness of care and of the environment (secondary endpoints). Linear regression models were used to identify the mean scores and to analyse group differences to test the effects of the intervention.

**Results:** The intervention had no statistically significant effects on staff job satisfaction, level of stress of conscience or the perceived person-centredness of care and of the environment.

## KEYWORDS

caring environment, complex intervention, job satisfaction, nursing home staff, person-centred care, stress of conscience

**Trial registration:** ClinicalTrials.gov-NCT02714452. Registered on 19 March 2016.

We declare adherence to the TREND checklist in this study paper.

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## 1 | INTRODUCTION

The aged care workforce is experiencing a growing crisis due to a global shortage of nurses, high turnover rates and the diminishing attraction of care careers for young people (Drennan & Ross, 2019; Haron, Levy, Albagli, Rotstein, & Riba, 2013). There are indications that the main reasons for turnover in nursing homes (NH) are unwanted working conditions and low job satisfaction (Hayes et al., 2012; Rosen, Stiehl, Mittal, & Leana, 2011). Therefore, there is a need for research on improving job satisfaction among NH staff. As described by previous studies (Castle & Engberg, 2005; Plaku-Alakbarova, Punnett, Gore, & Team, 2018), high job satisfaction is associated with high quality of care and positive patient outcomes in NHs. Considering the documented positive impact of person-centred care (PCC) on residents' and their families' well-being and satisfaction with care (Edvardsson, Winblad, & Sandman, 2008; Miller, Lepore, Lima, Shield, & Tyler, 2014), as well as on staff job satisfaction (Rajamohan, Porock, & Chang, 2019), it is likely that an increase in PCC could help improve the quality of care and thus increase job satisfaction (Vassbø, Kirkevold, et al., 2019; Vassbø, Kirkvold, et al., 2019). However, the existing evidence on the extent to which PCC may promote job satisfaction is limited (Rajamohan et al., 2019).

## 2 | BACKGROUND

The essential characteristics of PCC include integrating individuals' preferences, values, histories and relationships, shared decision-making and partnership in care (Ekman et al., 2011; Kitwood, 1997; McCormack, 2004). It also encompasses a caring environment which supports and promotes well-being, thriving and human interactions (Bergland & Kirkevold, 2006; Dewing & McCormack, 2017; Edvardsson, 2008). Job satisfaction is a positive emotional state that emerges when employees can perform their work in accordance with their professional standards and values (Locke, 1976). It can therefore be understood as staff well-being and thriving at work (Vassbø, Kirkevold, et al., 2019; Vassbø, Kirkvold, et al., 2019). As described by McCormack and McCance (2016), PCC is expected to improve staff job satisfaction because of its practical manifestation of the nursing values of respecting residents and protecting their human dignity. Furthermore, shared decision-making and partnership, which requires professional empowerment and autonomy (Morgan & Yoder, 2012), also found significant for NH staff job satisfaction (Squires et al., 2015). PCC is also expected to benefit staff due to its focus on residents' preferences, which may increase the opportunities for staff to do what they feel is right. When professionals cannot do what they think they should do at work, they may experience "stress of conscience" (Glasberg et al., 2006). Lower stress of conscience is significantly associated with higher degrees of PCC (Sjögren, Lindkvist, Sandman, Zingmark, & Edvardsson, 2015) and job satisfaction (Vassbø, Kirkevold, et al., 2019; Vassbø, Kirkvold, et al., 2019). Furthermore, stress of conscience may decrease following

the implementation of PCC guidelines (Edvardsson, Sandman, & Borell, 2014).

Given the reported positive effects of PCC, it seems crucial that care providers have the skills to adopt it in their care practice. However, PCC interventions are complex; its implementation is challenging, and the effectiveness of implementation is unclear (Fossey et al., 2014; Kim & Park, 2017; McCormack, Dewing, & McCance, 2011). For instance, four reviews find that various forms of PCC impact job satisfaction (Barbosa, Sousa, Nolan, & Figueiredo, 2015; Brownie & Nancarrow, 2013; Pol-Grevelink, Jukema, & Smits, 2012; Rajamohan et al., 2019); however, these reviews also describe concerns about design weaknesses, questionable study quality, unclear theoretical and pedagogical frameworks, a lack of homogeneity and a lack of endpoints that are relevant to the study objectives. All these reviews conclude that the existing evidence on this topic is not sufficiently reliable and further exploration is recommended.

NH staff care for residents with complex medical and emotional needs due to severe frailty (Kojima, 2015) and dementia (Helvik, Engedal, Benth, & Selbæk, 2015). At the same time, it is emphasized that nursing homes must be experienced as a home, which requires expertise in meeting the patient's social and cultural needs (Bergland & Kirkevold, 2006). These features call on several types of competencies and provide staff with opportunities to learn. However, several contextual factors, including varying skill levels, high workloads, high staff turnover, shift- and part-time work and the complexity of care may inhibit research on interventions designed to benefit NH residents and staff (Buckwalter et al., 2009). Furthermore, Moore et al. (2017) find that traditional practices and professionals' attitudes present barriers to the successful implementation of PCC, while robust management and adaptation strategies to overcome existing practices are facilitating factors that support the critical roles of leaders in PCC interventions.

To conclude, although previous studies indicate a relationship between PCC and staff job satisfaction and quality of care, further research is needed to expand and support these tentative conclusions. This article reports on an intervention study developed for promoting PCC and thriving in NHs (Edvardsson et al., 2017). The intervention was expected to provide evidence that PCC can improve the well-being and thriving of NH staff and residents and their relatives' satisfaction with care; this article focuses on staff. The study aims to evaluate the effects of the person-centred and thriving-promoting intervention on staff job satisfaction (primary endpoint), stress of conscience and the person-centredness of care and of the environment (secondary endpoints).

## 3 | METHODS

### 3.1 | Design

A multi-centre, non-equivalent controlled group before-after design (Edvardsson et al., 2017).

### 3.2 | Settings

Six NHs were recruited, two from Australia, two from Norway and two from Sweden (Victoria, Australia; Oslo, Norway and Västerbotten, Sweden). The inclusion criteria were (a) managers expressed a need and willingness to participate and support the intervention, (b) the NH had at least 50 resident beds and (c) the NH employed at least 50 staff members. The managers of each NH decided whether to participate in the study.

The participating NHs were all publicly funded. The number of beds ranged from 50–127. All NHs provided 24-hr services for older persons with complex health needs requiring assistance with everyday activities and units directed dementia care. The residents had personally furnished private rooms and access to shared dining and living rooms and outdoor areas. Four of the included NHs were in rural areas; two were located in a large city. The six participating NHs were assigned to either the intervention group or the control group (one NH from each country was assigned to each group) through dialogue between the researchers and the NH managers.

### 3.3 | Intervention

The intervention was theoretically grounded in the concepts of person-centred care and thriving. It lasted for a period of 14 months and used an educational approach grounded in pedagogical theory (Freire, 1996). The content and length of the intervention were a conscious extension of previous research which often consisted of less extensive interventions (not entire programmes) (Edvardsson et al., 2014).

Philosophically, the intervention is based on ethical approaches to humans (Berlin, 1992). Theoretically, it draws on PCC, which involves seeing people as autonomous, reflective persons; practising relationships and shared decision-making (Brooker & Latham, 2015; Edvardsson, 2008; Kitwood, 1997); recognizing staff as unique individuals (Tellis-Nayak, 2007); approaching thriving as an experience of well-being in relation to the place (Bergland & Kirkevold, 2006; Carver, 1998); and establishing a caring environment with a willingness to serve including doing a little extra and receiving a little extra to supporting positive experiences (Edvardsson, 2008). A more detailed description of the basis for the intervention can be found in the study protocol (Edvardsson et al., 2017). Members of the research management group (DE, POS and MK) and a working group of four researchers (KS, QL, ÅB and TKV) managed the person-centred and thriving-promoting intervention according to the study protocol (Edvardsson et al., 2017).

The philosophical and theoretical underpinnings of the study were operationalized into three dimensions which were the basis for the educational programme: (a) doing a little extra; (b) developing a caring environment; and (c) assessing and meeting highly prioritized psychosocial needs which were the focus in the intervention. The intervention comprised a training programme for staff based

on an interactive stepwise pedagogical framework consisting of: (a) knowledge translation; (b) knowledge generation; and (c) knowledge dissemination. The programme was divided into 12 sessions of 60 min each. It began with an introductory lecture on the foundations of person-centredness and thriving, followed by nine monthly workshops where staff were encouraged to discuss and reflect on the three dimensions in their care practice. Between the workshops, staff were asked to take part in activities that implemented person-centred care and thriving in clinical practice. The intervention also included an international dissemination seminar where participants from the three countries could exchange experiences and a closing seminar where local participants' overall experiences were summarized. To reach staff unable to participate in workshops, attendees were encouraged to inform their colleagues and continue to discuss the topics with other staff between workshops. Written learning material was provided so that all staff could familiarize themselves with the intervention's conceptual framework and the themes of the workshops and prepare for the activities conducted between the workshops. The four researchers in the working group held weekly calibration meetings throughout the intervention period to ensure that the intervention was as alike as possible. The members of the research group who led the interventions discussed their experiences in the workshops to further support standardization of the interventions and synchronization of upcoming events. The intervention process was also reported and discussed in regular meetings with the research management group.

### 3.4 | Intervention nursing homes

Staff working in the three intervention NHs were encouraged to participate in the intervention programme and to respond to the questionnaire during the three data collection time points.

### 3.5 | Control nursing homes

The control group consisted of staff in the three control NHs. They were offered the same introductory lecture that was given at the intervention NHs. Following this lecture, staff in control NHs continued their practice without further involvement from the research team aside from data collection before and after the intervention.

### 3.6 | Measures

A study-specific questionnaire was used to collect data three times: at baseline in March–May 2016 (T0), immediately after the intervention in September–November 2017 (T1) and 6 months following the intervention in March–May 2018 (T2). Data collected included sex; age; education; position; years of work experience in aged care and at current NH; whether the participant had responded to the

questionnaire before (at T1 and T2); and the study endpoints: job satisfaction, stress of conscience and person-centredness of care and the environment. The endpoint measures were carefully chosen to match the theoretical framework of the intervention and to measure the central concepts to the study (Edvardsson et al., 2014). All endpoint measures were tested for validity and reliability in the study population and context (Edvardsson et al., 2017).

*Job satisfaction* was measured using the Measure of Job Satisfaction (MJS) scale (Traynor & Wade, 1993) which consists of 37 questions. Responses to each item are given on a 5-point Likert scale, ranging from 1 (very dissatisfied)–5 (very satisfied). Total scores can range from 37–185. Higher ratings reflect overall higher job satisfaction. The scale covers five significant aspects of job satisfaction: personal satisfaction, satisfaction with the workload, satisfaction with professional support, satisfaction with pay and prospects and satisfaction with training. In this sample, Cronbach's alpha for the MJS total score was  $\alpha = 0.94$ .

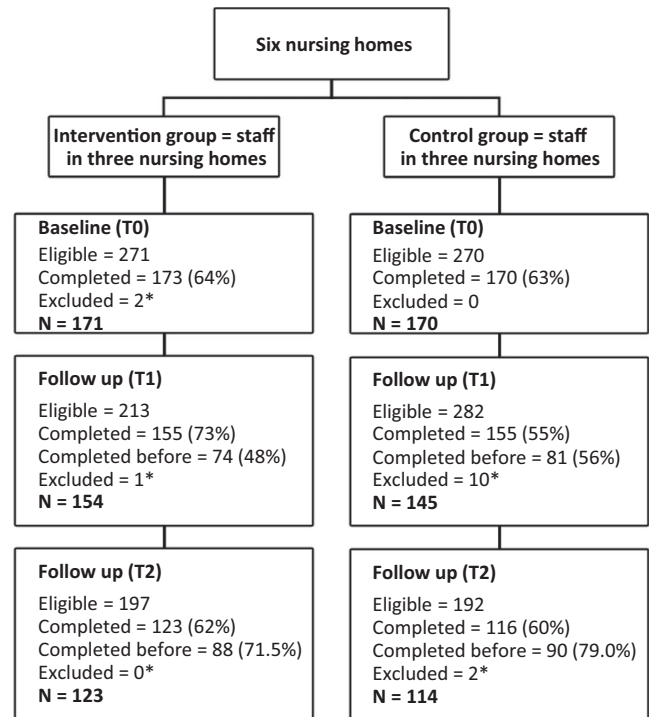
*Stress of conscience* was assessed using the Stress of Conscience Questionnaire (SCQ) (Glasberg et al., 2006). This questionnaire consists of nine items, each of which has an A and B part. The A questions ask participants to rate how frequently they encounter ethically challenging situations in care, using a scale from 0 (never)–5 (every day). The B questions ask the extent to which this troubles participants' consciences, from 0 (no, not at all)–5 (yes, very much). The frequency (A) and degree scores (B) are multiplied to provide an index for stress of conscience. The total score can range from 0–225. Lower ratings reflect lower stress of conscience. Cronbach's alpha value for SCQ in this data set was  $\alpha = 0.83$ .

*Person-centredness of care* was assessed by the 13-statement scale Person-centred Care Assessment Tool (P-CAT) (Edvardsson, Fetherstonhaugh, Nay, & Gibson, 2010). The answers are given on a 5-point scale ranging from 1 (completely disagree)–5 (completely agree). The total score can range from 13 (indicating a low degree of PCC)–65 (indicating a high degree of PCC). The P-CAT aims to capture the extent to which staff perceive that 13 predefined characteristics of person-centred care (personalized care, the organization and environmental support) are reflected in their care processes. Cronbach's alpha value in this sample was  $\alpha = 0.82$ .

*Person-centredness of the environment* was assessed using the 14-statement scale Person-centred Climate Questionnaire-staff version (PCQ-S) (Edvardsson, Sandman, & Rasmussen, 2009). The responses are given on a six-point scale ranging from 1 (no, I disagree completely)–6 (yes, I agree completely). The total score of the scale can range from 14 (indicating a low degree of person-centredness)–84 (indicating high person-centredness). The PCQ-S addresses three factors of person-centredness in the environment: safety, everydayness and community. In this sample, the Cronbach's alpha value for the PCQ-S was  $\alpha = 0.80$ .

### 3.7 | Translation

Apart from the MJS, all instruments (P-CAT, PCQ and SCQ) were available in English, Swedish and Norwegian (Edvardsson



**FIGURE 1** The flow of participants through each stage of the study. \*Excluded (N = 15): Not working with direct care but as admin, environmental (i.e. cleaning) or kitchen staff (N = 10); Not provided demographic data (N = 3); Missing values of any of the key scales (N = 2)

et al., 2017). Professional translators translated the English version of MJS (Traynor & Wade, 1993) into Norwegian and Swedish. The translation process included forward-backwards translation (Maneesriwongul & Dixon, 2004). The multilingual research group (in English, Norwegian and Swedish) accomplished the final linguistic validation by attaining a consensus and by ensuring that the phrases of the questionnaire could support the interpretation of the outcomes.

### 3.8 | Blinding

Due to the nature of the intervention, blinding to study allocation was not possible.

### 3.9 | Sample size and response rate

All six participating NHs completed the study. Minimum staff sample sizes for measuring the primary endpoint (job satisfaction) were calculated based on a previously reported MJS mean of 81 and SD of 14, based on a similar previous study of job satisfaction (Edvardsson, Fetherstonhaugh, McAuliffe, Nay, & Chenco, 2011). This indicates that a sample of 150 staff from each group would be sufficient to detect significant pre- and postintervention mean differences of at least 3.4. Therefore, the goal was to include a

total of at least 300 staff members from all NHs (Edvardsson et al., 2017). Figure 1 shows the response rates at each stage in detail. The overall response rate decreased across the three time points and there was a considerable decrease in the response rate for the control group at T2 due to an Australian bushfire that interrupted data collection in one NH.

### 3.10 | Ethical considerations

The La Trobe University Human Ethics Committee (Dnr. 16-002), Regional Ethical Review Board in Umeå (Dnr. 2015-407-31) and the Norwegian Social Science Data Services (Dnr. 46548) approved the study. All eligible persons were given written information about the purpose and outline of the study and were allowed to ask the researchers questions about the study throughout the study period. The processes for informed consent were conducted in accordance with the requirements in each country.

### 3.11 | Data analyses

Five of the 13 items in the P-CAT are negatively worded (items 7, 8, 9, 10 and 12), and the responses to these items were reversed before the data were analysed. Missing data were imputed with the mean for the individual at the level of 10% missing items for MJS, PCQ-S or P-CAT. Inspections of the missing data showed no systematic pattern.

Sample characteristics were explored using descriptive statistics. The differences between the intervention and control groups were evaluated using chi-squared tests for categorical variables and an independent sample *t* test for continuous variables. The normality of continuous variables was assessed by inspecting histograms and the data were checked for outliers. Linear regression models with an interaction term were used to analyse the predicted changes in differences between the intervention and control groups. Each dependent variable—job satisfaction total score and sub-factors, stress of conscience, person-centredness of care and person-centredness of the environment—was analysed separately. Data collection time, group and an interaction term (time × allocation centre, i.e. country) were also included in the model to adjust for the different settings. A significant interaction term implies differences in the changes in mean scores between the intervention and control groups over time. The results are presented with means and standard error at each time point and mean changes between groups are presented with the corresponding standard error, *p*-value and effect size partial  $\eta^2$ . Results with *p*-values under .05 are considered statistically significant and effect sizes (partial  $\eta^2$ ) over 0.06 are considered clinically significant. The internal consistency reliability for all included assessment scales was measured using Cronbach's alpha. The analyses were performed in SPSS v. 24.

## 4 | RESULTS

### 4.1 | Baseline characteristics

The characteristics of the participants are shown in Table 1. In the baseline data for all staff (*N* = 341), 90.3% were female (*N* = 308), the mean age was 42.1 years, 61.9% (*N* = 211) were enrolled nurses (EN), 22.0% (*N* = 75) were registered nurses (RN), 11.7% (*N* = 40) were care assistants (CA) and 4.1% (*N* = 14) were allied health staff (AH). The mean work experience in aged care was 13.3 years, while mean work experience in the respective NHs was 10.0 years. At all three data collection time points (T0, T1 and T2), there were significant differences in years of experience ( $p = .011$ ,  $p = .001$  and  $p = .001$ ) and in years of experience in the respective NH ( $p = .001$ ,  $p = .001$  and  $p = .001$ ) between the intervention and control groups. At T2, there were significant differences in the number of participants who had responded to the questionnaire before between the intervention and control groups ( $p = .001$ ).

### 4.2 | Effect on job satisfaction

Table 2 shows the mean score for the intervention group for job satisfaction (primary endpoint). Staff reported a decrease in mean scores between T0–T1 (mean difference –4.4) and between T0–T2 (mean difference –2.6). After controlling for the centres (Table 2), the linear regression models showed significant changes in differences in job satisfaction between the intervention and control groups between T0–T1 ( $p < .001$ ) and between T0–T2 ( $p = .002$ ). These significant changes in differences were due to a negative change (–4.4 and –2.6, respectively) in the intervention group and a positive change in the mean difference in the control group (8.0 and 7.0, respectively), which indicates that the intervention group did not benefit from the intervention.

We also conducted linear regression models to analyse the effect on the sub-groups of job satisfaction (Table 3). After controlling for centre, the model showed significant changes in differences in personal satisfaction between T0–T1 (mean change 2.8,  $p = .001$ ) and between T0–T2 (1.7,  $p = .046$ ). There were also significant changes in differences in satisfaction with workload between T0–T1 ( $p = .017$ ) and between T0–T2 ( $p = .012$ ); in satisfaction with professional support between T0–T1 ( $p = .001$ ); in satisfaction with pay and prospects between T0–T1 ( $p = .001$ ) and T0–T2 ( $p = .003$ ); and in satisfaction with training between T0–T2 ( $p = .014$ ). All significant changes in differences were due to positive changes in the mean difference in the control group compared with negative changes in the intervention group. These results also indicate that the intervention group did not benefit from the intervention in relation to any of the sub-factors of job satisfaction.

**TABLE 1** Sample characteristics of the participants at T0, T1, T2

	Total sample	Intervention	Control	
T0	(N = 341)	(N = 171)	(N = 170)	p-value
Gender (female) (N, %)	308 (90.3)	152 (89.0)	156 (91.8)	.051*
Age (mean, SD)	42.1 (13.7)	39.8 (13.4)	44.5 (13.6)	.708
Enrolled Nurse (N, %)	211 (61.9)	102 (59.6)	109 (65.1)	
Registered Nurse (N, %)	75 (22.0)	39 (22.8)	36 (21.2)	
Care Assistance (N, %)	40 (11.7)	22 (12.9)	18 (10.6)	
Allied Health (N, %)	14 (4.1)	7 (4.1)	7 (4.1)	
Work experience in aged care (Years mean, SD)	13.3 (11.3)	11.3.6 (10.5)	15.4 (11.8)	.011*
Work experience in this NH (Years mean, SD)	10.0 (11.9)	12.9 (12.4)	12.6 (12.4)	.001*
T1	(N = 298)	(N = 154)	(N = 144)	
Gender (female) (N, %)	266 (89.0)	131 (85.1)	135 (93.1)	.044*
Age (mean, SD)	42.5 (13.3)	41.7 (12.9)	43.3 (13.8)	.335
Enrolled Nurse (N, %)	184 (61.5)	89 (57.8)	95 (65.5)	
Registered Nurse (N, %)	62 (20.7)	31 (20.1)	31 (21.4)	
Care Assistance (N, %)	37 (12.4)	24 (15.6)	13 (9.0)	
Allied Health (N, %)	12 (4.0)	7 (4.6)	5 (3.4)	
Work experience in aged care (Years mean, SD)	12.8 (11.3)	11.5 (9.7)	14.1 (12.8)	.001*
Work experience in this NH (Years mean, SD)	12.3 (12.4)	8.7 (10.5)	12.0 (13.4)	.001*
Completed before (N, %)	155 (53.4)	74 (48.0)	81 (56.0)	.180
T2	(N = 235)	(N = 123)	(N = 114)	
Gender (female) (N, %)	214 (90.3)	111 (90.2)	103 (90.0)	.647
Age (mean, SD)	43.2 (13.7)	41.6 (13.8)	44.8 (13.3)	.604
Enrolled Nurse (N, %)	139 (59.1)	65 (52.8)	74 (64.9)	
Registered Nurse (N, %)	53 (22.4)	35 (28.5)	18 (15.8)	
Care Assistance (N, %)	26 (11.1)	14 (11.4)	12 (10.5)	
Allied Health (N, %)	17 (7.2)	7 (5.7)	10 (8.8)	
Work experience in aged care (Years mean, SD)	13.3 (12.0)	10.8 (10.0)	15.9 (13.4)	.001*
Work experience in this NH (Years mean, SD)	11.9 (13.0)	7.2 (10.2)	13.2 (14.1)	.001*
Completed before (N, %)	178 (75.4)	88 (71.5)	90 (79.0)	.001*

\*p-values &lt; .05.

### 4.3 | Effects on staff stress of conscience and on person-centredness of care and of the environment

Table 2 shows the mean score for the intervention group on stress of conscience and on PPC and the environment (secondary end-points). Staff in the intervention group reported a decrease in stress of conscience between T0–T1 (mean difference –0.3) and an increase between T0–T2 (mean difference 0.9). The perceived level of person-centredness of care decreased between T0–T1 (mean difference –0.4) and increased between T0–T2 (mean difference 1.1). The perceived person-centredness of the environment decreased between T0–T1

(mean difference –0.4) and increased between T0–T2 (mean difference 1.0).

After controlling for centre, the linear regression models showed significant changes in differences between the groups from T0–T1 for stress of conscience ( $p = .003$ ), person-centredness of care ( $p = .006$ ) and person-centredness of the environment ( $p = .034$ ). All significant changes in differences were due to positive changes in the mean difference of the control group compared with a negative change in the intervention group. This also indicates that the intervention group did not benefit from the intervention in the areas of stress of conscience, perceived

**TABLE 2** Estimated mean score and changes between intervention and control group on primary and secondary outcomes between baseline and first and second follow-up

Measures times	Intervention group (N) Mean (SE)			Control group (N) Mean (SE)			Change between groups from T0–T1	Change between groups from T0–T2
	T0	T1	T2	T0	T1	T2		
Job satisfaction (score 37–185) <sup>a</sup>	(170) <b>136.9</b> (1.3)	(154) <b>132.5</b> (1.4)	(121) <b>134.3</b> (1.6)	(168) <b>127.9</b> (1.4)	(144) <b>135.9</b> (1.5)	(110) <b>134.9</b> (1.7)	$p < .001$ mean change = 12 SE = 2.8 partial eta <sup>2</sup> = 0.023	$p = .002$ mean change = 9.5 SE = 3.0 partial eta <sup>2</sup> = 0.012
Stress of conscience (score 0–225) <sup>b</sup>	(171) <b>48.3</b> (0.6)	(145) <b>48.0</b> (0.6)	(120) <b>49.2</b> (0.7)	(169) <b>45.7</b> (0.6)	(143) <b>48.9</b> (0.6)	(107) <b>49.0</b> (0.7)	$p = .003$ mean change = 3.5 SE = 1.2 partial eta <sup>2</sup> = 0.010	$p = .070$ mean change = 2.3 SE = 1.3 partial eta <sup>2</sup> = 0.004
Person-centredness of care (score 13–65) <sup>d</sup>	(171) <b>49.6</b> (0.6)	(145) <b>49.2</b> (0.6)	(120) <b>50.7</b> (0.7)	(169) <b>47.2</b> (0.6)	(143) <b>50.2</b> (0.6)	(107) <b>50.3</b> (0.7)	$p = .006$ mean change = 3.3 SE = 1.2 partial eta <sup>2</sup> = 0.009	$p = .114$ mean change = 2.0 SE = 1.3 partial eta <sup>2</sup> = 0.003
Person-centredness of the environment (score 14–84) <sup>c</sup>	(169) <b>66.4</b> (0.6)	(143) <b>66.0</b> (0.6)	(120) <b>67.4</b> (0.7)	(166) <b>63.4</b> (0.6)	(141) <b>65.6</b> (0.7)	(107) <b>65.4</b> (0.6)	$p = .034$ mean change = 2.6 SE = 1.2 partial eta <sup>2</sup> = 0.005	$p = .411$ mean change = 1.1 SE = 1.3 partial eta <sup>2</sup> = 0.001

<sup>a</sup>High scores indicate higher degree of job satisfaction.

<sup>b</sup>High scores indicate higher degree of stress of conscience.

<sup>c</sup>High scores indicate higher degree of person-centredness of the environment.

<sup>d</sup>High scores indicate higher degree of person-centred care.

person-centredness of care or perceived person-centredness of the environment.

## 5 | DISCUSSION

This article reports on a study that aimed to evaluate the effects of a person-centred and thriving-promoting intervention in NHs on staff job satisfaction (primary endpoint), staff stress of conscience and the perceived person-centredness of care and of the environment (secondary endpoints). The study found that the intervention had no statistically significant positive effects on the primary or secondary endpoints.

Some possible explanations for these results are linked to the study's high baseline scores on person-centredness and job satisfaction (Table 2). Previous research on NH staff job satisfaction, which was implicit in the study's design, indicates no reason to expect high baseline levels of person-centredness and job satisfaction; managers at the studied NH also expressed a need for the intervention (Costello, Walsh, Cooper, & Livingston, 2019; Hayes et al., 2012; Orrung Wallin, Jakobsson, & Edberg, 2015; Wallin, Jakobsson, & Edberg, 2012). However, in the intervention group, staff baseline scores were near the ceiling for the MJS, P-CAT and PCQ and near the floor for the SCQ. Scores near a scale's floor or ceiling leave very limited room for improvement (Streiner & Norman, 2008). Consequently, these high baseline scores introduced a significant challenge for this study; staff in the intervention group had little potential for

positive developments, making it challenging to measure such changes. Boersma and colleagues describe similar findings; NH staff scored high at pretest on job satisfaction and person-centredness (Boersma, Dröes, Lissenberg-Witte, van Meijel, & van Weert, 2017; Boersma, van Weert, Lissenberg-Witte, van Meijel, & Dröes, 2019). That study also found that implementation of a PCC model had no significant effects on job satisfaction. These results may indicate that PCC has been somewhat established in the NH sector, with positive results for staff. In line with this, McCormack et al. (2015) found that there has been significant international development in the theory and practice of person-centredness. Therefore, future studies of PCC interventions in NHs should presuppose that the PCC approach to care has seen considerable development in this sector and designing the interventions based on the existing levels of PCC in the facilities.

Furthermore, in the study examined here, the intervention group's assessment of the perceived person-centredness of care and the environment decreased from baseline (T0) to after the intervention (T1) (Table 2). This may be because staff were influenced by the intervention, resulting in a shift in staff responses. Response shift is a change in respondents' internal standards or values or a redefinition of the target construct (Sprangers & Schwartz, 1999). This may have occurred due to the staff's increased focus on person-centredness because of the discussions and reflections on person-centredness that occurred during the intervention. Although no definite conclusion can be drawn about the importance of response shift to the current study, increasingly

**TABLE 3** Estimated mean score and changes between intervention and control group on sub-factors of job satisfaction between baseline and first and second follow-up

Measures	Intervention group (N) Mean (SE)			Control group (N) Mean (SE)			Change between groups from T0–T1	Change between groups from T0–T2
	T0 (171)	T1 (154)	T2 (123)	T0 (170)	T1 (145)	T2 (114)		
Personal satisfaction (score 10–50) <sup>a</sup>	(171) 40.0 (0.4)	(154) 38.8 (0.4)	(121) 39.0 (0.5)	(168) 37.9 (0.4)	(144) 39.6 (0.4)	(111) 39.6 (0.5)	$p = .001$ mean change = 2.8 SE = 0.8 partial $\eta^2 = 0.014$	$p = .046$ mean change = 1.7 SE = 0.9 partial $\eta^2 = 0.005$
Satisfaction with workload (score 7–35) <sup>b</sup>	(171) 22.4 (0.4)	(154) 22.5 (0.4)	(121) 22.4 (0.5)	(169) 20.4 (0.4)	(144) 22.1 (0.4)	(112) 22.2 (0.5)	$p = .017$ mean change = 1.9 SE = 0.8 partial $\eta^2 = 0.007$	$p = .012$ mean change = 2.2 SE = 0.9 partial $\eta^2 = 0.007$
Satisfaction with professional support (score 8–40) <sup>c</sup>	(171) 34.6 (0.4)	(154) 33.2 (0.4)	(123) 35.5 (0.5)	(170) 33.7 (0.4)	(144) 35.9 (0.5)	(123) 34.6 (0.5)	$p = .001$ mean change = 3.5 SE = 0.8 partial $\eta^2 = 0.019$	$p = .061$ mean change = 1.7 SE = 0.9 partial $\eta^2 = 0.004$
Satisfaction with pay and prospect (score 7–35) <sup>d</sup>	(170) 27.0 (0.4)	(154) 25.5 (0.4)	(122) 26.7 (0.5)	(168) 25.5 (0.4)	(144) 26.0 (0.4)	(111) 25.3 (0.5)	$p = .001$ mean change = 3.0 SE = 0.7 partial $\eta^2 = 0.019$	$p = .003$ mean change = 2.3 SE = 0.8 partial $\eta^2 = 0.010$
Satisfaction with training (score 4–20) <sup>e</sup>	(170) 14.0 (0.2)	(154) 13.5 (0.2)	(123) 13.8 (0.3)	(170) 13.4 (0.2)	(144) 13.7 (0.2)	(113) 13.9 (0.3)	$p = .061$ mean change = 0.8 SE = 0.5 partial $\eta^2 = 0.004$	$p = .014$ mean change = 1.2 SE = 0.4 partial $\eta^2 = 0.007$

<sup>a</sup>High scores indicate higher personal satisfaction.

<sup>b</sup>High scores indicate high satisfaction with workload.

<sup>c</sup>High scores indicate high satisfaction with professional support.

<sup>d</sup>High scores indicate high satisfaction with pay and prospect.

<sup>e</sup>High scores indicate high satisfaction with training.

critical attitudes towards their care practices could explain the differences between the baseline (T0) and after the intervention (T1) in the intervention group.

In addition, the long duration of the intervention was consistent with the idea that cultural change takes time (Moore et al., 2017; Schein, 2010) and with previous findings indicating a relationship between long duration and positive staff outcomes (Surr et al., 2017). However, this long duration also increased the likelihood that the intervention group would be affected by staff absences and turnover. Therefore, staff were continuously included in the intervention group. The idea was that the intervention would spread and that every staff member in the intervention NHs would be affected if they worked there for at least 1 month.

Consequently, not only did individual participants vary over time; participants also had varying levels of exposure to the intervention. Some participants may have had limited exposure to the intervention, thereby contributing to the lack of significant effects. Also, the intervention's long duration increased the likelihood that extraneous factors could mask its effects (Robson & McCartan, 2016). Future studies could counter these issues by ensuring the dissemination of knowledge of the intervention to new staff members, as well as

methodically scrutinizing extraneous factors having an impact on staff responses.

Recent literature on barriers and facilitators influencing the effectiveness of PCC interventions in NHs and other healthcare settings indicates that the structural barriers to successful implementation have not yet been overcome (Caspar, Cooke, Phinney, & Ratner, 2016; Moore et al., 2017). According to Moore et al. (2017), typical barriers for interventions in NH settings include high staff turnover, high workloads and competing clinical demands and responsibilities. These factors may have played essential roles in our study as well. For example, the intervention required some time commitment and interrupted the daily activities of staff and managers. Therefore, in line with previous findings (Moore et al., 2017), it seems that pressing clinical duties had a negative impact on staff participation and intervention implementation during particularly busy periods. A mixed-method approach to this study (Robson & McCartan, 2016) might have better illuminated the complex issues around the intervention and staff perceptions. For example, complementing the questionnaire data with data on staff experiences and with observations of the intervention activities could provide a more comprehensive picture of the intervention's effects.



NH leaders are crucial to an organization's mission and strategy and play key roles in supporting and promoting change during PCC interventions (Sharma, Bamford, & Dodman, 2015). Therefore, in this study, NH leaders were asked to lead staff in the evaluation activities, reflections and discussions that took place between the intervention workshops. This was done to ensure that these activities were completed and that they adhered to the intervention protocols. However, some key leaders resigned or changed their positions during the intervention period, something which the research team perceived as having a negative impact on the implementation of the intervention. Caspar et al. (2016) identify coaching, guidance and team meetings as driving factors for practice change in care settings, while Moore et al. (2017) find that trained, engaged professionals can motivate others to implement PCC in care settings. Thus, providing intervention leadership training to local staff champions might improve the likelihood of protocol adherence and the success of PCC interventions by reducing reliance on NH leaders and by valuing, recognizing and confirming local staff (Tellis-Nayak, 2007). All of these above suggestions could improve the intervention's engagement and impact if carefully considered in future studies.

## 5.1 | Strength and limitations of the study

One strength of the study is that the validity, reliability and psychometric properties of the questionnaires had previously been assessed (Edvardsson et al., 2017). However, one possible limitation is that the instruments have not been validated for their ability to measure differences between groups. On the other hand, the results of this study and the results of the evaluation interventions using the MJS (e.g. Nightingale, Kristjanson, & Toye, 2003) and the SCQ, the P-CAT and the PCQ-S (Edvardsson et al., 2014), indicate that the instruments are sensitive to change if differences exist. The inclusion of NHs from the researchers' existing networks can be regarded as both a strength and a weakness. This is a strength because collaboration between the research team and the NH staff and management was essential for a successful intervention process and collaboration is easier among people who are already accustomed to collaborating. However, this may also be perceived as a weakness because it meant that other NHs which saw a need for improvement did not have the option to participate. This may have harmed the representativeness of the study, limiting the generalizability of the findings.

## 6 | CONCLUSION

The results of this study indicate that the person-centred, thriving-promoting intervention had no significant beneficial effect on staff job satisfaction, staff stress of conscience or the perceived person-centredness of care or the environment. These findings could be explained by possible deviations in adherence

to the intervention protocol, along with some methodological challenges. Therefore, this study highlights some of the challenges of complex interventions in NH contexts. The reality of high workloads, staff and leadership turnover and competing duties represent significant challenges for NH research and require careful consideration. The pros and cons of long interventional duration time also needs further consideration in practice-based NH research.

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## CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest.

## AUTHOR CONTRIBUTIONS

D.E, Å.B., M.K., M.L, Q.L., K.S. and P.O.S.: Study design. Å.B., Q.L., K.S. and T.K.V.: Data collection. D.E, Å.B., M.K., M.L, Q.L., K.S., P.O.S. and T.K.V.: Data analysis and revising the manuscript. T.K.V.: drafting the manuscript.

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