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Associations between nurse–patient interaction and loneliness among cognitively intact nursing home residents – a questionnaire survey

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ABSTRACT

Nursing home (NH) residents risk loneliness because of many losses. Nurse–patient interaction includes core aspects contributing to thriving and well-being among long-term NH residents. We performed a cross-sectional observation study of 188 residents 65 years and older from 27 NHs with ≥3 months' residence. All had informed consent competence recognized by the responsible doctor and nurse and could converse. We asked "Do you sometimes feel lonely?" and used the Nurse–Patient Interaction Scale (NPIS) in face-to-face interviews. We identified associations between nurse–patient interaction and loneliness and investigated the prevalence of loneliness. Eighty-eight (47%) respondents reported loneliness often or sometimes and 100 (53%) rarely or never. Adjusted for sex and age, 10 of the 14 NPIS items were significantly correlated with loneliness. Loneliness is common among cognitively intact NH residents. Nurse–patient interaction associates with residents' loneliness and might be important in alleviating loneliness.

Introduction

Worldwide, the number of people aged 60 years or older is increasing: those 80 years and older will increase more than the younger age group.[1] From 2015 to 2050, the proportion of people 60 years and older will increase from 12% to 22%.[1] Ageing is often accompanied by functional limitations and comorbidity,[2] which for many people leads to the need for health-care services and long-term care in nursing homes (NHs). The need for long-term NH care mainly result from high age, chronic illnesses, multiple diagnoses and persistent symptom burden.[3,4] Accordingly, relocation to NHs is mostly caused by dependence on help to carry out basic needs. In general, NH stays result from numerous losses such as losing one's home, partner, family, friends, and self-determination because of institutionalization; given such losses, the individual may realize that life is going to end,[5,6] and this may result in loneliness.

Thus, NH residents face life challenges to which they must adapt. Paque et al.[6] identified loneliness as one major life challenge; however, how NH residents cope with loneliness varies.

Loneliness is defined as a subjective experience of a lack of satisfying human relationships,[7] a specific subjective feeling resulting from lack of belongingness,[8] which is described as an unpleasant feeling.[9] Weiss[10] conceptualized loneliness to include both an emotional and a social dimension, which can coexist or occur independently. Emotional isolation can result from the absence of a close person such as a partner or friend. Lack of social integration, minimal interaction with others or isolating oneself from former friends can cause social loneliness. The definitions of emotional and social loneliness share the same concept: an unpleasant, subjective experience resulting from inadequate social relationships.[11]

The prevalence of loneliness among older people ranges from 39% to 72%.[12–15] Research shows that loneliness is associated with many adverse conditions, such as cognitive decline,[16,17] physical inactivity,[18] cardiovascular disease,[19] depression and anxiety,[20,21] low quality of life[22] and mortality.[17,23–25] Access to placement in a NH is usually based on multidimensional irreversible losses of function, independence and relationships because of multiple illnesses. In general, NH residents are extremely vulnerable, characterized by frailty, mortality, disability, powerlessness and dependence; hence, their

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relationships are critical to their self-respect, feeling of self-worth, dignity and well-being.[26,27] However, most NH residents have few relationships left, providing limited opportunities to share and talk about their experiences, feelings and needs.[28,29] Accordingly, the nurse–patient relationship represents the main resource for connectedness for NH residents.[28] Moreover, the nurse–patient relationship is considered the core of nursing.[29] An established relationship between the NH resident and one or a few committed care personnel may be essential for a sense of emotional closeness,[30] preventing feelings of loneliness.[31] Prominent international nursing theorists describe nursing as a participatory process that transcends the boundaries between patient and nurse and can be learned and knowingly deployed to facilitate well-being.[32–34] Accordingly, excellent nursing care is characterized by a holistic view, with inherent human values and morality; thus, excluding the resident as a unique human being is a non-caring and amoral practice.[27,33,35] Consequently, the nurse–patient interaction may be important to alleviate loneliness in NHs.

NH residents' perceived nurse–patient interaction relates to interpersonal and intrapersonal self-transcendence,[31,36] meaning-in-life,[4] quality of life[37] anxiety and depression[38] and sense of coherence.[39] In addition, positive relationships, quality of care, caregivers and nurse–patient interaction are core aspects contributing to thriving and well-being among long-term NH residents.[30,40] However, we do not know whether nurse–patient interaction affects loneliness among NH residents.

Aims

The aim of this study was therefore to contribute to this knowledge gap by investigating the prevalence of loneliness and its association with nurse–patient interaction among cognitively intact NH residents in Norway.

The following hypothesis was tested: Nurse-Patient Interaction is associated with less perceived loneliness among NH residents.

Methods

Design, data collection and procedure

In a cross-sectional design, we collected data in 2017–2018 from 188 NH residents representing 27 NHs. The inclusion criteria were: 1) the municipality's decision on long-term NH care; 2) residential time 3 months or longer; 3) informed consent competence recognized by the responsible doctor and nurse; 4) capable of being interviewed; and 5) age 65 years or older. The 27 NHs were in two municipalities of equal size, one in central Norway and one in western Norway.

A nurse who knew the residents well presented the potential participants oral and written information about the study, their rights as participants and their right to withdraw at any time. Six researchers with the same professional background as nurses (RN) but with MSc degrees. The trained researchers ensured that the questions were understood. The sample comprised 188 NH residents.

Demographic variables

Among demographic data, age and marital status were collected.

Loneliness

The global question "Do you sometimes feel lonely?" assessed perceived loneliness. This question has been used in studies among older people in NHs[15] and older people living at home.[41–43] The responses were scored using the response categories of 1 = often, 2 = sometimes, 3 = rarely and 4 = never. Higher scores indicate lower loneliness. For the statistical analysis, this variable was dichotomized, with response categories 1 and 2 combined into 1 = lonely and 3 and 4 combined into 2 = not lonely.

We used the Nurse–Patient-Interaction Scale (NPIS) to assess how NH residents perceived the interaction between them and nurses. The NPIS was developed in Norway to identify how NH residents experiences the interaction with nurses and to validate this among NH residents.[36] The NPIS is a 10-point scale ranging from 1 (not at all) to 10 (very much), with the higher numbers indicating better perceived nurse–patient interaction. NPIS items include having trust and confidence in the nurses, experiencing being taken seriously and being respected and recognized as a person, being listened to and feeling good because of the interaction with nurses. The NPIS has 14 items identifying essential relational qualities emphasized in the nursing literature;[36] the items were developed to measure NH residents' sense of well-being derived from the interaction with nurses.[44–46] The NPIS has good psychometric properties, with good content validity and reliability among NH residents.[36]

Data analysis

Descriptive statistics were calculated for the demographic variables and the NPIS scale. The reliability of the NPIS construct was assessed by Cronbach's alpha reliability coefficient.

A logistic regression procedure was used to analyze the association between the 14 items of the NPIS and loneliness (dichotomized, both without and with adjusting for sex and age). Sex was coded as a categorical variable, whereas NPIS and age were coded as continuous covariates. The results are presented as odds ratios and 95% confidence intervals.

(Table 1). The statistical package SPSS version 26.0 (SPSS Inc. Chicago, IL, USA) was used. A statistical significance level of 0.05 was applied throughout.

Results

Characteristics of the participants

The participants' ages ranged from 63 to 104 years, with a mean age of 87.4 years (standard deviation (SD) = 8.57). The sample included 138 women (73%) and 50 men (27%), with a mean age of 88.3 years for the women (SD = 1.80) and 86.0 years (SD = 1.16) for the men. In total, 23 were married, 22 were cohabiting, 1 was single, 106 were widowed, and 36 were divorced. The time residing in the NH when interviewed was 2.6 years for both sexes (range 0.3–10 years).[39]

Loneliness

Eighty-eight respondents (47%) reported loneliness often or sometimes and 100 (53%) rarely or never.

Associations between loneliness and 14 items of the NPIS

In the unadjusted analysis, the items NPIS1 ("Having confidence and trust in the nurses", odds ratio (OR) 1.26, $P = 0.003$), NPIS2 ("The nurses take me seriously", OR 1.22, $P = 0.007$), NPIS3 ("Interaction with the nurses makes me feel good" OR 1.19, $P = 0.008$), NPIS4 ("The nurses understand me", OR 1.21, $P = 0.001$), NPIS5 ("The nurses make all possible effort to relieve my plagues", OR 1.29, $P = 0.001$), NPIS6 ("The nurses involve me in decisions regarding my daily life", OR 1.18, $P = 0.024$), NPIS7 ("The nurses treat me with respect", OR 1.22, $P = 0.011$), NPIS9 ("The nurses are listening interestingly to me", OR 1.17, $P = 0.002$), NPIS11 ("Interaction with the nurses contributes to meaning in my life", OR 1.18, $P = 0.007$) and NPIS13 ("I am satisfied

Table 1
Logistic regression Analyzes, Unadjusted and Adjusted for sex, age and Nurse Patients Interaction scale (NPIS) 14 items for Loneliness among 188 Cognitive Intact Nursing Home patients.

NPIS items	Mean SD	Unadjusted OR 95% CI	*p*-value	Adjusted OR	95% CI	*p*-value
NPIS1 Having confidence and trust in the nurses	8.52 2.13	1.26 1.08, 1.46	.003*	1.24	1,06, 1,45	.007*
NPIS2 The nurses take me seriously	8.44 2.17	1.22 1.06, 1.41	.007*	1.22	1.05, 1.42	.010*
NPIS3 Interaction with the nurses makes me feel good	8.03 2.36	1.19 1.05, 1.36	.008*	1.20	1.04, 1.37	.010*
NPIS4 The nurses understand me	7.08 2.70	1.21 1.08, 1.36	.001*	1.21	1.07, 1.36	.003*
NPIS5 The nurses make all possible effort to relieve my plagues	8.41 2.31	1.29 1.11, 1.49	.001*	1.33	1.14, 1.56	.000*
NPIS6 The nurses involve me in decisions regarding my daily life	6.99 3.06	1.18 1.02, 1.23	.024*	1.12	1.00, 1.23	.051
NPIS7 The nurses treat me with respect	8.54 2.05	1.22 .05, 1.42	.011*	1.25	1.06, 1.46	.007*
NPIS8 The nurses ask me how I am	6.96 3.16	1.08 .98, 1.18	.110	1.07	.97, 1.18	.193
NPIS9 The nurses are listening interestingly to me	6.99 3.06	1.17 1.06, 1.29	.002*	1.16	1.04, 1.29	.006*
NPIS10 I often get hurt or sad from how the nurses interact	3.17 2.84	.91 .82, 1.00	.059	.89	.80, .99	.043*
NPIS11 Interaction with the nurses contributes to meaning in my life	7.59 2.57	1.18 1.05, 1.33	.007*	1.17	1.03, 1.32	.016*
NPIS12 The nurses a pay attention to me as a person	7.38 2.85	1.10 .99, 1.23	.084	1.09	.98, 1.23	.134
NPIS13 I am satisfied with the communication with the nurses	8.15 2.40	1.27 1.10, 1.45	.001*	1.25	1.08, 1.44	.002*
NPIS14 Interaction with nurses a is the most important to my thriving	8.68 2.03	1.06 .92, 1.22	.449	1.03	.89, 1.20	.686

Note: SD: Standard deviation; OR: Odds ratio; CI: Confidence interval;
* $p<0.05$.

with the communication with the nurses", OR 1.27, $P = 0.001$), correlated statistically significantly with lower loneliness (Table 1).

The significant associations remained in the adjusted analysis for NPIS1 ("Having confidence and trust in the nurses", OR 1,24, $P = 0.007$), NPIS2 ("The nurses take me seriously", OR 1.22 $P = 0,01$), NPIS3 ("Interaction with the nurses makes me feel good" OR 1.20, $P = 0.01$, NPIS4 ("The nurses understand me", OR 1.21, $P = 0.003$), NPIS5 ("The nurses make all possible effort to relieve my plagues", OR 1.33, $P < 0.0001$), NPIS7 ("The nurses treat me with respect", OR 1.25, $P = 0.007$), NPIS9 ("The nurses are listening interestingly to me", OR 1.16, $P = 0.006$), NPIS11 ("Interaction with the nurses contributes to meaning in my life", OR 1.17, $P = 0.02$) and NPIS13 ("I am satisfied with the communication with the nurses", OR 1.25, $P = 0.002$), correlated statistically significantly with loneliness. NPIS10 ("I often get hurt or sad from how the nurses interact", OR 0.89, $P = 0.04$) was only statistically significantly correlated with loneliness in the adjusted analysis (Table 1). Cronbach's alpha was 0.90.

Discussion

This study aimed to investigate the prevalence of loneliness and its association with nurse–patient interaction among cognitively intact NH residents in Norway. We showed that 10 of the 14 items of the NPIS were significantly associated with less loneliness in the adjusted analysis.

In addition, our study shows that 47% of the residents reported loneliness often and sometimes: most were widows or widowers. That nearly half reported loneliness often and sometimes corresponds to Nyqvist et al.[14] and Drageset et al.,[15] who showed that 55% of older residents in care facilities in northern Sweden and 56% of NH residents in western Norway reported loneliness. Older studies have shown that at least one third of older people (to some extent) feel lonely, with a higher proportion among people in NHs.[47] Loneliness has been described as common in long-term care institutions.[48,49] In our study, 106 of the residents were widows or widowers, and loneliness is associated with the death of a spouse.[50,51] Further, previous research discloses that loneliness relates to physical disabilities among NH residents; deficit in interaction with others often accompanies physical disabilities followed by a reduced ability to participate in social activities.[31,52–54] Social relationships are a fundamental need in healthy old age; this especially concerns bonds derived from a network, attachment or simply belonging to a group.[55] Further, people moving to an NH often experience losses resulting from having to leave their home and thus reduced connectedness to family and friends.[56] This was a reality for many of the residents in this study. Consequently, loneliness may be a respond to losses, exposing NH residents to a sense of vulnerability and mental isolation.[57]

These results, based on both unadjusted and adjusted analysis, are in accordance with recent research[37,58] highlighting nurse–patient interaction as the main resource for connectedness while staying in a NH. Correspondingly, Halldorsdottir[29] emphasizes that the nurse–patient relationship is the core of nursing.

Our results showed significant positive associations between lower loneliness and the NPIS scale items in the adjusted analysis (Table 1). The following items were significantly correlated with loneliness:

- "Having confidence and trust in the nurses";
- "The nurses take me seriously";
- "Interaction with the nurses makes me feel good";
- "The nurses understand me";
- "The nurses make all possible effort to relieve my plagues";
- "I often get hurt or sad from how the nurses interact";
- "The nurses treat me with respect";
- "The nurses are listening interestingly to me";
- "Interaction with the nurses contributes to meaning in my life"; and
- "I am satisfied with the communication with the nurses".

The results demonstrate that relieving ailments, taking residents seriously, showing respect and involving and listening to them when communicating about specific needs such as pain, fatigue and dyspnea were essential for NH residents to perceive emotional closeness. According to Watson's nursing theory,[33] interpersonal relationships represent behavior that nurses need to apply by establishing a relationship of mutual trust, honesty and empathy. Thus, our results emphasize the importance of nurse–patient interaction as a basis of NH care to reduce the feeling of loneliness and thus increase well-being. Our results correspond to previous findings showing that an established relationship between the NH resident and one or a few committed care personnel is essential for a sense of emotional closeness[30] and that a strong relationship between caring nurses reduces loneliness among NH residents.[31]

Previous studies emphasize that nurse–patient interaction is critical to NH residents' sense of coherence, the subdimension manageability and comprehensibility,[59] feelings of self–worth,[36] meaning-in-life and QoL.[4,28] Moreover, loneliness results from deficits in the social relations with a partner, family and friends.[10,41] Using the nurse–patient interaction to facilitate residents' sense of being taken seriously and understood, recognized, respected and confirmed as a

unique person may well support and strengthen residents' self-worth. Reassurance of worth is defined as an essential dimension of social support, which is important to reduce the feeling of loneliness among individuals in general[10] and among older people and NH residents.[15,53] Accordingly, nursing personnel are important in facilitating and supporting the connection between family members and residents by promoting the integration of the family, improving information, increasing trust and contributing to mutual understanding of expectations and goals that ultimately improve the care for residents.[60]

Consequently, advancing how NH personnel are present with the residents, such as listening, empathic understanding, respecting, accepting and acknowledging the resident as an autonomous person, will positively contribute to reducing NH residents' loneliness.

Study strength and limitations

In this study, 188 NH residents representing 27 NHs in two large municipalities participated (response rate 92%) with almost no missing data, which is a strength. Given the specific frail population, the sample size is good, close to what is considered large samples.[61–63]

Loneliness was assessed using the global question "Do you sometimes feel lonely?" based on self-report. This self-report measure is easy to use in clinical settings, easy to understand and asks directly about feeling lonely. In face-to-face interviews, the respondents might express less loneliness to please the interviewer, which could result in a lower loneliness score. However, the responses may be biased because the researcher visits the NH resident to help them fill out the response forms. Another question is whether the single item assessing loneliness covers NH residents' feelings of loneliness appropriately. This question presumes that NH respondents understand the concept of loneliness, which is a limitation, since its nature and meaning probably vary among groups of people and over time. Moreover, this global question "Do you sometimes feel lonely?" also fails to differentiate between emotional and social loneliness. Further research on loneliness among cognitively intact NH residents therefore needs to use a multidimensional loneliness scale, which differentiates between emotional and social loneliness.

Several residents had dementia symptoms and were not included. Hence, whether cognitively impaired residents might report a higher loneliness score is still unknown. We therefore cannot generalize our results to the general NH population.

Conclusion and implications for NH practice

Loneliness is common among NH residents without cognitive impairment. Nurse–patient interaction is positively associated with less loneliness among cognitively intact NH residents. In general, NH residents represent a vulnerable population characterized by dependence and frailty. Accordingly, care that facilitates confidence and trust in the nurses is crucial not only for well-being but also for loneliness. More specifically, to relieve loneliness, NH nurses should base the care on nurse–patient interaction, which facilitates a sense of being taken seriously, understood, respected, listened to with interest and involved in decisions. Moreover, maximizing effort to relieve NH residents' ailments alleviates loneliness; this probably supports dignity and meaning in this life situation. Thus, supporting and improving how NH caregivers interact, communicate, are present and connect with the residents seem important to reduce loneliness and thus boost well-being among the residents. Besides, NH care requires communicating with residents about symptoms and ailments, accompanied by high palliative competence in managing pain and relieving symptoms.[4,64] Interacting with the residents in a manner that makes the NH resident feel "attended to as a person" requires high communication and interactional competence. Good nurse–patient interaction is a health-promoting resource in NHs[26,65] that contributes to reducing loneliness and thereby improving well-being. Pedagogical approaches for advancing caregivers in health-promoting interaction with the residents should therefore be upgraded and implemented in educational programs and clinical practice.

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