A cross-sectional study investigating patient-centred care, co-creation of care, well-being and job satisfaction among nurses

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Background Developments in the community health nursing sector have resulted in many changes in the activities of these nurses. The concepts of patient-centred care and co-creation of care are gaining importance in the work of community health nurses. Whether patient-centred care also contributes positively to nurses' well-being and job satisfaction is not known.
Method In 2015, a cross-sectional survey was conducted among 153 community health nurses employed by 11 health care organisations in the southern part of the Netherlands. Correlation and regression analyses were performed to identify relationships among patient-centred care, co-creation of care, background characteristics, job satisfaction and well-being of community health nurses.
Results Patient-centred care and co-creation of care were correlated positively with community health nurses' well-being and job satisfaction. Both variables were predictors of well-being, and patient-centred care was a predictor of job satisfaction. The length of time in the present position was related negatively to community health nurses' job satisfaction and well-being.
Conclusions Investment in patient-centred care and co-creation of care is important for the well-being and job satisfaction of community health nurses.
Implications for nursing management To safeguard or improve job satisfaction and well-being of community health nurses, organisations should pay attention to the co-creation of care and patient-centred care.

Keywords: community care, job satisfaction, nursing work

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Introduction

The numbers of elderly and chronically ill individuals in the Netherlands are growing rapidly, increasing expenditures and exerting pressure on the financing of the chronic care sector (De Putter *et al.* 2014). Systemic changes are needed to keep health care affordable and accessible. The Dutch government is dedicated to ensure that people can continue to live independently for as long as possible, and thus strives to organise support initially within people's informal networks (i.e. family members, neighbours and/or friends).

Community health nurses in the Netherlands

In the Netherlands, the community health nurses had an important task of supporting elderly and chronically ill individuals in the Netherlands and improving their quality of life until 1960. During that time, policy and economic developments resulted in the splitting and reassignment of the tasks of the community

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nurse to other specialised home care workers (Cramm & Nieboer 2016). Ageing populations and increased pressure on health care systems nowadays led to a revival of the community nurse to support independent living among frail citizens (de Klaver *et al.* 2013). Community nurses are expected to solve multiple problems of frail elderly and chronically ill by connecting various professionals/organisations in the field of (preventative) health care, social care, welfare, but also, for example, housing (Cramm & Nieboer 2016). On 1 January 2015, responsibility for care needs assessment, formerly held by the Care Needs Assessment Centre (CIZ), was therefore given back to them. Under the CIZ, medical diagnosis was the primary goal and uniform assessment procedures were in place, leaving little room for prevention or tailored approaches (De Putter *et al.* 2014). Community health nurses are now expected to stimulate and to find and identify frail people in the community, enabling the provision of tailored care. Care provision is supposed to be coherent at the individual level, with good co-ordination between the medical and social domains (CZ 2014).

The tasks and functions of the community health nurses are: (1) early observing and referring; (2) care and advice—connecting clients with the right help; (3) tailoring health, self-reliance and quality of life measures to the needs of clients or neighbourhoods as a whole; (4) registering and follow-up checks; and (5) monitoring policy-relevant information as feedback for local health policy (de Klaver *et al.* 2013, p. 34).

Thus, community health nurses have been given the lead role in the care provision for frail people in the community. Rosendal and van Dorst (2014) argue this change affects the profession and experiences of these nurses. The extension of community health nurses' tasks alters their autonomy, and created a new position in which the community health nurse acts as a care co-ordinator working together with professionals from health and social care as well as informal caregivers in the community. Such tasks require different skills, and may cause additional burden and feelings of stress. Investigation of job satisfaction and well-being of community health nurses thus seems relevant.

Job satisfaction and well-being of community health nurses

In studies of job satisfaction and well-being of (community health) nurses, great attention has been paid to work pressure and work stress. A recent study in the Netherlands clearly showed that 80% of the community health nurses experience increased work pressure mainly caused by the care needs assessment (V&VN enquête Wijkverpleegkundige (Survey Community health nurses) 2015). The examination of job satisfaction is also important in view of its relationship to job change (Geiger-Brown *et al.* 2004; Irvine & Evans 1995; Lu *et al.* 2005; Toh *et al.* 2012). In addition, job satisfaction serves as a buffer against negative influences on the work floor, such as stress (Irvine & Evans 1995). Given the numerous changes in the care sector and the current shortage of community health nurses in the Netherlands (Actiz 2014), attention to job satisfaction among these nurses is essential.

Role of patient-centred care

Various characteristics of patient-centred care, that is, the shift from uniform procedures to a focus on collaboration and customisation, are contained within the new working method and community health nurses' roles as 'linchpins' in the community. (For 'patient' also read 'client'.) Earlier research has resulted in the identification of eight dimensions of patient-centred care: patients' preferences, coordination of care, information and education, physical comfort, emotional support, family and friends, continuity and transition, and access to care (Gerteis et al. 1993, Rathert, Wyrwich, & Boren, 2013) (Box 1).

The eight dimensions of patient-centred care have been shown to improve patients' well-being and satisfaction with care (Mead & Bower 2000; Rathert *et al.* 2013). In addition, the implementation of all dimensions clearly leads to better results in patient care than does the implementation of one or a few dimensions (Rathert *et al.* 2013). Organizations in which a more patient-centred approach is followed when it comes to these eight dimensions may also place less pressure and burden on the community nurses. As such, more patient-centred care may also positively affect well-being and job satisfaction among nurses. If care, for example, is more responsive to patient's needs, their pain and physical comfort, as well as the needs of family and friends this may positively affect job satisfaction and well-being among nurses. In addition, if care is well coordinated and nurses feel supported by their team this may relieve feelings of stress, which is also expected to be beneficial to their well-being and job satisfaction. To date, however, whether patient-centred care is related to satisfaction with care and well-being among community health nurses remains unclear. In hospital settings, patient-centred care has been related to job satisfaction (Rathert & May 2007)

Box 1: The eight dimensions of patient-centred care

Dimension	*Description*
(1) Patients' preferences	Patients have indicated that they feel the need to be treated with dignity and respect and to be seen as whole persons, not merely as a disease or functional impairment. Patient-centred care is a concept requiring professionals' understanding of each patient as a whole by taking the time to really get to know the patient and his/her values and preferences, thereby improving the patient's quality of life. To enhance PCC, health care professionals should involve patients in decisions about their care and support them in setting and achieving their own treatment goals.
(2) Information and education	Patients expressed the fear that information would be withheld from them. The provision of complete information to patients about all aspects of their care is thus necessary. Patients should have access to their care records and be in charge of their care. Open communication between patients and health care professionals, which requires professionals to possess high-quality communication skills, is also necessary.
(3) Access to care	Access to care involves patients' ability to make appointments promptly and easily, the availability of health care professionals, support and navigation for illiterate patients, and consideration of cultural differences. Buildings must be accessible to all patients (including those with mobility issues), clear directions must be posted in several languages and a clear, user-friendly scheduling system must be in place.
(4) Emotional support	Patients sometimes experience anxiety about the impact of their illness on their lives and those of their loved ones. PCC requires professionals to pay attention to this type of anxiety.
(5) Family and friends	Depending on the seriousness of the condition, an illness can affect not only the patient, but also his/her family and friends. In such cases, PCC may be improved by the availability of accommodations for relatives nearby, the involvement of relatives in decisions about the patient's care, and attention to the role and needs of informal caregivers.
(6) Continuity transition	Continuity and secure transition between health care settings have been identified as important aspects of PCC. These concerns refer to transfers within the same organisation (e.g. from one unit to another), as well as transitions to rehabilitation centres, hospitals and home situations. Smooth transitions require the transfer of all relevant patient information; ensuring that patients are well informed about where they are going, what care they will receive, and who their contact person will be; and the provision of skilled advice about care and support at home after discharge.
(7) Physical comfort	Patients' physical comfort should be supported effectively. Care areas should be clean and comfortable, patients' privacy must be respected, pain should be managed effectively and health care professionals should take patients' preferences about support and their daily living needs into account.
(8) Coordination of care	Patient care should be well coordinated among professionals (teamwork in care delivery). Health care professionals should be well informed so that patients need to tell their stories only once; patients should have a primary contact person who knows everything about their condition and treatment.

PCC, patient-centred care.

and reduced intention to switch jobs (Avgar *et al.* 2011). Given that patient-centred care may require different processes and/or actions in different settings (Mead & Bower 2002; Rathert *et al.* 2013), research on its effects in the setting of community health nursing, is important.

Importance of co-creation of care

In addition to patient-centred care needed at organizational level (the eight dimensions of patient-centred care) patient-centred care also requires co-creation of care (patient-centred interactions between community health nurses and patients). Patient-centred care involves partnerships between health care recipients/users and providers (Mead & Bower 2000, 2002). Improvements in the eight dimensions of patient-centred care are expected to lead to improved collaboration/partnership and co-creation of care between providers and recipients. Co-creation of care resembles relational coordination, as described by Gittell (2011). It focuses on the human aspect of the process of coordination, rather than on the roles or tasks performed by clients and health care professionals. Important aspects of the co-creation of care are shared goals, shared knowledge and mutual respect, and frequent, timely, accurate and problem-solving communication (Gittell 2011). Co-creation of care will be achieved only when clients are well informed and participate actively in the care process. On the other side, health care providers should possess expertise, information about their clients and sufficient time to enable proactive (instead of reactive) action (Wagner *et al.* 2001). The literature on productive patient–professional interaction suggests that professionals should pay more attention to patients' preferences and communicate more with them about their wishes in the decision-making process (Brom *et al.* 2014). The eight dimensions of patient-centred care can likely serve as preconditions to improve co-creation of care, which in turn may affect job satisfaction and well-being.

Patient-centred care and co-creation of care with clients (and their networks) can be considered crucial elements of the new working method for community

health nurses in the Netherlands. The return of community health nurses as central figures in neighbourhoods may meet the needs of vulnerable citizens, as this change may improve the effectiveness and patient-centeredness of care delivery. Based on the literature, community health nurses can be expected to support the self-efficacy of independently living clients, improve clients' quality of life and, ultimately, prevent permanent admission of chronically ill elderly individuals to nursing homes (Stuck *et al.* 1995). If co-creation occurs and nurses are able to establish positive changes among their clients this is expected to affect positively their own well-being and satisfaction with work as well. Still, evidence is lacking on the effects of patient-centred care and co-creation of care on community health nurses' job satisfaction and well-being.

Study aim

The aim of this cross-sectional survey was to provide insight into the relationships between patient-centred care, co-creation of care, job satisfaction and well-being among nurses. Such insight may provide home care organisations with tools to guide and support better the community health nurses in performing their new tasks, and to develop patient-centred co-creation of care in the home care sector.

Method

Study design

A cross-sectional study design was used to investigate the relationships between patient-centred care, co-creation of care, job satisfaction and well-being among nurses.

Setting

Data were collected among 11 organisations throughout the Netherlands providing care to all frail people in the community (e.g. elderly, chronically ill, people with disabilities, youth with mental health problems, alcoholics). All 322 community health nurses (also called district nurses, specialist nurses, neighbourhood coordinators, case managers, directors, 'visible links' and nurses) employed by 11 participating organisations were invited to participate in this study, which took place in 2015. The selection criterion for respondents was the performance of personal care and nursing needs assessments, which has been reimbursed according to the Health Care Insurance Act since 1 January 2015.

Instruments

Job satisfaction

Respondents were asked to complete the validated 38-item measurement of job satisfaction questionnaire (Traynor & Wade 1993). This instrument consists of eight subscales. van Saane *et al.* (2003) concluded this instrument is the most reliable and valid measure of job satisfaction from their systematic review. The degree of job satisfaction is rated on a five-point Likert scale ranging from 'very satisfied' to 'very dissatisfied'. In this study, the summary 'general job satisfaction' score was used in analyses. Higher scores indicate more job satisfaction. The Cronbach's alpha value for the instrument in the current study was 0.84, reflecting a high degree of reliability. Cronbach's alpha's of the eight subscales range from 0.63 to 0.81 indicating adequate to good reliability.

Well-being

Well-being was measured with the validated 15-item version of the social production function instrument for the level of well-being (Nieboer *et al.* 2005). This questionnaire assesses social and physical well-being using five subscales (comfort, stimulation, affection, behavioural confirmation and status) and has been used extensively in previous studies to investigate well-being (e.g. Cramm & Nieboer 2015a, 2015b, 2015c, 2015d). Responses are structured by a four-point Likert scale ('never', 'sometimes', 'often' and 'always'). The total score is the average of all item scores, with higher scores indicating more well-being. The Cronbach's alpha value of this instrument in the current study was 0.83, reflecting a high degree of reliability.

Co-creation of care

Co-creation of care was measured with the validated relational coordination instrument, which meets the following psychometric validation standards: internal consistency, interrater agreement and reliability, structural validity and content validity (Gittell 2002; Gittell *et al.* 2010). This instrument consists of seven questions addressing the following domains of communication and coordination: shared goals, shared knowledge, mutual respect, frequency of communication, timely communication, accurate communication and problem-solving communication. Responses ('never', 'almost never', 'occasionally', 'almost always' and 'always') provide insight into respondents' experiences with the co-creation of care with clients. Higher scores indicate better co-operation (co-creation). Cronbach's alpha of this instrument in the current study was 0.67, indicating adequate reliability.

Patient-centred care

The perceived degree of patient-centred care was measured using an adapted version of the validated patient-centred care questionnaire, which was developed based on research conducted among professionals and patients (Berghout *et al.* 2015; Cramm *et al.* 2015). It addresses the following eight dimensions of patient-centred care, suggested by the Picker Institute (2015): 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, and access to care. The original questionnaire consists of 35 items, with responses structured by a five-point Likert scale ranging from 'never' to 'always'. Higher scores indicate a greater patient-centred care. Because the literature shows that the interpretation of the eight dimensions of patient-centred care is different in the home care sector, this questionnaire was slightly adapted for this setting. The Cronbach's alpha value of the instrument (based on the eight dimensions) in the current study was 0.85, indicating a high degree of reliability.

Background characteristics

Respondents were asked to provide information on the following background characteristics: age, gender, position, number of working hours per week, number of years working in the present position and number of years employed by the present organisation. For use in the correlation and regression analyses, the variables 'number of working hours per week' and 'number of years working in the present position' were dichotomised (≥29 hours = 1, <29 hours = 0 and ≥3 years = 1 and <3 years = 0, respectively).

Data collection

Questionnaires were sent by mail to all potential respondents (n = 322). After a few weeks, a reminder was sent to all non-responders. This strategy resulted in a total of 153 surveys being returned (48% response rate).

Ethics

According to the Central Committee on Research Involving Human Subject, the current study did not fall within the scope of the Medical Research Involving Human Subjects Act and therefore did not have to undergo previous review by an accredited Medical Research and Ethics Committee or the Central Committee on Research Involving Human Subject. All respondents were informed about the aims of the study and its anonymous and voluntary nature, before giving their consent to participate.

Analyses

The survey data were analysed with SPSS (IBM version 22; IBM Corp., Armonk, NY, USA). Descriptive statistics were applied to calculate means, minimums, maximums and standard deviations, or percentages, of all variables. Correlation analyses were performed to identify any correlation among patient-centred care, co-creation of care, background characteristics, job satisfaction and well-being of community health nurses. Regression analyses were performed to investigate multivariate relationships among these variables.

Results

Almost all (96%) respondents were female (Table 1). The mean age was 40 years.

Patient-centred care was correlated positively with well-being (r = 0.30; $P \leq 0.001$) and job satisfaction (r = 0.41; $P \leq 0.001$) (Table 2). Co-creation of care was also found to be positively related to well-being (r = 0.35; $P \leq 0.001$) and job satisfaction (r = 0.23; P = 0.004). In addition, a negative relationship was found between working as a community health nurse ≥3 years and job satisfaction (r = –0.23; $P \leq 0.01$).

Looking at the importance of the eight dimensions of patient-centred care for co-creation of care, job satisfaction and well-being (Table 3) results show that all eight dimensions are significantly related to co-creation of care. Except for the dimensions for patient preferences, all other seven dimensions are significantly related to the well-being of community health nurses. The dimensions for patients' preferences, coordination of care, emotional support, access

Table 1
Characteristics of the study population (n = 153)

Characteristic	*n*	*Mean ± standard deviation (range) or percentage*
Age (years)	151*	39.86 ± 11.77 (21–61)
Gender (female)	151*	96%
Working ≥29 hours/week	153	46%
Working as community health nurse ≥3 years	153	52%
Patient-centred care	153	4.02 ± 0.42 (1–5)
Co-creation of care	153	4.21 ± 0.36 (1–5)
Job satisfaction	153	16.97 ± 2.74 (5–25)
Well-being	153	2.82 ± 0.33 (1–4)

*Missing data.

Table 2
Relationships of variables to job satisfaction and well-being (n = 153)

	Job satisfaction		*Well-being*	
Variable	*r*	*P*	*r*	*P*
Age (years)	0.01	0.907	0.04	0.662
Working ≥29 hours/week	0.04	0.606	0.08	0.328
Working as community health nurse ≥3 years	−0.23	≤0.01	−0.13	0.101
Patient-centred care	0.41	≤0.001	0.30	≤0.001
Co-creation of care	0.23	0.004	0.35	≤0.001

Table 3
Relationships between the eight dimensions of patient-centred care, co-creation of care, job satisfaction and well-being (n = 153)

Eight dimensions of patient-centred care	*Co-creation of care*		*Job satisfaction*		*Well-being*	
	r	*P*	*r*	*P*	*r*	*P*
Patients' preferences	0.237	≤0.01	0.216	≤0.01	−0.009	0.910
Physical comfort	0.374	≤0.001	0.137	0.091	0.187	≤0.05
Co-ordination of care	0.431	≤0.001	0.410	≤0.001	0.302	≤0.001
Emotional support	0.401	≤0.001	0.328	≤0.001	0.314	≤0.001
Access to care	0.351	≤0.001	0.284	≤0.001	0.204	≤0.01
Continuity and transition	0.301	≤0.001	0.363	≤0.001	0.189	≤0.05
Information and education	0.368	≤0.001	0.295	≤0.001	0.261	≤0.001
Family and friends	0.433	≤0.001	0.151	0.063	0.209	≤0.01

Table 4
Multivariate relationships of variables with well-being and job satisfaction (n = 153)

	*Job satisfaction**		*Well-being*†	
Variable	*β (SE)*	*P*	*β (SE)*	*P*
Age (years)	0.03 (0.02)	0.756	0.01 (0.00)	0.954
Working ≥29 hours/week	0.10 (0.40)	0.194	0.14 (0.05)	0.079
Working as community health nurse ≥3 years	–0.30 (0.42)	≤0.001	−0.20 (0.05)	0.013
Patient-centred care	0.40 (0.55)	≤0.001	0.19 (0.07)	0.032
Co-creation of care	0.09 (0.66)	0.288	0.31 (0.08)	0.001

*Listwise deletion of missing cases led to a final inclusion of n = 150.
†Listwise deletion of missing cases led to a final inclusion of n = 150.

to care, continuity and transition and information and education were significantly related to job satisfaction. No significant relationship was found between the dimensions for family and friends, physical comfort and job satisfaction.

Multivariate regression analyses adjusted for demographic information showed that the co-creation of care and patient-centred care were important predictors of well-being (Table 4). Patient-centred care appeared to be an important predictor of job satisfaction. In addition, working as community health nurse for ≥3 years was correlated negatively with well-being and job satisfaction.

Discussion

Previous research has clearly demonstrated the positive relationships between patient-centred care and patients' satisfaction with care and well-being (Rathert *et al.* 2013). The present study also revealed that patient-centred care and co-creation of care were associated positively with well-being and job satisfaction among community health nurses in the Netherlands. Organizations that are more patient-centred when it comes to these eight dimensions of patient-centred care may relieve some of the pressure and burden that is being placed on the community nurses. Having the back-up of a well-coordinated team, and the right support systems in place may help nurses perform their job well and thereby improve their job satisfaction and well-being as opposed to working in an organization without such support. If care is more responsive to a patient's needs, their pain and physical comfort, as well as the needs of family and friends this additionally may positively affect job satisfaction and well-being among nurses again as opposed to situations where nurses experience of care is not responsive to the needs of patients and informal caregivers. As such, more patient-centred care may also positively affect well-being and job satisfaction among nurses. Patient-centred care also appeared to be correlated positively with co-creation of care. Thus, in research on job satisfaction and well-being of employees, consideration of organizational dimensions of patient-centred care and the notion of co-creation of care between providers and users is important.

Although the results of this study showed that the co-creation of care was related to job satisfaction and well-being, when patient-centred care entered the equation co-creation of care had added value only for well-being not job satisfaction. A possible explanation for the stronger association between co-creation of care and well-being is that co-creation focuses on the human (social) aspect of the process (Gittell 2011). Co-creation of care is a matter of communication and relational links, with the key elements of common goals and knowledge, and mutual respect. Within the construct of well-being (notably within social well-being), these terms/concepts can be recognised in the realisation of

affection ('Do you feel appreciated for who you are as a person?'), behavioural confirmation ('Is my behaviour useful to others and do I contribute to a shared goal?') and status ('Am I treated with respect?' 'Do I do better than others?' 'Do I have influence?') (Nieboer & Lindenberg 2002). As such, co-creation of care may affect social well-being through the quality of relationships at work. Apart from more social aspects, such as professional support, job satisfaction also involves more practical aspects, such as salary, training and work pressure, which seem to be influenced predominantly by coordination of care, emotional support, access to care, continuity and transition, information and education, and taking into account patient preferences. Moreover, previous research has shown that job satisfaction is influenced negatively by work pressure and changes in the work situation, and positively by good organisation of the work process (Geiger-Brown *et al.* 2004; Lu *et al.* 2005; Stuart *et al.* 2008; Toh *et al.* 2012; Verhaeghe *et al.* 2006). Earlier research indeed indicated that 'coordination of care' and 'continuity and transition' dimensions are related strongly to work pressure and the organisation of the work process, which may explain the stronger links between the eight dimensions of patient-centred care and job satisfaction (Geiger-Brown *et al.* 2004; Lu *et al.* 2005; Verhaeghe *et al.* 2006; Stuart *et al.* 2008; Toh *et al.* 2012).

Although we did not find a significant bivariate relationship, the length of time in the present position was correlated negatively with community health nurses' well-being and job satisfaction, after correction for age, gender and patient-centred care. This finding stands in contrast to previous observations from studies conducted outside of the Netherlands. Humpel and Caputi (2001), for example found evidence that experienced nurses are better able to cope with stress. This difference in results may be explained by the numerous changes that have occurred in the community health nursing sector in the Netherlands in past decades, including the introduction of regional needs assessment centres/CIZ, the merger with family care and the recent reassignment of the responsibility for needs assessment to community health nurses (De Putter *et al.* 2014). These developments may have generated a great deal of stress among community health nurses with longer careers in the sector. Verhaeghe *et al.* (2006) showed that changes in the work environment might negatively affect well-being.

Limitations

A major limitation of this study is its cross-sectional nature, which did not permit the examination of causal relationships. Furthermore, a dynamic relationship between patient-centred care and job satisfaction cannot be excluded; as one becomes more satisfied with one's job, working in a patient-centred manner becomes easier. A further important limitation is that clients were not surveyed. Community health nurse respondents indicated the extents to which they perceived that the provided care was patient centred and co-creation of care was achieved. Patients' experiences with regard to these aspects are not known. Finally, this study was conducted in Dutch regions; more research is needed in other countries to confirm our study findings.

Conclusions

Developments in the community health nursing sector have resulted in many changes in the activities of these nurses in the Netherlands. To safeguard or improve the job satisfaction and well-being of community health nurses, organisations should pay attention to the co-creation of care and patient-centeredness of care.

Ethical approval

Ethical approval was not required for this paper.

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