Feature Article

The satisfaction with the quality of dementia care and the health, burnout and work ability of nurses: A longitudinal analysis of 50 German nursing homes

Sascha G. Schmidt, RN, MScN, Martin N. Dichter, RN, MScN, Sabine Bartholomeyczik, RN, PhD, Hans Martin Hasselhorn, MD

A R T I C L E   I N F O

Article history:
Received 20 June 2013
Received in revised form 9 September 2013
Accepted 16 September 2013
Available online 13 October 2013

Keywords:
Dementia care
Nursing home
Satisfaction
Quality of care
Burnout
General health
Work ability

A B S T R A C T

Background: The increasing prevalence of residents with dementia in Nursing Homes (NH) leads to a demanding work with high physical and psychological workloads. This study focuses on NH nurses and their satisfaction with quality of care for residents with dementia (SQCD) and its impact on nurses' general health, burnout and work ability.

Method: Two-wave (2007/2009) self-report questionnaire data of 305 nurses (RNs and nurses' aides) from 50 German NHs.

Results: 58.6% (2007) and 64.9% (2009) of the respondents reported satisfaction with the quality of care of the dementia residents. However, when dissatisfied, this was perceived as substantial work stressor and was adversely associated with nurses' individual resource outcomes. Those nurses who between 2007 and 2009 had become dissatisfied or were dissatisfied at both measurements showed the most adverse scorings for burnout, general health and work ability.

Discussion: The findings imply that in NHs, SQCD may be a relevant work factor with substantial impact on nurses' core resources.

© 2014 Mosby, Inc. All rights reserved.

In forthcoming decades, elder care will present a challenge to industrialized countries because of the large and increasing number of elderly people with dementia (approximately 35.6 million people worldwide in 2010). This number may increase to 115.4 million people by 2050. According to the WHO (2012), in some high-income countries, approximately one third to one half of all people with dementia live in nursing homes, because they require professional care. Professional dementia care in Nursing Homes (NH) is demanding due to high physical and psychological workloads. It requires intense, time-consuming care, a high degree of professional expertise, and advanced communication skills. Moreover, in the course of their disease, many people with dementia show some type of 'challenging behavior,' which is often self-destructive and/or a threat to others. Such behavior has been found to be exhibited by up to 90% of the dementia residents in NH. If not adequately addressed, this behavior can easily become a major occupational stressor for the professional staff and contributes to increased workload physical strain and burnout among nurses. According to a literature review, poor job satisfaction is the primary predictor for nurses who leave dementia care. Numerous studies indicate that job satisfaction is a core indicator for nurse well-being and mental health. Job satisfaction has a strong moderating effect on the relationships between work exposure, nurses' attitudes and behavioral outcomes (such as 'intention to leave'), and job turnover. Another aspect of nursing job satisfaction is the satisfaction with the quality of care. Among NH nurses, our prior findings indicated, on average, a high level of satisfaction with the residents' physical care in the nurses' institutions. The degree of satisfaction with dementia care was substantially lower. Therefore, the present study focuses on nurses and nursing aids working in NHs, their satisfaction with the quality of care for residents with dementia (SQCD), and the connectedness with the nurses perceived general health, degree of burnout and work ability over a 2.5-year period.

The following two hypotheses were developed and tested: (1) A significant decrease in general health and work ability and an increase in burnout will be found among nurses between 2007 and 2009, and (2) Nurses who report care improvement from 2007 to 2009 will report, in 2009, improved general health and work ability.
and less burnout compared to nurses who do not see a change in care over a 2.5-year period.

Methods

Study design and sample recruitment

This study is part of the German 3Q-Study, which is a research project aiming to investigate the interconnectedness of working conditions, nursing care outcomes and economic indicators in German NHs. The data from self-reported questionnaires (two surveys spaced 2.5 years apart, spring 2007 and autumn 2009) from the nursing staff of the participating NHs were analyzed. Since 2007 in the 3Q-Study, surveys have been performed by all NH employees from one nationwide welfare organization. In 2007, 1283 of 2824 employees from 51 NHs participated (overall return rate of 45.4%), and in 2009, 1341 of 2838 employees in 56 NHs (47.3%) participated. For the present paper, only the data from the nurses and nursing aides were analyzed.

Using a pseudonymous coding system, the returned questionnaires in 2009 could be individually matched with the returned questionnaires from 2007 (921 nurses). The final matched sample consisted of 305 registered nurses and nursing aides from 50 NHs who responded to both questionnaires from 2007 to 2009. Ethical approval for the 3Q-Study was given by the ethics committee of the University of Wuppertal. Employee participation was voluntary and anonymous. In addition, written consent from the employee representative committee at each of the nursing homes was obtained.

Measures

A self-reported questionnaire based on the questionnaires of the European nurses’ early exit (NEXT) study was used. The questionnaire covered aspects of work and health outcomes.

Satisfaction with the quality of care of residents with dementia (SQCD)

SQCD was measured individually by a single item: ‘How do you rate the nursing care of people with dementia in your nursing home?’ This item was taken from a questionnaire that measured nurses’ satisfaction with the quality of different aspects of care in NHs. The response options for SQCD were: a) very satisfied, b) satisfied, c) dissatisfied or d) very dissatisfied. This item was previously used in another study examining work determinants of SQCD.

Additionally in 2009, the nurses who reported to be ‘dissatisfied’ or ‘very dissatisfied’ with the quality of care were also asked to respond to the question, ‘How much does this distress you?’ The response categories were ‘doesn’t stress me at all,’ ‘stresses me somewhat,’ and ‘stresses me a lot.’

Burnout

To assess the degree of the nurses’ psychological exhaustion, the four-item ‘Personal Burnout’ scale of the Copenhagen Psychosocial Questionnaire (COPSOQ, second version) was used. Participants were asked to indicate how often they ‘felt worn out,’ had ‘been emotionally exhausted,’ had ‘been physically exhausted,’ and ‘felt tired.’ The five response categories ranged from ‘(almost) never’ to ‘(almost) every day.’ The added scores of all items were transformed from 0 (no burnout) to 100 (maximum burnout). Cronbach’s alpha of this scale in this sample was 0.81.

General health

General health was measured by a single item as proposed by the German COPSOQ validation study. The item assesses the current general health status and is based on a scale from 0 (the worst imaginable health status) to 10 (the best imaginable health status). For the analyses, the scale was transformed from 0 to 100 points. The single items, self-rated health question is a widely used measure of health status and has high predictive validity with respect to objective health outcomes, such as disease onset (e.g. cardiovascular diseases, cancers), future sick leave and health insurance claims.

Work ability

Work ability is a broader concept of employability. The work ability index (WAI) was used to assess the degree of concordance between the individual and his/her specific work demands. The WAI takes into account mental and physical capabilities, including health and motivation as well as specific psychosocial and physical work-related factors. Higher scores correspond to better work ability (7–49 points). Cronbach's alpha in this sample was 0.77.

Data analysis

The data analyses were performed in three steps. In the first step, descriptive statistics and chi-squared statistics were used. For the first hypothesis (the change of resources from 2007 to 2009), paired t-tests were used.

To test the second hypothesis, the sample was categorized into four groups that reflected the nurses’ SQCD and their change over time. Participants who were ‘satisfied’ in 2007 and in 2009 were labeled ‘still satisfied.’ Participants who changed from ‘dissatisfied’ in 2007 to ‘satisfied’ in 2009 were labeled ‘became satisfied,’ and those changing from ‘satisfied’ to ‘dissatisfied’ were labeled ‘became dissatisfied.’ Participants who listed ‘dissatisfied’ in both 2007 and 2009 were referred to as ‘still dissatisfied’ (Fig. 1). Paired t-tests were conducted to identify the changes between 2007 and 2009 for each group and changes in burnout, general health and work ability.

A p-value of <0.05 was considered to be statistically significant. All of the analyses were performed with SPSS 19.0 (SPSS Inc., Chicago, IL, USA).

![Fig. 1. Change of degree of satisfaction with the quality of care of residents with dementia (SQCD) in a sample of 305 nurses between 2007 and 2009.](image-url)
Results

Participant characteristics and nurse satisfaction

Socio-demographics and occupational characteristics are shown in Table 1. In 2007, 58.7% (n = 179) of all participants were ‘satisfied’ or ‘very satisfied’ regarding the degree of SQCD, 34.4% (n = 105) were ‘dissatisfied,’ and only 6.9% (n = 21) were ‘very dissatisfied.’ In 2009, 64.9% (n = 198) of the nurses were ‘satisfied’ or ‘very satisfied’ with the quality of nursing care for dementia residents. Overall, there were more ‘satisfied’ nurses in 2009 than in 2007 (Chi-squared = 42.64; p < 0.001) (Fig. 1).

Distress through dissatisfaction

In 2009, all of the nurses who reported being ‘dissatisfied’ or ‘very dissatisfied’ with the quality of care for dementia residents (n = 107) were asked to rate their degree of perceived distress due to this circumstance. Of the 107 dissatisfied nurses, 54 (57.3%) felt ‘very stressed’ because of this dissatisfaction, and 33 (35.1%) felt ‘somewhat’ stressed because of it. Only seven nurses (7.4%) responded that this issue ‘doesn’t stress me at all.’

General health, burnout and work ability in 2007 and 2009

Between the two time points, the mean scores of general health, burnout and work ability in the total sample worsened. The general health score decreased by 5.9 points from 72 in 2007 to 66.1 in 2009 (p < 0.001). The burnout score increased by 5 points from 41.3 to 46.3 (p < 0.001), and the WAI declined by 1.5 points from 39.8 to 38.3 (p < 0.001).

Change in satisfaction, general health, burnout and work ability

Approximately half of the participants in the sample (n = 143, 46.9%) reported a high degree of SQCD both in 2007 and 2009 (‘still satisfied’ group), whereas 71 participants (23.3%) consistently rated a low degree of SQCD at both instances (‘still dissatisfied’) (Fig. 1). The number of nurses who ‘became satisfied’ in terms of SQCD was greater (n = 55, 18.0%) than those who ‘became dissatisfied’ (n = 36, 11.8%). No significant difference was found among the four groups regarding socio-demographic or occupational characteristics (not shown).

The group of ‘still satisfied’ nurses had the highest overall ratings of work ability, general health and the lowest burnout. However, these nurses had a statistically significant decline regarding work ability (−1.4 points, p < 0.01) and general health (−6.6 points, p < 0.001) over the 2 year period. Those nurses who were dissatisfied at both instances (‘still dissatisfied’) also deteriorated in the three outcomes despite already having comparably adverse effects in 2007. In this group, a strong increase was observed for burnout (+10.7 points, p < 0.001) and a decrease was observed in general health (−6.2 points, p < 0.001).

The group of nurses who ‘became dissatisfied’ showed the most pronounced negative changes for all three outcomes: burnout +13.3 points (p < 0.01), general health −11.8 points (p < 0.01), and WAI −4.1 points (p < 0.001). In 2007, these nurses had already indicated more adverse resource scores than those who were ‘still dissatisfied,’ although both groups were composed of nurses with high initial SQCD scores. Among the nurses who ‘became satisfied,’ the resource outcomes remained stable. However, in 2009, these outcomes were still lower than for those nurses who were ‘still satisfied’ (Table 2).

Discussion

Over a 2.5-year period, this longitudinal study examined nurse SQCD, as well as the resulting professional distress of dissatisfied nurses and its relation to general health, burnout and work ability. The main results indicated that many nurses in NHs were satisfied with the care of dementia residents. However, in those nurses who were not satisfied, a substantial work stressor may be present: the perception of insufficient quality of care within one’s own professional sphere. Furthermore, the findings indicate that a change in satisfaction with the quality of care for dementia residents may impact the nurses’ general health, burnout and work ability.

Increase in satisfaction

The proportion of satisfied nurses in this cohort increased from 58.7% in 2007 to 64.9% in 2009, which is similar to the overall results of the SQ-Study. A possible explanation for this outcome may be the concurrent increase in the general public and professional discussions regarding the quality of care of people with dementia and the implementation of the Care Development Act of 2008, which explicitly focused on dementia care in NHs. These changes may have prompted an increased administrative awareness of the dementia care programs in NHs (e.g. implementing person-centered care programs), which may have affected the nurses’ perceptions of the quality of their dementia care.

Nevertheless, the proportion of nurses who were dissatisfied with the quality of care for dementia residents is high. Moreover, the results show that dissatisfaction is a substantial stressor for nurses, which has also been found by Edberg and colleagues in Australia, Sweden and the United Kingdom. Interventions that aim to improve the quality of dementia care should focus on both the nurses and the residents. Examples of such interventions may include dementia care mapping, case conferences or training programs with peer support groups. A study conducted by Verkaik et al. involved the introduction of nursing guidelines that focused on depression in dementia, and the study reported positive effects among both nurses and residents. In that study, the perceived professional autonomy of certified nursing assistants increased, and the severity of depression among dementia residents was reduced. The idea of publishing nursing guidelines that simultaneously target the staff and the residents is promising and invites future developments and scientific evaluations that take into account both nurses and residents.
Changes in general health, burnout and work ability

In the longitudinal analyses, a pronounced increase in burnout was found, which was consistent with our first hypothesis and with results from the Netherlands and Belgium. However, in contrast to other studies, the burnout level in our study was exceptionally high in 2009. This result may be explained by an overall increase in the workload and pressure in the NH sector in Germany. In addition, the general health and the WAI decreased in the overall sample, but this result was within the expected range for the aging nurse samples.

The subgroup analyses for the two hypotheses revealed findings with potential relevance for the NH practice. General health, burnout and work ability of nurses who ‘became satisfied’ remained stable from 2007 to 2009. This finding is contrary to our hypothesis forecasting positive outcome changes. However, our findings indicate that the change from ‘dissatisfied’ to ‘satisfied’ leads to resource stabilization against the general negative trend over time. Among those nurses who ‘became dissatisfied,’ a deterioration in all of the three outcomes was found. This group had the lowest general health scores and the lowest WAI of all four groups in 2009. The general health score had decreased by approximately 12 points, and the mean work ability was only moderate. These substantial negative changes may imply a significant need for interventions, such as work improvement for nurses.

In addition, the nurses who were ‘still dissatisfied’ were identified as a risk group. Although the decrease in general health and WAI was comparable to the values of the overall study group, the 2009 scores were at an extraordinarily low level. Furthermore, an alarming increase was observed in the burnout scores. Such conditions may lead nurses to consider leaving their institution or even the profession.

Our findings show the importance of nurses’ perspectives on quality of care and indicate a need for action for nurses with sustained dissatisfaction with the quality of care of dementia residents in order to keep the nurses healthy and motivated. This issue will gain even more relevance when increasing staff shortages requires organizational initiatives to bind nurses to their NH.

Limitations of the study

Our study had some limitations. First, the sample size of the longitudinal portion of the study was relatively small (n = 305). We were only able to follow up with approximately one-third of the nurses over the time period (921 nurses initially responded in 2007). However, this group did not differ with respect to sociodemographic factors from the two complete nursing samples in 2007 and 2009. Second, we do not have any information about the reasons why some nurses did not participate in the follow-up (e.g. whether they were no longer interested in the overall study, had changed institutions or had left the profession). Third, we did not assess the strategies and concepts of dementia care in the different NHs or the influence of these issues on nurse satisfaction. Finally, the current findings could be affected by the fact that our sample included nurses and nursing aides from only one welfare organization and that the satisfaction with the quality of care for residents with dementia was assessed by a single question only (and only tested in the 3Q-Study).

Conclusions

The findings indicated that dissatisfaction with the quality of care for dementia residents may constitute a substantial work stressor that in turn negatively impacts nurse burnout, health and work ability. Therefore, NH management should consider the work quality satisfaction of nurses, particularly with respect to dementia care and to identify dissatisfied nurses.

The underlying reasons for, and the multiple consequences of, nurse dissatisfaction with dementia care must be scientifically investigated in further longitudinal intervention studies. Future investigations should study nursing staff in other health care settings, such as home care and hospital geriatric care wards. Qualitative studies are needed for achieving a deeper understanding of nurses’ SQCD. Such understanding should promote the development of more differentiated assessment instruments for SQCD. Finally, work organization research should investigate the potential of the concept of SQCD may have for organizational human resource management and quality assurance in health care institutions.

Acknowledgments

The authors thank all Homes for the Elderly of the Knights of St. John for their endorsement on the 3Q-Study, particularly the employees participating in the surveys. The 3Q-Study was funded by the “New Quality of Work Initiative” (INQA) of the German Federal Institute for Occupational Safety and Health (BAuA) and the Knights of St. John Home for Elderly GmbH.

Authors’ contributions: Study design: SGS, HMH; Data collection and analysis: SGS, MND; Manuscript preparation: SGS, HMH, MND, SB.

Competing interests: The authors declare that they have no conflicts of interests.

References


Table 2

<table>
<thead>
<tr>
<th>Individual resource outcome</th>
<th>Measurement year</th>
<th>Nurses’ groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Still satisfied</td>
</tr>
<tr>
<td></td>
<td></td>
<td>n = 143</td>
</tr>
<tr>
<td>Burnout (0–100)</td>
<td>2007</td>
<td>36.2 (21.5)</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>38.7 (23.9)</td>
</tr>
<tr>
<td>General health (0–100)</td>
<td>2007</td>
<td>77.9 (17.5)</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>71.3 (18.5)**</td>
</tr>
<tr>
<td>Work ability (WAI, 7–49)</td>
<td>2007</td>
<td>41.3 (5.4)</td>
</tr>
<tr>
<td></td>
<td>2009</td>
<td>39.9 (6.0)**</td>
</tr>
</tbody>
</table>

*p < 0.05; **p < 0.01; ***p < 0.001 (significance levels of changes between 2007 and 2009).


