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EMPIRICAL RESEARCH QUANTITATIVE

Quality of life and nurse–patient interaction among NH residents: Loneliness is detrimental, while nurse–patient interaction is fundamental

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Abstract

Aims and Objectives: To investigate the association between perceived nurse–patient interaction and quality-of-life among nursing home residents, adjusted for loneliness, anxiety and depression.

Background: Symptoms of anxiety and depression are known to residents of nursing homes along with cognitive impairment, physical inactivity and low quality-of-life. Anxiety, depression and loneliness are found detrimental to NH residents' quality-of-life. The nurse–patient relationship is important for patient's well-being, both in terms of illness and symptom management.

Design: Cross-sectional design.

Methods: Data were collected in 2017 and 2018 from 188 residents in 27 nursing homes resided in two large urban municipalities in Middle and Western Norway. The inclusion criteria were: (1) local authority's decision of long-term NH care; (2) residential stay 3 months or longer; (3) informed consent competency recognised by responsible doctor and nurse; (4) capable of being interviewed, and (5) aged 65 years or older. This article is executed in accordance with STROBE statement.

Results: Adjusting for age, sex, anxiety, depression and loneliness, perceived nurse–patient interaction was statistically significant to quality-of-life. While anxiety and depression showed insignificant estimates, loneliness demonstrated a significant relation with quality-of-life. Nurse–patient interaction and loneliness explained together 25% of the variation in quality-of-life.

Conclusion: This study suggests that loneliness is frequent as well as more detrimental to quality-of-life among nursing home residents compared to anxiety and depression. Furthermore, the present results show that the nurse–patient interaction represents an essential health-promoting resource for Quality-of-life in this population.

Relevance to clinical practice: Staff nurses need to exercise their awareness of loneliness to meet residents' needs. Nursing educations should provide knowledge about nurse–patient interaction, and students as well as staff nurses in NHs should be trained, for instance by simulation, to use the nurse–patient interaction as

a health-promoting resource. Finally, loneliness represents a bigger challenge than depression and anxiety; accordingly, building nurses that are capable of meeting patients' needs and facilitate care that counteracts loneliness is highly warranted

KEYWORDS
nurse–patient interaction, nursing homes, older people, quality of life, well-being

1 | INTRODUCTION

With an ageing population, the proportion of people over 80 is also increasing; this segment of the population is expected to triple between 2020 and 2050 (Bassler et al., 2017; World Health Organization, 2021). Age is not a disease. However, ageing often leaves traces in the form of failing health and impaired functionality due to pain, lethargy, impaired vision, hearing and memory and other physical ailments in addition to changes in social, roles and surroundings. Hence, with age the frequency of several chronic illnesses increases, often causing loss of functionality and thus a need for care in a nursing home (NH). Accordingly, increasing attention to quality-of-life (QoL) among NH residents along with improving care quality in NHs has been reported (Røen et al., 2019). Nevertheless, there is still a lack of evidence concerning QoL in the NH population. What is most important to facilitate NH residents' QoL? Therefore, this study investigates the associations between perceived nurse–patient interaction and QoL among NH residents, adjusted for loneliness, anxiety and depression.

What does this paper contribute to the wider global clinical community?

- This article reveals that loneliness is more frequent and more detrimental to QoL among NH residents compared to anxiety and depression, when investigating the relationship between perceived nurse–patient interaction and quality-of-life among nursing home residents adjusted for loneliness, anxiety and depression.
- The present results indicate that the nurse–patient interaction represents an essential health-promoting resource for QoL and multidimensional well-being in the NH population.
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2 | BACKGROUND

The NH population is generally marked by advanced age, physical impairment and high mortality. In Norway, about 86% of long-term NH residents have extensive assistance needs; the mean residential stay is about one to two years, and annual mortality is about 40% (Norwegian Directorate of Health, 2020). Furthermore, symptom severity seems constantly high; in 2009 (Haugan, 2014d) and 2018 (Rinnan et al., 2022) symptom severity was reported respectively as: 57% and 54% fatigue, 43% and 52% constipation, 49% and 45% pain, 41% and 43% dyspnoea, 38% and 32% insomnia, 25% and 22% appetite loss, 18% and 20% nausea, 12% and 20% anxiety and 30% and 23% reported depressive symptoms. Nevertheless, a recent study demonstrates that despite these ailments, about 50% of residents in Norwegian NHs report a high joy-of-life (Rinnan et al., 2022). Globally, anxiety and depression are commonly reported among NH residents (Beutel et al., 2017; Drageset & Haugan, 2021; Hawkley & Cacioppo, 2010); compared to older people living in their own homes NH residents report higher levels of depression and anxiety (Šare et al., 2021). Moreover, anxiety and depression indicate significant associations with loneliness in the NH population (Kobayashi & Steptoe, 2018; Tan et al., 2020).

Moving to a new and institutionalised environment such as NH is significantly associated with a reduced sense of independence (Matarese et al., 2022; Paque et al., 2018) along with changes in social roles and relationships (Cooney et al., 2014; Drageset & Haugan, 2021). With advanced age more often person's once spouse/partner, siblings, and friends have passed away. Hence, in general NH residents have limited close relationships for sharing daily life experiences, feelings, and needs (Haugan et al., 2021), thus loneliness is common (Cooney et al., 2014; Drageset & Haugan, 2021). The prevalence of loneliness among NH residents is high; more than 60% report being 'somewhat lonely' while 35% experience severe loneliness (Gardiner et al., 2020). One of the most commonly used definitions refers to 'loneliness as a subjective negative feeling associated with a perceived lack of a wider social network (social loneliness) or the absence of a particular desired companion '(emotional loneliness)' (Valtorta & Hanratty, 2012). Loneliness can be divided into two different dimensions; namely emotional and social loneliness (Weiss et al., 1973). These two dimensions can occur independently, or they can be experienced simultaneously. The term 'emotional loneliness' covers absence of closeness to other people, while 'social loneliness' involves little or no contact and interaction with other people or isolation from family or friends (Weiss et al., 1973). In this study, we assessed global loneliness without including this distinction between emotional and social loneliness.

QoL can be defined as 'individuals' perceptions of their position in life in the context of the culture and value systems in which they live and in relation to their goals, expectations, standards and 'concerns' (World Health Organization, 1998). The concept of QoL

captures individuals' subjective experience of their life situation (Quinn, 2013). Research shown has indicated that several variables such as perceived autonomy, social relationships, meaning-in-life and meaningful activities are positively and highly correlated with QoL in NH residents (Bassler et al., 2017; Haugan et al., 2021; Hupkens et al., 2019), while QoL correlates negatively with loneliness, anxiety and depression (Beutel et al., 2017; Kobayashi & Steptoe, 2018; Tan et al., 2020).

Nurse–patient interaction is important both in terms of illness and symptom management as well as emotional, mental, existential and social well-being (Haugan, 2021; Strandås & Bondas, 2018). Research reveals that NH residents' perceived nurse–patient interaction significantly associates with stronger joy-of-life, meaning-in-life, hope, self-transcendence and sense of coherence, all of which indicates better QoL (Haugan, 2021). Conversely, residents' perceived nurse–patient interaction associates strongly and negatively with loneliness, anxiety and depression. Thus, how NH residents perceive the nurse–patient interaction represents a vital resource for health and well-being in this population (Haugan, 2021).

There is a lack of evidence concerning what is most detrimental to QoL among NH residents, as well as what is most significant to QoL. Evidence indicates that anxiety and depression correlate with loneliness, while anxiety and depression associate with QoL. Moreover, loneliness and perceived nurse–patient interaction affect QoL. However, knowledge about which of these variables explain QoL best is lacking. Therefore, this study aims to explore the associations between perceived nurse–patient interaction, QoL, loneliness, anxiety and symptoms of depression among cognitively intact NH residents.

3 | THE STUDY

3.1 | Aims

This study investigates whether NH residents' perceived nurse–patient interaction associates with QoL, when adjusting for loneliness, anxiety, depression, age and gender. We hypothesise that a higher score on the Nurse–Patient Interaction Scale is associated with a higher score on QoL and less loneliness in this population. This study and article are executed in accordance with the criteria for reporting quantitative research using the STROBE Statement (Appendix S1).

3.2 | Design, data collection and procedure

This study is part of a larger study on NH residents. In a cross-sectional design, data were collected in 2017–2018 from 27 NHs, located in two large urban municipalities in Mid- and Western Norway. The NH residents were recruited at the request of the head of each individual NH department; residents considered cognitively intact by the responsible doctor and nurse were included. A head of the nursing unit who knew the residents well invited potential participants to participate and provided written and oral information about the study and explained that they had the right to withdraw at any time. Six researchers with identical professional backgrounds (all RN, MA, with education and experience in the topic of communication with the older, and with teaching in gerontology at a higher level) were trained to conduct face-to-face interviews as identical to each other as possible. In this way, the researchers ensured that the questions were equally perceived and understood. The total sample included 188 NH residents.

The inclusion criteria were the following: (1) local authority's decision of long-term NH care; (2) residential stay 3 months or longer; (3) informed consent competency recognised by responsible doctor and nurse; (4) capable of being interviewed and (5) aged 65 years and/or older.

3.3 | Measurements

The larger study collected data using seven scales; the questionnaire included 120 items. However, in this study only three scales and a global item assessing loneliness were used, along with demographic information.

Demographics: Age, sex, marital status, and length of stay in NH, were collected.

Quality-of-life was assessed by the brief Older People's Quality of Life (OPQoL-brief) questionnaire which is a short form of the Older People's Quality of Life 35 (OPQoL-35) questionnaire designed to assess QoL among older adults of 65+ (Bowling & Gabriel, 2007). The OPQOL-brief includes a preliminary single item on global QoL coded from Very good (1) to Very bad (5), and 13 items scored on a five-point scale, ranging from Strongly agree = 1, to Agree = 2, Neither = 3, Disagree = 4, and Strongly disagree = 5 (Bowling et al., 2012). These 13 items are summed for a total OPQOL-brief score ranging from 13–65, higher scores represent lower QoL. Examples of OPQOL-items include enjoying one's life, looking forward to things, staying involved in things, feeling safe where one lives, etc. (Table 1). The OPQOL-brief has been found to be a highly reliable and valid measure of QoL in old age (Bowling et al., 2012). The OPQOL-brief has been translated and validated among Norwegian NH residents showing good reliability (Cronbach's alpha = 0.90) and validity (Haugan et al., 2020).

The Nurse–Patient-Interaction Scale (NPIS) assessed NH residents' perceived nurse–patient interaction. The NPIS was developed in Norway to identify important characteristics of NH residents' experiences of the nurse–patient interaction and validated in an NH population (Haugan et al., 2012). The NPIS uses a 10-point-scale from 1 (not at all) to 10 (very much); higher numbers indicate better perceived nurse–patient-interaction. Examples of NPIS items include having trust and confidence in the staff nurses, the experience of being taken seriously, as well as experiences of being respected and recognised as a person, being listened to, and feeling good resulting from the perceived nurse–patient interaction. The

TABLE 1 Pearson's correlation coefficients.

	QoL	HADSA	Loneli-ness	NPIStotal	HADSD	Gender	Age
QoL[a]	1.00						
HADSA[b]	−.19**	1.00					
Loneliness	−.35**	.25**	1.00				
NPIStotal[c]	−.44**	.07	.24**	1.00			
HADSD[d]	−.02	.22	.18**	−.02	1.00		
Gender[e]	.01	−.03	.18**	.03	−.15*	1.00	
Age	−.05	.20**	.09	.10	.26**	−.10	1.00

Note: $p \leq 0.05$; $p \leq 0.01$.

[a]Quality of life.

[b]HADSA: Hospital anxiety and depression scale – Anxiety.

[c]Nurse–Patient interaction scale.

[d]HADSD: Hospital anxiety and depression scale – Depression.

[e]Female = 0, male = 1.

NPIS comprises 14 items identifying essential relational qualities stressed in the nursing literature (Haugan et al., 2012) developed to measure the NH residents' sense of well-being derived from the nurse–patient interaction (Rchaidia et al., 2009). The NPIS has demonstrated good psychometric properties with good content validity and reliability (Cronbach's alpha = 0.90) among NH residents (Haugan et al., 2012).

Anxiety and depression were assessed using the Hospital Anxiety and Depression Scale (HADS) developed in the United Kingdom (Zigmond & Snaith, 1983). The HADS includes two subscales assessing symptoms of anxiety and depression; seven questions assess anxiety (HADS-A) and seven questions assess depression (HADS-D). The HADS-A is related to generalised anxiety but does also address fear of panic. The HADS-D is largely based on the concept of anhedonia (the absence of the pleasure response). Each item is scored on a four-point scale from 0 (not present) to 3 (considerable) (Zigmond & Snaith, 1983). The maximum score on each subscale is 21, and a higher score indicates a higher symptom burden. A total score of 0–7 is considered normal, 8–10 indicates probable cases that should undergo further clinical examination and a score ≥11 indicates cases of anxiety or depression that require further investigation and possibly treatment (Zigmond & Snaith, 1983). The HADS is well validated (Sivertsen et al., 2015) and has been used and validated in many countries among various populations, including a Norwegian NH setting (Haugan & Drageset, 2014); this validated Norwegian version was used in this study. Previous factor-analyses of the HADS have resulted in two and three factors, and for internal consistency, a Cronbach's alpha ranging between 0.67 and 0.90 for both the HADS-A and the HADS-D is reported (Bjelland et al., 2002; Haugan & Drageset, 2014; Sivertsen et al., 2015).

Loneliness was assessed by with a global question: 'Do you feel lonely?' The responses were scored using response categories of 1 = often, 2 = sometimes, 3 = rarely and 4 = never; higher scores indicated less loneliness. For the statistical analysis, this variable was dichotomized, with response categories 1 and 2 combined into 0 = lonely and 3 and 4 combined into 1 = not lonely.

3.4 | Data analysis

Descriptive statistics of the demographic variables of age, and gender the NPIS, the HADS-A, the HADS-D, loneliness and QoL were calculated, and the reliability of the HADS, the NPIS and QoL was assessed by using the Cronbach's alpha reliability coefficient.

We initially used correlation bivariate analysis to select variables for the regression analysis and remove suspicion of multicollinearity.

Furthermore, we used multiple (linear) regression using the HADS-A, and the NPIS as the explanatory variables.

We used the SPSS for Windows Version 28.0 for all statistical analyses, applying a significance level of .05.

Cronbach's alpha was as follows; NPIS 14 items 0.90, HADS 14 items 0.83 and QoL 14 items 0.84.

3.5 | Ethical considerations

The Regional Committee for Medical and Health Research Ethics in Central Norway (ref.nr 2014/2000/REK Central) approved the study, as did the management units at the 27 NHs. Participation was voluntary and entailed no risk for the residents. The interviewers had a duty of confidentiality vis-à-vis the staff. The participants received oral and written information about the study and were informed that they could withdraw at any time during the process. Each participant provided written informed consent.

4 | RESULTS

4.1 | Descriptive statistics

The participants' ages ranged between 65 and104 years, with a mean 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 women (SD = 1.80) and 86.0 years for men (SD = 1.16). In total,

23 participants were married, 22 were cohabiting, one was single, 106 were widowed and 36 were divorced. The mean time residing in the NH when interviewed was 2.6 years for both sexes (with a range of 0.3–10 years).

Eighty-eight respondents (47%) of participants reported loneliness often or sometimes and 100 (53%) rarely or never. The frequency of depression and anxiety was 20% and 23%, respectively, while 47% reported loneliness.

The mean value for QoL was 27.1 (SD 7.8) for the 188 respondents.

We created a mean-score for each construct; in the correlation analysis, the HADS-A, the NPIS and loneliness correlated significantly with QoL, explaining 4%, 12% and 19% of the variation (square of the correlation coefficients) in QoL respectively (Table 1).

4.2 | Multiple regression analyses

The highest correlation found among the explanatory variables included in the regression analysis was 0.25 giving no concern for multicollinearity (Table 1). Adjusting for age, sex, anxiety, depression and loneliness, the NPIS sum score was statistically significant with QoL (regression coefficient (B), −121 $p = <.001$; Table 2). Neither anxiety nor depression were significantly associated with QoL ($p = .122$ vs. 494), while loneliness related significantly with QoL (regression coefficient (B), −3.934, $p = <.001$). The NPIS and loneliness demonstrated significant explanatory power both separately, and overall (expressed by the adj. R^2-value of 0.25). This means that 25% of the variation in QoL could be explained by these two explanatory variables.

5 | DISCUSSION

This study investigated whether NH residents' perceived nurse–patient interaction associates with QoL, when adjusting for age, gender, anxiety, depression and loneliness. Moreover, we investigated whether perceived nurse–patient interaction could explain the variation of QoL. In doing so, this study provides novel knowledge about the heart of NH care; that is the nurse–patient interaction. We were able to demonstrate that loneliness is more detrimental to NH residents' QoL than anxiety and depression, and that nurse–patient interaction represents a vital resource for QoL in this population.

TABLE 2 Multiple regression models with HADS-A, NPIS; Loneliness as independent variables, and QOL as dependent variable.

Covariates	B[a]	CI[b]	p-Value	R^2 adj
HADS-A[c]	−.391	−.864, .082	.105	
Loneliness	−3.577	−5.706, −1.448	.001	
NPIS total[d]	−.121	−.165, −.075	.000	
				.251

[a]B, Regression coefficient.

[b]CI, Confidence interval, R^2 = Adjusted.

[c]HADSA: Hospital anxiety and depression scale – Anxiety.

[d]Nurse–Patient interaction scale.

5.1 | Loneliness is more detrimental to NH residents' QoL than anxiety and depression

According to the World Health Organization (2017), depression is a common mental disorder among older people globally. Evidence shows that depression and anxiety are frequent symptoms in the NH population (Beutel et al., 2017; Gardiner et al., 2020); compared to older adults living at home the NH population reports higher levels of depression and anxiety (Šare et al., 2021). Moreover, a significant association between depression and poorer QoL is demonstrated among older adults (Sivertsen et al., 2015). It is well known that anxiety and depression occur together, and are highly correlated, also in the NH population (Haugan & Drageset, 2014; Sivertsen et al., 2015). However, the present study disclosed that when adjusting for age, gender, and loneliness, anxiety along with depression were not significant to QoL (Table 2). Instead, loneliness revealed a significant relation to QoL. Our results suggest that loneliness is more detrimental to NH residents' QoL than anxiety and depression, which is remarkable as well as surprising. How can this be explained?

In the present study, the frequency of depression and anxiety was 20% and 23%, respectively, while 47% of participants reported loneliness. Notably, loneliness was reported double as frequently as anxiety and depression, which is in line with a previous study indicating that more than 60% of NH residents reported 'somewhat lonely' while 35% experienced severe loneliness (Gardiner et al., 2020). Moving to a NH result from numerous losses, illnesses, disabilities, loss of functions and social relations and facing an end-of-life situation. Accordingly, the long-term NH population is characterised by a high incidence of chronic illness and functional impairments (Hoben et al., 2016), multiple simultaneous and complex diagnoses with a severe symptom burden, impaired functioning, various losses and fewer social relationships (Haugan, 2014b; Rinnan et al., 2022; Söderbacka et al., 2017). All of these increase an individual's vulnerability and distress. Vulnerability refers most directly to a heightened sense or awareness of one's mortality and fragility or susceptibility to being harmed in some way. In the NH context, a wide variety of experiences generate a sense of vulnerability. This vulnerability increases correspondingly with the resident's perceived dependency; the more dependent on care, help and support, the more vulnerable the resident is. Dependency on other people related to private aspects such as toileting and eating causes great vulnerability (Haugan, 2021; Strandås & Bondas, 2018).

What is more, residential stay in Norwegian NHs varies largely between 6 months and 2 years. In several municipalities 35% of NH residents pass away within 6 months (Norwegian Directorate of Health, 2020). In Norway, about 40% of all deaths annually are in NHs (Statistisk sentralbyrå, S. N, 2020). Consequently, many NH residents are in their last phase of life and should be acknowledged as palliative

patients requiring different types of medical and nursing treatment for palliation (Hoben et al., 2016). Many NH residents struggle with existential issues including among others 'what makes my life worth living' and 'how do I cope with the finality of my life' such existential struggles may entail extreme vulnerability resulting in existential loneliness and distress (Grech & Marks, 2017; Larsson et al., 2017; van der Vaart & van Oudenaarden, 2018). The few available studies indicate the need of NH residents to talk about existential issues (Sjöberg et al., 2018; Smedbäck et al., 2017; Haugan et al., 2013, Haugan, 2014b, 2014c, 2014d). By contrast, while the perception of existential suffering is emphasised in research on cancer care and palliative medicine (Gautam et al., 2019; Kissane, 2012), this is hardly studied in the NH context.

Considering the above-mentioned aspects related to increased vulnerability, the relatively high frequency of loneliness in this study seems rational. Anxiety and depression represent psychiatric diagnoses or mental disorders, while loneliness embodies a natural and 'sound' response to an existentially demanding life situation characterised by high dependency, vulnerability, and facing the finality of one's life. Nursing home residents are confronted daily with disease, and bereavement as well as idleness and time spent in passive activities, such as doing nothing, sleeping, and waiting, lead to feelings of boredom, loneliness, meaninglessness and indignity (Brownie & Horstmanshof, 2011; Grönstedt et al., 2013; Slettebø, Saeteren, et al., 2017; Slettebø, Skaar, et al., 2017), all of which increases one's vulnerability even further. Frail older people state that to ease existential loneliness it is important to feel seen and acknowledged by others and to feel that other people care (Sjöberg et al., 2019). Without being seen in the eyes of another being, the person is not confirmed and given no connectedness to the world; that is being no one, reduced to an object, a thing. Such experiences are existentially upsetting (Haugan, 2021). By contrast, if the NH resident feels acknowledged and seen by another person, he/she becomes someone and thus belongs to this material world. Therefore, NH-residents who experience that their existential needs are not being attended to, report frustration, suffering, hopelessness, meaninglessness and loneliness (Sjöberg et al., 2019). Experiencing caring and compassionate interaction with nurses will therefore be an important resource to alleviate loneliness (Drageset & Haugan, 2021; Haugan, 2021).

5.2 | Perceived nurse–patient interaction associates with QoL

The experience of connectedness has been linked with QoL among older people in long-term care settings (Cooney et al., 2014). However, in the NH context there are few people to connect with; during a regular day, the nurse–patient interaction represents the main resource for connectedness. In addition, the mean age of the Norwegian NH population is about 86 years; consequently, many have lost their spouse/partner and friends to death or disability and have limited close relationships left for sharing daily life experiences, feelings and needs (Haugan et al., 2021). Experiences of connectedness among NH residents include at least three aspects: (1) a sense of not being separated from the outer world; (2) connectedness to family, friends and peers; and (3) how residents are treated by the staff nurses. Regarding the first aspect, a recent qualitative study indicated that an open NH contributed to meaningful everyday life for the residents. The NHs were open institutions, meaning that they extended into the community and invited the community into the NHs to participate in activities (Slettebø et al., 2021). When not being attended to or treated with indifference, NH residents reported feelings of frustration and suffering (Bakas et al., 2012; Haugan et al., 2021). Moreover, since older adults in NHs are extremely dependent on help, care, and support by the staff nurses, they may feel ostracised to others and therefore vulnerable in this relationship. The staff nurses have the power to overlook and reject them or to meet, acknowledge and embrace them as unique persons. Therefore, it seems rational that how the staff nurses interact with their residents represents a powerful resource for the alleviation of loneliness and existential distress (Haugan, 2021; Sundström et al., 2019).

Our results demonstrate that, regardless of age and gender, NH residents' perceived nurse–patient interaction relates significantly to QoL. Looking at the NH context, obviously the nurses represent most of the human contact that NH residents in general experience; the nursing staff represents the main human contact during a day. As already highlighted, generally NH residents experience great dependency on nursing care, followed by a sense of vulnerability accompanied by lower self-worth (Haugan, 2021; Strandås & Bondas, 2018). Consequently, it is understandable that the qualities experienced in the nurse–patient interaction substantially influence on NH residents' QoL, regardless of age and gender.

Second, in the unadjusted analyses we could demonstrate that not depression, but anxiety revealed a significant association with perceived nurse–patient interaction. Plausibly, the experiences of trust and confidence in the nurses (item NPIS1) relate to less anxiety; the same goes for experiences of feeling good (item NPIS3), feeling understood (item NPIS4) and feeling involved in decisions (item NPIS6). It is rational that these aspects are vital to NH residents' anxiety. What is more, the experiences that the nurses care about you (item NPIS8), pay attention to you as a person and not just as a work task (item NPIS12), do listen interestingly to you (item NPIS9), as well as involve themselves in meaningful dialogues facilitating a sense of meaning-in-life (item NPIS11) seem important to vulnerable older individuals' anxiety. Hence, the present findings are rational. The last NPIS item (item NPIS14) involves that the nurse–patient interaction is the most important to NH residents' thriving. It is noteworthy that, previously (Haugan et al., 2012) as well as in this study, this NPIS-item reported the highest mean-score indicating that how NH residents perceive the nurse–patient interaction is crucial to their thriving and QoL.

The evidence indicates that anxiety and depression show significant associations with loneliness in the NH population (Kobayashi & Steptoe, 2018; Tan et al., 2020). Looking at the NPIS-items mentioned above, it seems evident that both anxiety and loneliness are associated with NH residents' perceived nurse–patient interaction. Possibly, the qualities embodied in the nurse–patient interaction,

such as feeling cared about and taken seriously, paid attention and listened to, etc., alleviate loneliness as well as anxiety. Still, these two phenomena behave as distinct concepts. Due to the huge dependency on the staff nurses and the increased vulnerability, NH resident's lifeworld is strongly influenced by the way he/she is met and cared about. Feeling overlooked, rejected or a burden is existentially painful and upsetting, causing existential loneliness and distress. On the other hand, feeling seen and appreciated creates a meaningful experience of well-being. It is feasible that every experience of feeling seen, appreciated, cared about and empowered by family, friends, peers and staff might buffer existential loneliness and existential distress such as meaninglessness (Haugan, 2021). Accordingly, NH staff should have a friendly and welcoming approach striving to see the resident as a unique person and thereby foster hope and meaning-in-life (Nakrem et al., 2011).

This study reveals that the perceived nurse–patient interaction, and loneliness demonstrate significant explanatory power showing that staff nurses have an important role meeting NH residents'holistic care needs and thus contributing to their QoL. This can be done by encouraging conversation about the residents' opinions and life experiences as well as stimulating positive contact between residents and between health professionals and residents, so the experience of loneliness can be alleviated (Naik & Ueland, 2020; Paque et al., 2018).

Nurses' relational competence includes knowledge and professional skills to use the nurse–patient interaction in health-promoting ways; that is, to carefully observe and competently influence the older residents, so that health, QoL and well-being increase while loneliness decreases (Haugan, 2021). A health promoting and person-centred approach is needed.

5.3 | Strength and limitations of the work

A notable strength of this research is the empirical examination of associations that have not been tested previously. This study expands previous research by testing the associations between loneliness and nurse–patient interaction as well as the relationships between nurse–patient interaction, loneliness, depression and anxiety in cognitively intact NH residents. The study builds on a strong theoretical foundation with use of questionnaires demonstrating good psychometrical properties. However, some limitations must be noted.

A self-report measure has the benefit of being easy to use, it is easy to understand, and it asks directly whether the person feels lonely. However, the question presumes that the person understands loneliness as a concept. Furthermore, the present study assessed loneliness using one single item; hence, we did not distinguish between emotional and social loneliness (Weiss et al., 1973). Using just one item, it is not possible to distinguish between social and emotional loneliness. A broader and more nuanced concept of loneliness might show different results.

The interviewers visited the participants to help complete the questionnaire; this might have introduced some bias into the respondents' reporting. The scales used were part of a battery of questionnaires comprising 120 items. Thus, frail, older NH residents might tire when completing the questionnaire representing a possible bias to their reporting to avoid such bias all interviewers were nurses, experienced in nursing care for older people and carefully selected and trained to conduct the interviews in the same manner. The interviewers followed a common standard procedure including small breaks at specific points to prevent tiring the respondents. This procedure worked out very well; most participants were even more vigorous after completing the interview. Another limitation concerns the use of self-reported data, which implies a certain risk that the findings are based on common-method variance (Podsakoff et al., 2003) Finally, this study included cognitively intact NH residents; the present results must be generalised to the entire NH population with caution. Commonly, older people are brought up to be grateful and appreciate the help they receive; this frequent attitude might have affected their responses.

5.4 | Recommendations for further research

Examine barriers to address NH residents' loneliness along with evaluating whether NH residents' loneliness results from a lack of knowledge and competence among health professionals or other factors.

1. Provide comprehensive knowledge about NH residents' experience of loneliness, which is important for understanding how to alleviate loneliness and thus increase the quality-of-life.
2. Identify whether loneliness in NHs is of an emotional or social dimension.

6 | CONCLUSION

This study suggests that loneliness is frequent as well as most detrimental to QoL among NH residents compared to anxiety and depression. Furthermore, nurse–patient interaction represents an essential health-promoting resource for QoL in this population. Finding approaches to increase QoL and well-being among older adults in NHs is highly warranted, along with systematic work addressing the healthcare staff's relational competence and working culture. Creating health promoting relationships is an important part of the professionals' role in NHs.

AUTHOR CONTRIBUTIONS

BMK, JD and GH made substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data; involved in drafting the manuscript or revising it critically for important intellectual content; given final approval of the version to be published. Each author should have participated sufficiently in the work to take public responsibility for appropriate portions of the content; agreed to be accountable for all aspects

of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

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CONFLICT OF INTEREST STATEMENT

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

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SUPPORTING INFORMATION

Additional supporting information can be found online in the Supporting Information section at the end of this article.

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