

ORIGINAL RESEARCH

Why do nurses intend to leave their organization? A large-scale analysis in long-term care

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Accepted for publication 10 August 2013

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TUMMERS L.G., GROENEVELD S.M. & LANKHAAR M. (2013) Why do nurses intend to leave their organization? A large-scale analysis in long-term care. *Journal of Advanced Nursing* 69(12), 2826–2838. doi: 10.1111/jan.12249

Abstract

Aim. To analyse the impact of six job characteristics on the intention of nurses to leave their organization, specifically focusing on long-term care settings: nursing homes, care homes and home care.

Background. When nurses leave their organization, this can negatively affect organizational performance. Organizations have to recruit new nurses and tacit knowledge is lost. Furthermore, organizational turnover could contribute to the nursing shortage, which will increasingly become a problem given the ageing population. This article adds to the literature, given: (a) its focus on long-term care; and (b) by explicating the differences between nursing and care homes (intramural) on one hand and home care (extramural) on the other.

Design. Survey.

Method. Survey of 9982 nurses in 156 Dutch organizations in 2010–2011, 6321 nurses in nursing and care homes and 3661 nurses working in home care, based on the *ActiZ Benchmark in Healthcare*.

Results. First, the most important reason for nurses' intention to leave is insufficient development and career opportunities. Secondly, a negative working atmosphere strongly influenced intention to leave. The impact of the working atmosphere is not often examined in the literature. However, this research shows that it is an important reason. Thirdly, intention to leave is partly context dependent. More specifically, when nurses in home care felt that their autonomy was reduced, this strongly influenced their intention to leave, although this was not the case for nurses working in nursing and care homes.

Conclusion. This article provides guidelines for organizations on how to retain their nurses.

Keywords: autonomy, care homes, home care, intention to leave the organization, leadership, long-term care, nurses, nursing homes, quality of work, turnover

Why is this research or review needed?

- Nurses' intention to leave the organization is expected to seriously impact organizational performance and may lead to a higher nursing shortage.
- The state of the art of studies on organizational turnover of nurses focuses on acute care settings. However, long-term care settings are of increasing importance in an ageing society.
- Job characteristics have proven to be important predictors of nurses' intention to leave the organization, but their impact has not been examined yet for nurses in long-term care.

What are the three key findings?

- The most important reason why nurses in long-term care are inclined to leave their organization is insufficient development and career opportunities.
- Although not often mentioned in the literature, the impact of a pleasant working atmosphere on intention to leave the organization proved to be strong.
- The effects of job characteristics on intention to leave are context dependent: for nurses in extramural care (homecare), the effect of autonomy is stronger than for nurses in intramural care (nursing and care homes).

How should the findings be used to influence policy/practice/research/education?

- We recommend healthcare managers, HR managers and researchers to explore development opportunities for the nurses in their organization.
- HR and line managers should ensure a good working atmosphere in their organization by paying attention to appreciation for each other's work, no bullying in the workplace and good relationships with colleagues.
- Especially home care organizations should think of interventions, which ensure the perceived autonomy of nurses.

Introduction

This article analyses the intention of nurses to leave their organization and the reasons why they do so. When nurses leave their organization, this is an important event. Nurses will possibly have to find another organization to work for, will need to adapt to their new situation and maybe move house. For organizations, it can involve substantial costs, such as fees for recruiting and hiring new nurses, the loss of tacit knowledge and continuity problems (Larrabee *et al.* 2003, Zimmerman *et al.* 2008). Furthermore, it has been shown that when nurses leave their organizations, this nega-

tively influences health outcomes for patients, for instance because it increases the number of inexperienced nurses and causes psychological distress for residents (Knapp & Missiakoulis 1983, Aiken *et al.* 2002, Castle & Engberg 2005). Furthermore, turnover at the organizational level is a major contributor of the nursing shortage (Borda & Norman 1997), which will increasingly become a problem given the increased demands of the healthcare system by an ageing population. In sum, it is of paramount importance that we understand the reasons nurses leave their organization.

This article focuses on the intention to leave of nurses in long-term care, consisting of intramural care (care delivered inside an organization, such as nursing and care homes) and extramural care (home care). We chose for this focus given that recently Buchan (2013:2) – in an editorial of the *Journal of Advanced Nursing* – noted that there seems to be a bias in the literature towards acute care (see also Hayes *et al.* 2012:894). A limited number of studies focus specifically on the intention of nurses to their organization in long-term care (examples are Castle *et al.* 2007, Jinnett & Alexander 1999, Karantzas *et al.* 2012, Karsh *et al.* 2005). However, these studies do not explicitly distinguish between intramural care and extramural long-term care. Distinguishing between care settings could be important, however, as these could influence the reasons why nurses leave their organization. For instance, a reduction in autonomy could be more important in extramural (home care) settings, given that nurses may choose this setting expecting that they can work relatively independently (Nevidjon & Erickson 2001).

This article uses a large sample of 9982 nurses from 156 Dutch organizations: 6321 working in intramural care and 3661 working in extramural care. The 156 organizations form approximately 33% of all organizations providing long-term care (homecare, nursing and care homes) in the Netherlands (RIVM 2012). Using a large-scale sample and focusing on the differences between intramural and extramural long-term care, we aim to contribute to the insights into which factors affect nurses' intention to leave their organizations. The sample is based on the nationwide *Benchmark in Healthcare* ('Benchmark in de Zorg'), set up by ActiZ, the main Dutch trade organization of among else homecare, nursing and care homes (see also Method section). This brings us to the following research question:

What are the main reasons why nurses in intramural (nursing and care homes) and extramural (home care) long-term care leave their organizations?

The next section identifies possible reasons why nurses in long-term care intend to leave their organization, based on

a literature review. Here, we will also analyse potential differences between intramural and extramural long-term care settings. Next, we will describe the method and approach for conducting the survey, as well as its results. We will conclude by discussing the contribution of this article to the understanding of nursing turnover at the organizational level and highlight recommendations for employers and managers in nursing homes, care homes and home care.

Background

Scholars have found that intention to leave one's organization is one of the best proxies for actual turnover (Bluedorn 1982, Alexander *et al.* 1998). Furthermore, Krausz *et al.* (2006:285) showed that mild forms of turnover of nurses – such as leaving the ward and leaving the organization – preceded more severe manifestations, such as the intention to withdraw from the nursing profession altogether (for studies on leaving the nursing profession, see for instance Shacklock & Brunetto 2011, Shields & Ward 2001).

For identifying the reasons why nurses leave their organization, we rely on several meta-analyses on intention to turnover and actual turnover. These studies are not focused exclusively on intention to leave the organization. However, these are valuable as they are highly related to it. Based on a systematic search of the literature on nursing turnover, Coomber and Barriball (2007) conclude that four job characteristics are most often noted in the literature: (1) leadership; (2) development opportunities (educational attainment); (3) stress; and (4) pay. Although the meta-analysis of Coomber and Barriball (2007) is restricted to hospital-based nurses, a meta-analysis by Hayes *et al.* (2006) includes both acute care and long-term care settings. They find comparable results, namely management style (compare nr. 1, leadership), development opportunities (nr. 2) and work pressure (compare nr. 3, stress). Next to this, they find a strong influence of autonomy/empowerment and work schedules on intention to leave. Hayes *et al.* recently published an update of their meta-analysis (2012). They continue to highlight the same factors, such as management style, workload and empowerment. Furthermore, they also stress the impact of generational factors.

On the basis of the meta-analyses, we will examine to what extent intention to leave is affected by work pressure (Hayes *et al.* 2006, 2012, Coomber & Barriball 2007), leadership issues (Hayes *et al.* 2006, 2012, Coomber & Barriball 2007), development and career opportunities (Hayes *et al.* 2006, 2012, Coomber & Barriball 2007) and

autonomy (Hayes *et al.* 2006, 2012). Pay is excluded from the analyses, because the meta-analyses show inconclusive findings (Coomber & Barriball 2007). Furthermore, although pay could affect the intention to leave the profession, it is expected to influence nurses' intention to leave the organization less strongly, as pay levels of nurses are standardized in the Dutch healthcare sector (in collective labour agreements) and do not differ between organizations (all most healthcare organizations are public).

Next to these four job characteristics, which are often mentioned in several meta-analyses, we will analyse two other job characteristics: working atmosphere and organizational vision. These factors turned out to be important in explaining intention to leave of nurses and other healthcare workers in recent studies. Working atmosphere is found to be an important influencing factor in the studies by Gardulf *et al.* (2005) and Tzeng (2002). Next to this, Hwang and Chang (2006) and Kukkurainen *et al.* (2011) showed that identification with organizational vision affects turnover intentions of healthcare workers.

Organizations can try to improve these six job characteristics, thereby improving quality of work and possibly diminishing intention to leave (see also Coomber & Barriball 2007:244). Furthermore, important individual characteristics – such as age and gender – are taken into account. However, we should note that turnover, in general, is not only due to job or individual characteristics. Other factors, such as the chances of finding a new job on the external labour market, which is among else dependent on the economic situation, are also important (Wheeler *et al.* 2007, Brewer *et al.* 2009).

We will develop hypotheses on the possible impact of the six job characteristics on intention to leave the organization of nurses in long-term care. First, considering work pressure and following the findings in the meta-analyses, we expect that when nurses experience more work pressure, this increases their intention to leave their organization. Karsh *et al.* (2005) found evidence for this hypothesis for nurses working in long-term care. They analysed 76 nursing homes in the United States. Using logistic regression, they showed that nurses who intended to stay in their job ('stayers') experienced significantly less work pressure than people who were considering leaving their job ('leavers'). They concluded that work pressure indeed affected nursing turnover in the organization. However, the relatively low Cronbach's alpha of the measurement of work pressure (0.51) and the use of a single item to measure intention to leave indicates that we should be somewhat cautious in interpreting these results. Secondly, much research has shown that the perceived quality of leadership

has a major impact on the intention to leave the organization (Yin & Yang 2002, Larrabee *et al.* 2003).

Next to work pressure and leadership, the meta-analyses indicate that experienced autonomy – or empowerment – of nurses could seriously decrease turnover intentions. Similarly, studying registered nurses in hospitals, Larrabee *et al.* (2003: 272) note that ‘Nurses are more likely to stay in their work setting when they view themselves to have control of their practice [and] adequate autonomy’. We expect that for nurses in long-term care, more autonomy also decreases their intention to leave the organization.

In the literature on the quality of work, development and career opportunities are often mentioned as factors affecting work outcomes such as job satisfaction and intention to leave. When an organization provides nurses with opportunities to develop themselves, this will decrease their intention to leave their organization (Coomber & Barriball 2007). In a study of a university hospital, Gardulf *et al.* (2005) investigated the reasons why nurses seek for another job. Respondents (19%) who thought about quitting provided limited career opportunities as the main reason. On the basis of this, we expect that development and career opportunities are also negatively related to intention to leave their organization for nurses in long-term care settings.

The fifth possible factor affecting intention to leave is the working atmosphere. A ‘good’ working atmosphere is characterized by a pleasant interaction with colleagues working in the same unit, a good team spirit and collegial behaviour (Tzeng 2002). On the basis of the study of Tzeng (2002), we expect that when nurses in long-term care experience an unpleasant working atmosphere, this will increase their intention to leave their organization.

Lastly, we analyse the impact of an inspiring organizational vision on the intention to leave. Research indicates that a clear vision and an inspiring perspective on the future of the organization attracts employees to the organization (Larwood *et al.* 1995, Baum *et al.* 1998, Liu 2006, Kantabutra & Avery 2007). Oswald *et al.* (2006: 477), based on a study of 226 managers, concluded that ‘With regard to managers’ psychological attachment to the organization, the results suggest that there are advantages afforded by involving them in the strategy-making process and that these advantages are magnified to the extent that the involvement occurs in the context of a salient strategic vision’. Although it is acknowledged that an inspiring organizational vision could be of importance, to our knowledge, the specific impact of organizational vision on intention to leave of nurses has not yet been analysed. However, Hwang and Chang (2006: 134) did show that identification with hospi-

tal vision decreases turnover intentions of physicians. Furthermore, in a study of Finnish healthcare workers, Kukkurainen *et al.* (2011) showed that an inspiring vision was related to motivation and satisfaction. On the basis of this, we expect that when nurses feel that the vision of their organization is inspiring and motivating, this will decrease their intention to leave.

Next to the direct effect of the six job characteristics on intention of nurses to leave their organization, we also expect that the impact of these job characteristics is dependent on the care setting (intramural vs. extramural). In particular, we expect the impact of autonomy and working atmosphere to be dependent on the care setting.

We expect that the impact of autonomy is especially important in extramural care. In extramural settings, care takes place at the patients’ homes. Nurses often work alone when providing services. In fact, autonomy is often a main factor in their job choice decision (Neal 2000, Veldhuizen 2012). In intramural settings, nurses work more intensively in teams with other nurses, carers and physicians. In general, the autonomy – for instance with respect to when and how to work – of nurses in extramural settings is higher (Neal 2000, Veldhuizen 2012). This is related to the fact that nurses in extramural settings work less intensively with team members and have to make more decisions on their own. On the basis of this work context, we hypothesize that nurses in extramural care also expect to be more autonomous. When their autonomy is being reduced, they will be more likely to leave their organization, as their expectations are not fulfilled (Nevidjon & Erickson 2001). Related to this, Ellenbecker (2004: 306) notes that there is ‘strong evidence that the independence and professional autonomy in the role of home healthcare nurses is the major aspect of job satisfaction’. Contrary to this, nurses in intramural settings expect to be somewhat less autonomous. Hence, when they perceive less autonomy, we expect them to accept this more easily.

Related to this, we expect that the relationship of working atmosphere with intention to leave is more important for nurses working in intramural care than for nurses working in extramural care. In extramural care (home care), nurses work alone most of the time (Barling *et al.* 2001). Hence, when the working atmosphere in their team is not very pleasant, this will possibly only have a limited impact on them. In an intramural setting, nurses are surrounded by their colleagues most of the time, making the working atmosphere, on the contrary, very important. On the basis of this, we expect that for nurses in intramural care, there is a stronger relationship between working atmosphere and intention to leave than for nurses in extramural care. On

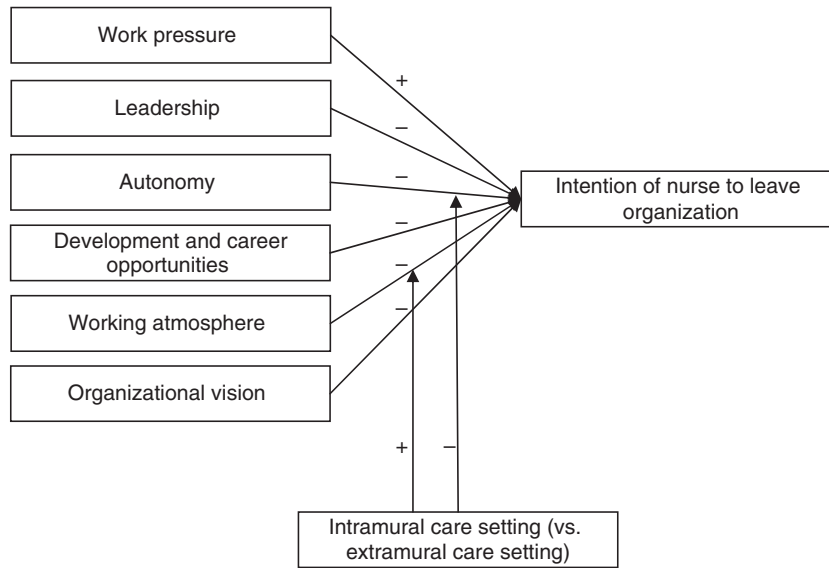


Figure 1 The hypothesized influence of six job characteristics on the intention of nurses working in long-term care to leave their organization, including the moderating influence of healthcare setting (intramural care vs. extramural care).

the basis of the above, we have formulated the following eight hypotheses:

Direct effects

H1: Work pressure positively influences intention to leave the organization.

H2: Quality of leadership negatively influences intention to leave the organization.

H3: Autonomy negatively influences intention to leave the organization.

H4: The quality of development and career opportunities negatively influences intention to leave the organization.

H5: The quality of the working atmosphere negatively influences intention to leave the organization.

H6: A clear organization vision negatively influences intention to leave the organization.

Moderating effects

H7: The effect of autonomy on intention to leave the organization is weaker for nurses working in intramural care than for nurses working in extramural care.

H8: The effect of the quality of the working atmosphere on intention to leave the organization is stronger for nurses working in intramural care than for nurses working in extramural care.

Based on these eight hypotheses, a theoretical framework can be constructed. This is shown in Figure 1. The next Section discusses the method to test the hypotheses.

The study

Aim

This study aimed firstly to analyse the impact of six job characteristics on the intention to leave the organization of nurses. Secondly, it aimed to test whether the impact of these job characteristics differs between intramural and extramural long-term care.

Design

Before discussing the design, it is important to shortly discuss the structure of the Dutch healthcare sector. Dutch health care is often divided into somatic and mental health care (psychologists, psychiatrists). Somatic care is divided into short-term ('cure' sector, such as hospitals) and long-term ('care' sector, such as nursing homes). This research focuses on long-term care. This is mainly financed using public funds, based on the 'General Law on Exceptional Healthcare Costs' (AWBZ). This Law aims to provide general insurance covering the Dutch population against special healthcare needs.

To test the hypotheses, we used data from the *ActiZ Benchmark in Healthcare* (in Dutch, *ActiZ Benchmark in de Zorg*). This benchmark has been developed by ActiZ in cooperation with PwC (a major accountancy, tax and consultancy firm), for the period 2010–2015. The benchmark measures and compares the performance of among else intramural and extramural long-term care (but also maternity care and youth care). It collects data on three main dimensions: clients (such as client satisfaction), employees (such as perceived work pressure), and business performance (such as total turnover) (ActiZ 2011). Given our aim, we used the employee data. The employee data derive from an email survey (with various reminders) among all employees of the participating organizations.

Data collection

We analysed the surveys held in autumn 2010, spring 2011 and autumn 2011, which comprise of comparable questionnaires. In total, 162 organizations participated in this period and they did so only once. In total, 61,061 employees filled in the survey questionnaire, a response rate of 42% (Tummers *et al.* 2012).

From this sample, we selected the employees who indicated that their profession was nursing. Furthermore, we selected those nurses who worked either in intramural care or in extramural care. Hence, we did not for instance select nurses working in maternity care or youth care. This resulted in a final sample of 9982 nurses in 156 organizations: 6321 working in intramural care and 3661 working in extramural care.

Of the valid responding nurses, 94% were women. This is consistent with Dutch averages for nurses in nursing care and care homes, which is predominantly a female profession (93% women) (Maximum 2009). The nurses' average age was 43 years, which is comparable to the Dutch average (41 years) (Maximum 2009). Hence, the respondents' mean age and gender-distribution are similar to those of population.

Validity and reliability

The survey and corresponding scales have been developed by ActiZ, PwC and Tilburg University. To test the validity of the developed scales, we firstly read and discussed the wording of the items. Secondly, exploratory factor analyses were performed on the original survey items using the sample of nurses in long-term care on which this study is based. Based here on, we made some small

modifications. For the variables 'intention to leave', 'leadership' and 'career/development opportunities', we deleted 1, respectively, 1 and 2 items as these were less suitable to measure the latent variables and negatively influenced the reliabilities. All other items for all other scales were preserved.

Intention to leave

The dependent variable intention to leave (intention to leave the organization) is measured using three items, using a five-point Likert scale (fully disagree–fully agree). Sample items are as follows: 'If I could, I would resign from this organization today' and 'At the moment, I am actively searching for a job outside the healthcare sector', Cronbach's alpha = 0.85.

Work pressure

Work pressure (workload, physical and mental strain) is measured using six items, with response categories never, sometimes, often and always. A sample item is 'There are enough staff members for the work to be done', Cronbach's alpha = 0.82.

Leadership

Leadership (an active and motivating leadership style) is measured using four items, using the response categories never, sometimes, often and always. A sample item is 'My direct supervisor inspires and motivates me', Cronbach's alpha = 0.91.

Autonomy

The indicator autonomy (empowerment and independency) taps the degree of freedom nurses have in their work. One of the in total four items is 'I can decide myself how I realize my tasks'. Response categories are never, sometimes, often or always, Cronbach's alpha = 0.77.

Development and career opportunities

Development and career opportunities (opportunities that the organization offers to develop skills and to foster career progress) are measured using three items with a five-point Likert scale. A sample item is 'My organization pays sufficient attention to my career', Cronbach's alpha = 0.76.

Work atmosphere

Work atmosphere (pleasure at work, a good team spirit and collegiality) is measured using three items on a five-point Likert scale. A sample item is 'The working atmosphere in my work unit/team is good', Cronbach's alpha = 0.88.

Table 1 Descriptive statistics.

	Min.	Max.	Avg. intramural	Avg. extramural	Diff. between care settings	Avg. total	SD total
Dependent variable							
Intention to leave the organization	1	10	2.75	2.66	2.24	2.71	1.95
Job characteristics							
Work pressure	1	10	5.21	4.27	-30.27*	4.87	1.64
Leadership	1	10	6.68	6.65	0.05	6.67	2.39
Autonomy	1	10	6.80	7.13	-9.65*	6.92	1.64
Development and career opportunities	1	10	7.08	6.94	3.59*	7.03	1.67
Working atmosphere	1	10	7.67	7.81	-3.65*	7.72	1.91
Organizational vision	1	10	6.40	6.43	-0.9	6.41	1.69
Control variables							
Gender (0 = female, 1 = male)	0	1	0.07	0.04	20.72*	0.06	NA
Age (in groups)	1	5	3.16	3.41	115.63*	3.25	1.20
Years at employer	1	4	3.21	3.12	48.38*	3.18	0.93
Supervisory position (0 = no, 1 = yes)	0	1	0.14	0.08	101.93*	0.12	NA
Size of contract (in groups)	1	4	3.18	2.94	324.49*	3.09	0.79
Care setting (0 = Intramural, 1 = Extramural)	0	1	-	-	-	0.37	NA

For the dependent variable and the job characteristics, a 1–10 scale was used to ease interpretation. N total = 9982, N intramural = 6321, N extramural = 3661. * $P < 0.01$. Difference tests: T -test for continuous variables (all work quality indicators) and Chi-Square test for nominal/ordinal variables (all control variables).

Organizational vision

We measure the organizational vision (the acknowledgment of ambitious goals as part of the mission of the organization) using four items with a five-point Likert scale. A sample item is 'It is clear to me what the organization wants in the future', Cronbach's alpha = 0.79.

Control variables

We include several control variables, such as gender, age (five categories: <25, 26–35, 36–45, 46–55, >56 years) and managing position (yes/no). In addition, size of contract (four categories: 0-hours/call basis, 1–15, 15–28, 29 or more hours) is included. Next to this, of course, the work setting is intramural care (nursing homes, care homes) or extramural care (home care).

Ethical considerations

Research Ethics Committee approval for employee surveys, which do not contain possibly personal or sensitive subjects, is not required in the Netherlands. All responses have been collected anonymously and anonymity was stressed for the respondents.

Data analysis

The data were analysed using SPSS 20.

Results

Descriptive statistics

The means and standard deviations are shown in Table 1. To increase the ease of interpretation, all four- and five-point scales were recoded into 1–10-point scales. On average, the intention to leave the organization of nurses is quite low. Furthermore, nurses in intramural and extramural care do not differ in their average degree of intention to leave.

Nurses working in intramural care (nursing and home care) experience significantly more work pressure than nurses working in extramural care (homecare). Next to this, 'intramural nurses' experience less autonomy than 'extramural nurses', which is in line with related research (Neal 2000, Veldhuizen 2012).

Correlations of the variables are presented in Table 2. All correlations between the six job characteristics and intention to leave are statistically significant and in the anticipated direction.

Results of regression analyses

Table 3 shows that the job characteristics – together with the control variables – explain 30% of the variation in intention to leave the organization. This is substantial, given that there are many different possible reasons outside

Table 2 Correlations between control variables (nr. 1–6), job characteristics (7–12) and intention to leave the organization (13).

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Gender	1												
2. Age	0.007 (0.459)	1											
3. Years at employer	-0.047* (<0.001)	0.421* (<0.001)	1										
4. Supervisory position	0.083* (<0.001)	0.097* (<0.001)	0.048* (<0.001)	1									
5. Size of contract	0.151* (<0.001)	-0.013 (0.200)	0.076* (<0.001)	0.154* (<0.001)	1								
6. Care setting	-0.046* (<0.001)	0.103* (<0.001)	-0.044* (<0.001)	-0.101* (<0.001)	-0.143* (<0.001)	1							
7. Work pressure	-0.028* (<0.001)	-0.059* (<0.001)	0.083* (<0.001)	-0.055* (<0.001)	0.135* (<0.001)	-0.275* (<0.001)	1						
8. Leadership	-0.003 (0.753)	-0.062* (<0.001)	-0.083* (<0.001)	0.085* (<0.001)	0.035* (0.001)	0.005 (0.603)	-0.392* (<0.001)	1					
9. Autonomy	-0.004 (0.717)	-0.043* (<0.001)	-0.051* (<0.001)	0.125* (<0.001)	0.049* (<0.001)	-0.096* (<0.001)	-0.462* (<0.001)	0.462* (<0.001)	1				
10. Development and career opportunities	-0.036* (<0.001)	-0.085* (<0.001)	-0.096* (<0.001)	0.052* (<0.001)	0.018 (0.095)	-0.039* (<0.001)	-0.433* (<0.001)	0.576* (<0.001)	0.485* (<0.001)	1			
11. Working atmosphere	-0.012 (0.229)	-0.010 (0.311)	-0.025 (0.013)	0.044* (<0.001)	-0.018 (0.075)	0.036* (<0.001)	-0.334* (<0.001)	0.363* (<0.001)	0.374* (<0.001)	0.398* (<0.001)	1		
12. Organizational vision	-0.001 (0.898)	0.013 (0.191)	-0.078* (<0.001)	0.092* (<0.001)	0.031* (0.002)	0.009 (0.353)	-0.369* (<0.001)	0.418* (<0.001)	0.336* (<0.001)	0.499* (<0.001)	0.279* (<0.001)	1	
13. Intention to leave the organization	0.051* (<0.001)	0.038* (<0.001)	0.066* (<0.001)	-0.028* (0.006)	0.013 (0.193)	-0.023 (0.025)	0.372* (<0.001)	-0.373* (<0.001)	-0.348* (<0.001)	-0.463* (<0.001)	-0.384* (<0.001)	-0.344* (<0.001)	1

Actual *P* values in between brackets. **P* < 0.01.

Table 3 Impact of job characteristics and control variables on intention to leave the organization.

	Intramural	Extramural	Total	Total including interactions
Job characteristics				
Work pressure	0.16*	0.11*	0.14*	0.14*
Leadership	-0.08*	-0.04*	-0.06*	-0.06*
Autonomy	-0.02	-0.10*	-0.05*	-0.05*
Development and career opportunities	-0.22*	-0.23*	-0.22*	-0.22*
Working atmosphere	-0.18*	-0.19*	-0.18*	-0.18*
Organizational vision	-0.09*	-0.09*	-0.09*	-0.09*
Control variables				
Gender (0 = female, 1 = male)	0.05*	0.04	0.05*	0.05*
Age (in groups)	0.01	0.02	0.01	0.01
Years at employer	0.01	0.02	0.02	0.01
Supervisory position (0 = no, 1 = yes)	0.03	-0.00	0.02	0.02
Size of contract (in groups)	0.01	-0.03	0.00	0.00
Care setting (0 = Intramural, 1 = Extramural)	-	-	0.02	0.03
Interaction of job characteristics and work setting				
Work pressure * setting	-	-	-	0.02
Leadership * setting	-	-	-	0.02
Autonomy * setting	-	-	-	-0.04*
Development and career opportunities * setting	-	-	-	0.00
Working atmosphere * setting	-	-	-	-0.00
Organizational vision * setting	-	-	-	-0.01
Adjusted R ²	0.30*	0.30*	0.30*	0.30*

All independent variables are entered into the regression simultaneously, to assess the unique impact of each variable. Standardized regression coefficients are presented. * $P < 0.01$. The following criteria are met (based on Field 2005): Criterion of independent residuals (Durbin-Watson all: $1.9 < \text{criterion} < 3$). Criterion of no multicollinearity (no VIF values above 10 and average close to 1). No exclusion of influential outlying cases was required (Cook's distance all < 0.02 (criterion < 1). Criteria of homoscedasticity and normality met.

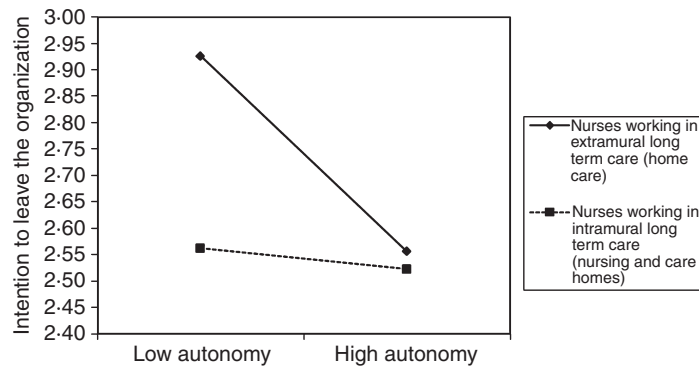


Figure 2 Autonomy more important for explaining intention to leave for nurses working in extramural care (based on a template of dr. Jeremy Dawson, University of Sheffield, www.jeremydawson.co.uk/slopes.htm).

the organization why nurses are inclined to leave, such as household situation and turnover opportunities.

Work pressure (H1), leadership (H2), development and career opportunities (H4), working atmosphere (H5) and organizational vision (H6) are all antecedents for intention to leave of nurses working in long-term care. Hence, we do not reject these hypotheses. Development and career opportunities are especially important. Furthermore, the working atmosphere and high work pressure were of considerable importance.

Considering Hypothesis 3, autonomy proved not to be significantly related to intention to leave for nurses working in intramural care. This was not the case for nurses working in home care. For them, more autonomy decreases the intention to leave the organization. Hence, Hypothesis 3 is only supported for extramural nurses. Related to this, Hypothesis 7 noted that the effect of autonomy on intention to leave is weaker for nurses working in intramural care than for nurses working in extramural care. To analyse this systematically, we examined the interaction effect of

autonomy with care setting on intention to leave. Such an interaction effect indeed appears in our empirical analyses. Figure 2 shows the interaction effect. To conclude, the degree of autonomy proves especially important in explaining the intention to leave for extramural nurses, but is far less important for intramural nurses.

Finally, Hypotheses 8 argued that the effect of a positive working atmosphere on intention to leave is stronger for nurses working in intramural care than for nurses working in extramural care. However, we have not found a significant interaction effect here. Hence, we reject this hypothesis. The final model is shown in Figure 3.

Discussion

Contribution

Scholars have argued that the nursing turnover literature has a bias towards studying acute care. This study aimed therefore to analyse the impact of several job characteristics on the intention to leave the organization for nurses working in long-term care. Furthermore, it aimed to test whether the impact of these job characteristics differs between intramural (nursing and care homes) and extramural (home care) long-term care.

A theoretical model was constructed linking six job characteristics to intention to leave. This model was tested in a survey of 9982 nurses from 156 Dutch organizations. The regression model explained 30% of the variance in intention to leave. The high internal consistency values and the satis-

faction of regression criteria strengthen the reliability and the validity of the statistical conclusions drawn. As such, we can conclude that the model worked satisfactorily.

On the basis of the analyses, we can present the most important job characteristics for the explanation of intention to leave the organization of nurses working in intramural and extramural care: insufficient development and career opportunities is the most important factor, followed by a negative working atmosphere. Moreover, intention to leave turned out to be partly context dependent: when nurses in home care felt that their autonomy was being reduced, this strongly influenced their intention to leave, whereas this was not the case for nurses working in nursing and care homes. Although the direct effect of leadership on intention to leave is relatively modest, we foresee an important role for leadership in improving these job characteristics and thereby reducing nurses' intention to leave.

A first important conclusion for scholars and managers in long-term health care is that development and career opportunities play an important role in nursing turnover, in line with the overview articles on nursing turnover (Hayes *et al.* 2006, 2012, Coomber & Barriball 2007). Managers could identify what nurses find important in their training and development. This does not need to be limited to only promotions to higher positions (which is very difficult for nurses given the usual flat organizational hierarchy in healthcare organizations). Horizontal growth opportunities could also be beneficial. Reference can also be given to training to certain specializations, such as nurse practitioner or a special-

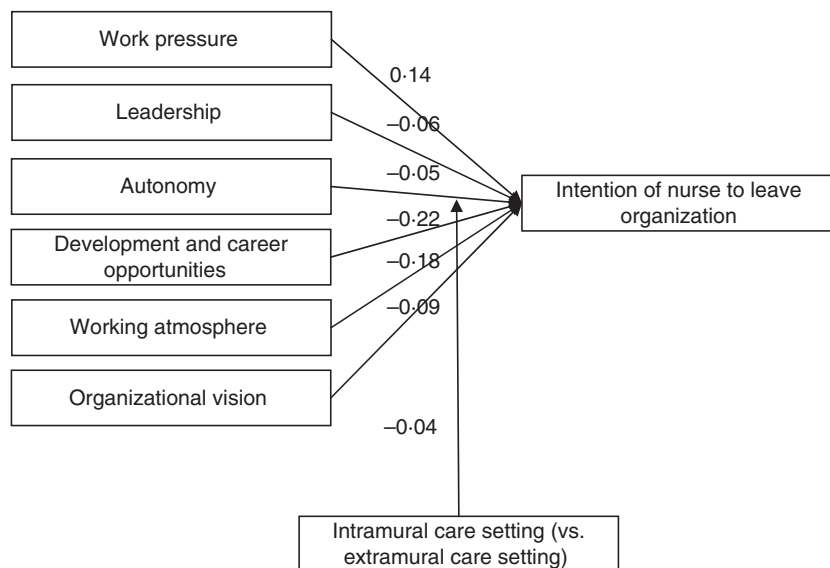


Figure 3 Results: The influence of job characteristics on the intention of nurses working in long-term care to leave their organization, including the moderating influence of healthcare setting (autonomy more important for extramural care).

ization in certain client segments. We recommend managers to think about diverse development opportunities for nurses in their organization and engage with nurses while developing these plans.

A second conclusion focuses on the importance of a pleasant working atmosphere. In the literature, the impact of the working atmosphere on intention to leave is not often examined. However, our research shows that it is indeed an important factor for the intention to leave of nurses. Therefore, HR and line managers should ensure that their organization ensures a good working atmosphere. Appreciation for each other's work, no personal harassment or bullying in the workplace, good relationships with colleagues are important for the intention of nurses to stay in their job. Team activities could furthermore foster the team spirit. Next to this, the introduction of a company counsellor could be helpful in resolving unpleasant work experiences.

Thirdly, we conclude that intention to leave is partly context dependent. More specifically, we found that especially for nurses working in home care, autonomy is crucial for their intention to leave their organization. In general, nurses in home care were more autonomous than nurses in nursing and care homes. However, when their autonomy is being reduced, this will strongly influence their intention to leave, whereas this will not be the case for nurses working in nursing and care homes. Autonomy of nurses could be enhanced by involving them in preparing the work schedule. Next to this, they can be empowered by letting them choose their own working hours and work routes (for instance, which client to visit first).

Limitations

Notwithstanding the robust results from the regression analysis, this study has limitations. First, the scales used were not validated in earlier studies. Future studies should further test the model of intention to leave in long-term care using validated scales.

Second, the analysis makes assumptions about the direction of causality, moving from job characteristics to intention to leave the organization. A longitudinal design could be helpful to establish causality, which was impossible given the cross-sectional design of this survey. Furthermore, objective data on actual turnover would improve the validity of studies.

Third, the survey results provide insight into the importance of several job characteristics for nurses' intention to leave their organizations, but not into the meaning of these factors in specific work contexts. Therefore, our recommen-

dations to practitioners remain somewhat restricted to pointing at possible important factors, but these need to be further substantiated in small sample size qualitative research.

Conclusion

When nurses leave their organization, this can negatively affect organizational performance. Organizations have to recruit new nurses and tacit knowledge is lost. Furthermore, organizational turnover could contribute to the nursing shortage. We highlight reasons why nurses are inclined to leave their organization. The results show first that a negative evaluation of development and career opportunities appears to be the main reason why nurses intend to leave their organization. Second, a negative and unpleasant working atmosphere appears to be influential in explaining intention to leave. Third, we found that – for nurses in home care organizations – low perceived autonomy is an important reason to leave their organization. This was not the case for nurses working in nursing care or care homes. Line managers and HR managers in long-term care organizations need to take these conclusions into account, to retain the most qualified and suitable nurses for their organizations.

Acknowledgements

The authors thank Frans van Rooijen and Susanne Bruijns – both employed at branch organization ActiZ – for their constructive comments on earlier versions of this article.

Funding

The data were collected as part of the *ActiZ Benchmark in Healthcare (ActiZ Benchmark in de Zorg)*, which is being executed by ActiZ and PwC, and is funded by ActiZ. ActiZ is the main Dutch sector organization for providers of care in nursing homes, home care, maternity and child care. The authors did not receive any funding for writing this article.

Conflict of interest

No conflicts of interest.

Author contributions

All authors have agreed on the final version and meet at least one of the following criteria [recommended by the IC-MJE (http://www.icmje.org/ethical_1author.html)]:

- substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data;
- drafting the article or revising it critically for important intellectual content.

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