The Impact of Organizational Innovations in Nursing Homes on Staff Perceptions

Citation for published version (APA):

Document status and date:
Published: 01/01/2017

DOI:
10.1111/jnu.12271

Document Version:
Publisher's PDF, also known as Version of record

Document license:
Taverne

Please check the document version of this publication:
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Download date: 16 Sep. 2023
NEW MODELS OF CARE IN RESIDENTIAL LONG-TERM CARE

The Impact of Organizational Innovations in Nursing Homes on Staff Perceptions: A Secondary Data Analysis

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Key words
Care environment, job demands, job satisfaction, long term care, staff perception

Abstract

Purpose: The shift in nursing home care for patients with dementia from traditional task-driven environments towards patient-centered small-scale environments has implications for nursing practice. Information about its implications for nursing staff is lacking, and only a few studies have addressed staff perceptions. We sought to explore staff perceptions of required skills and to determine differences in job satisfaction, motivation, and job characteristics of staff working in both care settings.

Design: A secondary data analysis was conducted. The data source used was drawn from a larger study testing the effects of small-scale living (Verbeek et al., 2009).

Methods: Nursing staff working on a permanent basis and who were directly involved in care were eligible to participate in the study. Data on job satisfaction, motivation, and job characteristics of nursing staff working in typical small-scale and traditional care environments were derived using a questionnaire. Data were analyzed using descriptive statistics. Differences between nursing staff job satisfaction, motivation, and job characteristics were tested using multilinear regression analysis.

Findings: In total, 138 staff members were included (81 staff members working in traditional nursing home wards and 57 staff members working in small-scale nursing home wards). The findings showed that in typical small-scale nursing homes, job satisfaction and job motivation were significantly higher compared to those in typical traditional nursing homes. Job autonomy and social support were also significantly higher, while job demands were significantly lower in these small-scale nursing homes. Social support was found to be the most significant predictor of job motivation and job satisfaction in both types of typical nursing homes. Nursing staff working in traditional care environments more often expressed the intention to switch to small-scale environments.

Conclusions: Based on the findings of this study, it can be concluded that nursing homes environments differ substantially in experienced job satisfaction and job motivation.

Clinical Relevance: To enable a balanced work environment for nursing staff, a clear understanding of the relation between living environments and experienced job satisfaction among nursing staff is required. Since social support seems to be one of the key contributors to a supportive beneficial work climate, managers should focus on enabling this in daily nursing home care.
In Western countries, healthcare delivery for people with dementia in institutionalized, long-term care facilities is changing as a result of organizational innovations (Verbeek, van Rossum, Zwakhalen, Kempen, & Hamers, 2009). In the past, institutional long-term care (ILTC) was based on the medical model, whereas care delivery was mainly supply driven (Van Nie, Hollands, & Hamers, 2010). As in other areas of health care, as well as in the business sector, there has been a large amount of development towards a demand-driven approach (Van Nie et al., 2010). With regard to dementia care, this resulted in the concepts of person-centeredness, client-centeredness, and resident-focused or individualized care, which relates to concepts that strongly focus on individual needs and preferences of the person to optimize well-being and improve outcomes (Brown, McWilliam, & Ward-Griffin, 2006; Edwardsson, Winblad, & Sandman, 2008; Mead & Bower, 2000). As a result of this development, new ILTC care environments, like small-scale living facilities (also known as group living), have emerged worldwide (Annerstedt, 1993; Sterns, Miller, & Allen, 2010; Te Boekhorst, Depla, de Lange, Pot, & Eefsting, 2007; Verbeek, van Rossum, Zwakhalen, Kempen, et al., 2009). Individualized care, well-being, and social participation are key characteristics of these small-scale living facilities (Verbeek, van Rossum, Zwakhalen, Kempen, et al., 2009). In these facilities, a limited number of persons with dementia live together in a homelike environment and form a household with staff (Te Boekhorst et al., 2007; Verbeek, van Rossum, Zwakhalen, Kempen, et al., 2009).

The impact and implications of these new care environments on resident outcomes (e.g., quality of life) have been studied (Funaki, Kaneko, & Okamura, 2005; Kane, Lum, Cutler, Degenholtz, & Yu, 2007; Te Boekhorst, Depla, de Lange, Pot, & Eefsting, 2009; Verbeek, van Rossum, Zwakhalen, Ambergen, et al., 2009), showing some beneficial outcomes for residents. However, research about the relationship between the ILTC care environment and nursing staff’s well-being is very limited. Brownie and Nancarrow’s (2013) review detected nine papers that addressed the relationship between the ILTC care environment and staff’s well-being and showed that person-centered care was found to impact job satisfaction in a positive way. However, it must be mentioned that only De Rooij, Luijkx, Declercq, Emmerink, and Schols (2012) study included in this review was a randomized controlled trial (RCT). All other studies failed to use a strong design. Another review by Ausserhofer et al. (2016) investigating the effect of homelike residential models on staff-related outcomes found only three studies investigating staff-related outcomes, showing no significant benefits.

More specifically looking at outcomes of small-scale living on staff’s well-being, some positive outcomes were found on health problems and burnout. Te Boekhorst, Willemse, Depla, Eefsting, and Pot (2008) found that job demands were lower and job control and social support were higher in small-scale, homelike nursing homes in comparison with traditional nursing homes. Evidence shows that it is not only the type of small-scale living environment that seems to impact the staff’s well-being, but also the dose or level of small scaledness that seems to matter (Verbeek, 2011; Willemse, Depla, Smit, & Pot, 2014). Willemse and colleagues (2014) showed that if the long-term care facility more strictly adhered to the key principles of small-scale care, the staff perceived more decision-making authority and less work pressure.

Because of the specific characteristics and the different approach to providing care in these small-scale facilities, it is expected that working within these small-scale living environments also creates a change in the nursing staff’s required personal skills. Verbeek, van Rossum, Zwakhalen, Ambergen, et al.’s (2009) previous study shows that skills have changed for nurses working in these small homelike ILTC facilities by demanding a more integrated way of working, in comparison to staff working in traditional ILTC facilities. However, until now it has remained unclear which skills are warranted in these new, small-scale living environments.

This study aims to (a) explore staff perceptions about skills warranted in both care environments and (b) determine differences in job satisfaction, motivation, and job characteristics of staff between the two care settings.

**Methods**

**Design**

This cross-sectional study used baseline data from a longitudinal quasi-experimental study on the effects of small-scale living facilities in dementia care (secondary data analysis, data collected between April 2008 and January 2010 in the Netherlands; Verbeek, van Rossum, Zwakhalen, Ambergen, et al., 2009). The study design and protocols of Verbeek, van Rossum, Zwakhalen, Ambergen, et al.’s (2009) study were approved by the Medical Ethics Committee of the University Hospital Maastricht and Maastricht University, and written informed consent was obtained from the participants.

**Participants**

Nursing staff (i.e., nursing aides, nursing assistants, certified nursing assistants, and registered nurses) working on a permanent basis and who were directly involved
in dementia care (on small-scale and traditional wards) were eligible to participate in the study. Temporary staff (such as trainees), permanent nightshift workers, and team managers were excluded since they usually have different job tasks.

Nursing staff members from 28 small-scale facility wards were invited to participate. Small-scale was defined based on the following characteristics: (a) at most, eight residents per house or unit; (b) daily household duties centered around the residents’ activities of daily life (e.g., all meals prepared in the unit’s kitchen by nursing staff, together with the residents or their family caregivers); (c) staff performed integrated tasks (along with medical and personal care, they also carried out household chores and organized activities); (d) a small consistent team of staff members took care of the residents; (e) daily life was largely determined by the residents, family caregivers, and nursing staff; and (f) the physical environment resembled an archetypal house (Verbeek, van Rossum, Zwakhalen, Ambergen, et al., 2009).

Nursing staff members from 21 traditional wards were also invited to participate. Traditional wards in nursing homes were defined using the following criteria: (a) at least 20 residents or more per ward; (b) staff had specialized tasks and focused on the medical and personal care of residents; and (c) daily life was mainly organized by the routines of the nursing home, with little influence by the residents, their family caregivers, and staff. The facilities were located in the southern part of the Netherlands.

**Theoretical Framework**

The Job-Demand-Control (JDC) model developed by Karasek (1979) and the Job Demand-Control-Support (JDCS) model developed by Johnson and Hall (1988) are the most prominent models on occupational stress (Van der Doef & Maes, 1999). These models have studied job-related outcomes (Van der Doef & Maes, 1999), such as burnout symptoms and job satisfaction. The JDC model acknowledges two essential factors of the work environment: job demands and job control. According to the JDC model, staff that experience high job demands (workload) and low job control (influence over tasks) experience low well-being related to their work (Van der Doef & Maes, 1999).

In 1988, Johnson and Hall proposed an extended model. They added the factor “social support,” referring to support experienced by colleagues or managers. Job demands, job control, and workplace social support are defined in the JDCS model as factors that interact with and influence the personal outcome behavior (De Jonge, 1995). Staff who experience high demands, low control, and low social support are at the highest risk for poor well-being. While the most favorable outcomes can be expected in the activation hypothesis, which states that a high level of job control (even with a high level of job demand and a low level of social support) leads to learning (De Jonge & Kompier, 1997; Te Boekhorst et al., 2008). It is likely that the influence of the JDCS model on job outcomes also changes in small-scale homelike nursing homes in comparison with traditional nursing homes, given the possible differences in perceived demands, control, and support. The measures used in this study build on the JDCS model.

**Measures**

Background variables assessed included age, gender, education level, weekly working hours, months of employment in the same department, and years of experience. In addition to the background information, the nursing staff members were asked two additional open-ended questions. The first was related to two skills that they felt were essential in their working environment. The second question asked if the employees would like to switch to another type of nursing home. The intention to switch to another type of nursing home is an indication of a certain fit. Nurses with the intention to switch to another type of nursing home are likely to perceive their person and organization fit with their current type of nursing home as being low (O’Reilly, Chatman, & Caldwell, 1991).

Job satisfaction was measured with four items (De Jonge, 1995). The items were assessed using a 5-point Likert scale ranging from totally disagree to totally agree (Verbeek, 2011). A sample item is: “I am satisfied with my current work.” Higher scores indicate a more optimal job satisfaction. Cronbach’s alpha, based on the current study data, was .90.

Job motivation was measured with two items adopted from De Jonge (1995). The items were assessed using a 5-point Likert scale ranging from totally disagree to totally agree (Verbeek, 2011). A sample item is: “I have a challenging job.” Higher scores indicate higher job motivation. Cronbach’s alpha, based on the current study data, was .62.

Job autonomy was measured using the 10 items of the Maastricht Autonomy Questionnaire (MAC; De Jonge, 1995). The validity, as well as reliability, of the MAQ (De Jonge, 1995) was confirmed, including a Cronbach’s alpha coefficient of 0.86. Cronbach’s alpha, based on the current study data, was .88. Items related to job control and job freedom were measured on a 5-point Likert scale ranging from very little to very much (Verbeek, 2011). A sample item is: “My work offers me the opportunity to
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...choose my own working method.” Higher scores indicate a higher level of autonomy.

Workplace social support was measured with the eight-item scale from the Job Content Questionnaire (De Jonge, Reuvers, Houtman, Bongers, & Kompier, 2000; Karasek, 1985). International comparisons of the scale demonstrated acceptable-to-good levels of internal consistency, ranging from .68 to .84 (Karasek et al., 1998). Cronbach’s alpha, based on the current study data, was .81. The items are measured using a 4-point Likert scale, ranging from completely disagree to completely agree (Verbeek, 2011). A sample item is: “My colleagues help me to get the job done.” Higher scores indicate more support.

Workload (job demands) was measured with eight items, which are widely used and validated (De Jonge, Mulder, & Nijhuis, 1999; Verbeek, 2011). Cronbach’s alpha, based on the current study data, was .93. The items were assessed using a 5-point Likert scale ranging from never to always. A sample item is: “In my department, there is significant pressure to get the job done in a limited amount of time.” Higher scores indicate higher demands. Cronbach’s alpha, based on the current study data, was .9.

The level of small-scale homelike care was measured using an 18-item observational questionnaire. Items relate to a unit’s organizational, social, and physical environment. A sample item is: “Does the staff wear a uniform?” The items were assessed using a 5-point Likert scale, ranging from 1, not at all, to 5, completely (total scoring range 18–90); higher scores indicated more adherence to the key features of small-scale living.

Data Analysis

Data from the study were analyzed using SPSS software (IBM Corp., Armonk, NY, USA). To contrast the groups, two subgroups were derived based on the score on the observational questionnaire that measured organizational, social, and physical environment. Most small-scale nursing homes were categorized as having a median score on the questionnaire of above 66, and most traditional nursing homes were categorized as having a score of below 40. These subgroup analyses were used for comparing the most typical small-scale living facilities with most typical traditional wards. Open-ended questions about skills were first analyzed using descriptive statistics. A chi-square test was used to test for significant differences in the intention to switch. Differences between traditional and small-scale nursing homes were tested using multilinear regression analysis. Assumptions, including multicollinearity, were checked. The influence of the JDCS model was tested in three models per type of nursing home. First, a regression analysis was conducted with only (sociodemographic) control variables. Second, the variables job demand, job control, and social support were introduced into the regression analysis. Third, the interactional variables of the JDCS model were separately introduced to determine the difference of their influence and the benefits of the JDCS model. An alpha level of .05 was used for all statistical tests.

Results

Sample Characteristics

Questionnaires were sent out to a total of 581 members of the nursing staff, of whom 302 responded, resulting in an overall response rate of 52%. Response rates varied across the participating settings: 62% (n = 110/178) nursing staff in small-scale living environments and 48% (n = 192/403) in traditional wards. For subgroup analyses, two groups were created based on the contrast questionnaire that assessed the level of how small scale and homelike the nursing home was. In total, 138 staff members were included: 81 staff members working in the most traditional wards (lowest scoring on adherence to principles of small-scale living) versus 57 staff working in the most small-scale wards (highest scoring on adherence to principles of small-scale living). The participants’ characteristics are presented in Table 1. Information about the intention to switch to the other care environment is included in the characteristics of the participants, showing a higher intention to switch for staff currently working in a more traditional care setting. While no nursing staff had the intention to switch to a traditional care environment, about 22% of the valid responses from nursing staff working in traditional care environments expressed the intention to switch to a small-scale environment (p < .01).

Staff Perceptions About Skills Warranted in Care Environments

A deviation was made between essential skills that are warranted in both care environments in cases where there was an intention to switch. Table 2 shows findings about essential skills mentioned per type of ILTC facility of nursing staff who expressed the intention to switch to another care environment and those who did not express the intention to switch. In almost all nursing homes, patience was perceived as being the most essential skill. Autonomy was only regarded as being important in small-scale facilities, together with having a greater level of social communication skills. In traditional care...
environments, collaboration was mentioned as being an important skill.

**Differences in Job Satisfaction, Motivation, and Job Characteristics of Staff**

Table 3 presents the mean scores for each group of nursing staff working in the two types of ILTC facilities in terms of job characteristics, job satisfaction, and motivation of staff. The findings show that job satisfaction (mean difference = 0.5) and job motivation (mean difference = 0.3) are significantly higher in typical small-scale nursing homes. Job autonomy (mean difference = 0.6) and social support (mean difference = 0.2) are also significantly higher in typical small-scale nursing homes. Job demands (mean difference = 0.9), on the other hand, are perceived as being significantly lower in typical small-scale nursing homes.
Influence of the JDCS Model

Tables 4 and 5 present the regression analyses of the influence of the JDCS model on job satisfaction in typical small-scale and traditional nursing homes. When comparing the results, there was only one difference found between typical small-scale and traditional nursing homes when studying the influence of the JDCS model. The interactional influence of job autonomy and social support is only found in traditional nursing homes. In small-scale nursing homes, social support has a positive influence, independent of the level of autonomous experiences.

Tables 6 and 7 present the regression analyses of the influence of the JDCS model on job motivation in typical small-scale and traditional nursing homes. When comparing both regression analyses, no differences were found in the influence of the JDCS model. Only social support is a significant predictor of the JDCS model in both types of typical nursing homes.
Discussion

Findings of the current study showed that in typical small-scale nursing homes, nursing staff experienced a significantly higher job satisfaction and job motivation compared with typical traditional nursing homes. In addition, nursing staff perceived their job autonomy and social support also as significantly higher, while job demands were perceived significantly lower in these small-scale nursing homes. These results are in line with previous work on typical small-scale, homelike nursing homes (Alfredson & Annerstedt, 1994; Te Boekhorst et al., 2008; Willems et al., 2014), while effects were not found in the total population small-scale nursing homes (Verbeek et al., 2010) or other homelike, residential models (Ausserhofer et al., 2016). This suggests that a dose–effect relationship may exist.

In this study, most of the proposed influences of the JDCS model were not found; only limited significant influences were detected. Although most influences were not significant, the introduction of the JDCS model into the regression analyses increased the explained variances by 20% to 50%. Support of the strain and activation hypothesis was also limited in typical nursing homes. Only job autonomy and social support demonstrated interactional influences on typical traditional nursing homes. The influence of the JDCS model on job satisfaction and job motivation did not differ between living environments.

Social support was found to be the most significant predictor of job motivation and job satisfaction in both types of typical nursing homes. This can be related to the strain and activation hypothesis. More social support could lead to less strain and, therefore, more job satisfaction and motivation. De Rooij and colleagues (2012) also emphasized this. In addition, social support can lead to more learning and, therefore, more job satisfaction and motivation.

The only difference found was the interaction influence of job autonomy and social support in typical traditional nursing homes. The results showed that the more social support present, the stronger the positive influence of having more job autonomy on job satisfaction. In typical small-scale nursing homes, this interactional influence was not found. It might be that in small-scale nursing homes, the working methods are more adapted to their own particular group of residents, thus presenting differently than the working methods of colleagues in a different small-scale home with a different group of residents. In addition, Te Boekhorst et al. (2008) also stated that small-scale nursing homes are less formally organized because the organization is designed according to the individual needs of the residents. Therefore, more job autonomy will not have a stronger influence when more social support is perceived.

The results of the study show that most employees on the nursing staff explicitly chose one type of nursing home and do not want to switch to another type of nursing home. This could indicate that the nursing staff perceive a good fit between the personal and organizational goals of this type of nursing home match. Perceived personal organizational fit is seen as a more important predictor of behavior than is actual fit (Cooper-Thomas, Van Vianen, & Anderson, 2004). The intention to switch to another type of nursing home could be an indication that an employee does not perceive a high personal organizational fit in his or her current nursing home. The staff included differed in educational level, which may have influenced their perceptions. In the current study, the majority of participants (54% of the staff in small-scale facilities and 58% of the staff in regular wards) were level 3 educated staff members. The other groups (nursing levels 1, 2, 4, and 5) were small and unequally distributed. Therefore, (subgroup) comparisons between educational levels could not be explored in this study.

Furthermore, less bureaucratic and more innovative organizations have a negative influence on the intention of employees to leave the organization (Alvi, Hanif, Adil, Ahmed, & Vveinhardt, 2014). A small-scale nursing home can be considered as being less bureaucratic and more innovative; therefore, this could be a possible explanation for the fact that intention to switch to another type of nursing home was lower in typical small-scale nursing homes.

This study has several limitations that need to be addressed. First, the sample size that was used was limited and could possibly have influenced findings. Second, nursing home settings vary widely across and within countries. Given this enormous variation, study findings are limited in their generalizability. Third, a selection bias could have occurred, resulting in the inclusion of a certain type of nursing staff. Furthermore, the staff that was included differed in educational level, which may have influenced their perceptions.

Our results have important implications for nursing practice and policy. It is possible that the small-scale homelike model will attract more people who want to begin work, and remain working, in health care due to the differences in perceived job demands, control, and support. Ensuring that they stay satisfied, motivated, and do not leave the healthcare field is of major importance for the near future, given the current staffing shortages. Social support seems to be one of the key contributors to a beneficial work environment. In addition, this information is also important for human resource managers. They can use the mentioned skills to select...
new employees according to the type of nursing home. Potential employees who show high levels of social skills and who have a high level of client focus would find a more appropriate fit in the small-scale nursing home setting. Most nurses perceive these skills as being more important in small-scale nursing homes than in traditional nursing homes. Therefore, employees who have a lower level of client focus, fewer social skills, and are more comfortable with specialized tasks may find a better fit in a traditional nursing home.

There are several suggestions for future research. This study incorporated parts of the personal organizational fit literature. However, personal organizational fit itself was not measured. By measuring the personal and organizational variables in different types of nursing homes, a comparison can be made and their influences on behavioral outcomes can be tested.

**Conclusions**

Based on the findings of this study, it can be concluded that nursing home environments differ in experienced job satisfaction and job motivation. In small-scale nursing homes, job autonomy and social support were significantly higher, while perceived job demands were significantly lower compared with traditional nursing homes. For policymakers, this has important implications. Taking staff shortages into account, it is important to create an appealing nursing home and work environment. Social support seems to be one of the key contributors to a beneficial working environment.

**Clinical Resources**

- Alzheimer Europe. A nongovernmental organization aimed at raising awareness of dementia: http://www.alzheimer-europe.org
- Alzheimer’s Disease International: https://www.alz.co.uk
- Interdem. A European network of researchers collaborating in research on and dissemination of early, timely and quality psychosocial interventions in dementia aimed at improving the quality of life of people with dementia and their supporters, across Europe: http://interdem.org

**References**


