

Relationship between support and job satisfaction among nurses working in residential long-term care facilities: a cross-sectional study

Junko Hoshino¹, Koji Tamakoshi¹, Masashi Hotta²,
Suguri Muto³ and Naomi Furukawa²

¹*Department of Integrated Health Sciences, Nagoya University Graduate School of Medicine, Nagoya, Japan*
²*Department of Nursing, Gifu College of Nursing, Hashima, Japan*
³*Department of Nursing, Asahi University, Mizuho, Japan*

ABSTRACT

The quality of care in care facilities for older adults varies according to the employees' satisfaction level. This study aimed to clarify the relationship between the level of support from supervisors and colleagues and job satisfaction among nurses working in care facilities for older persons. Using a cross-sectional design, we analyzed the responses of 295 nurses in long-term care facilities in Japan to a questionnaire survey. The surveyed items included the nurses' satisfaction with their current job (the dependent variable), and the degree of support from supervisors and colleagues. Of the 295 nurses, 166 (56.3%) were satisfied with their nursing jobs. Additionally, 125 (42.4%) nurses had low support from both supervisors and colleagues, 110 (37.3%) had high support from either supervisors or colleagues, and 60 (20.3%) had high support from both. There was a positive association between support from supervisors and nurses' satisfaction. Furthermore, based on the criterion of low support from supervisors and colleagues, high support from either or both was significantly associated with nurses' satisfaction (an odds ratio of 2.04 in the case of support from either and 4.02 in the case of support from both). These results suggest that there should be strategic hiring and training of managers who can support staff, as well as the strengthening of teamwork.

Keywords: homes for the aged, nurse, satisfaction, support, quality of care

Abbreviation:

OR: odds ratio

This is an Open Access article distributed under the Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License. To view the details of this license, please visit (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

INTRODUCTION

In recent years, effective measures have become necessary to meet the needs of older persons, whose health conditions inevitably deteriorate.^{1,2} World Health Organization (WHO) has observed

Received: January 15, 2025; Accepted: February 28, 2025

Corresponding Author: Junko Hoshino, PhD

Department of Integrated Health Sciences, Nagoya University Graduate School of Medicine,
1-1-20 Daiko-Minami, Higashi-ku, Nagoya 461-8673, Japan

Tel/Fax: +81-52-719-3150, E-mail: hoshinoj@met.nagoya-u.ac.jp

the inability of current health and social care systems worldwide to deliver long-term care services and support to older adults. Furthermore, they proposed the need to include caregivers and care workers to achieve an integrated continuum of long-term care within their new framework.³ According to statistics from Organization for Economic Co-operation and Development (OECD),^{4,5} compared with other countries, Japan has the highest percentage of population aged 65 years and over, as well as 80 years and over. In addition, Japan also has the highest per capita percentage of persons with dementia. Considering the future aging of this population, the development of a high-quality long-term care system is an urgent issue.

Previous studies conducted in Japanese long-term care facilities have shown that care staff continue to work despite their poor mental well-being.⁶ Additionally, the prevalence of behavioral and psychological symptoms of dementia (BPSD) in long-term care facilities (percentage of people exhibiting at least one BPSD symptom) among residents with dementia or similar symptoms was 64%.⁷ Half of the Japanese nurses employed in long-term care facilities chose their jobs based on extrinsic work motivations, such as the convenient location and transportation, and/or better working conditions (eg, no night shifts and favorable working hours). However, upon investigating the relationship between work motivation and work engagement, intrinsic work motivation, such as an interest in gerontological nursing and/or the ability to provide careful nursing care without being overwhelmed by time, was found to have a significantly positive effect on work engagement compared to extrinsic work motivation.⁸ Therefore, improving the intrinsic motivation of nurses working in long-term care facilities is necessary.

Nurses working in nursing homes for older adults require a specific set of skills, knowledge, competencies, and experience to provide quality care for older adults.⁹ However, in recent years, the evolution of the long-term care work of nurses, including both medical and administrative responsibilities, has not been well managed. Although supervisory and organizational support can protect nurses from the negative aspects of their work environment, they experience persistent role ambiguity, job dissatisfaction, and burnout.¹⁰

According to previous research in long-term care facilities in the Netherlands, where staff perceive supervisor support, they are associated with reduced drug prescriptions for people with dementia, suggesting that leadership behaviors may affect resident outcomes.¹¹ In addition, in facilities with long-term care wards across Japan, nurses' intentions to continue working are related to appropriate support from nurse managers and work engagement.¹² Thus, a supportive environment, including support from supervisors and colleagues, is an important environmental factor for staff working in long-term care facilities for older adults. However, the importance of each support type remains unclear.

Several previous studies examined the staff satisfaction in care facilities for older persons.¹³⁻¹⁶ When overall employee satisfaction increases, there is also an increase in the satisfaction of residents and their families and a decrease in resident falls, weight loss, and pressure ulcer incidents. This study suggests that improving staff satisfaction with care facilities for older adults may increase the quality of care for residents and their families.¹³ Additionally, job satisfaction of nursing home nurses is the most influential factor in their turnover intention.¹⁴ Therefore, the support available to nursing home nurses must be reviewed. A longitudinal study in a German nursing home reported that nurses who were not satisfied with the quality of care for residents with dementia had worse scores on burnout and general health, as well as lower scores on work abilities.¹⁵ These results suggest that nurses can provide satisfactory care in improved and supportive environments. Nursing homes have also been reported to exhibit strong employer-of-choice characteristics.¹⁶

While the above-mentioned findings suggest that a supportive practice environment for nurses may increase their job satisfaction and improve the quality of care for older adults, no study

has examined whether the degree of support is related to nurses' satisfaction with care facilities for older adults. This study aimed to clarify the relationship between the level of support from supervisors and colleagues and job satisfaction among nurses working in residential long-term care facilities in Japan.

MATERIALS AND METHODS

This study used part of the data collected by the authors in a prior study¹⁷ entitled "Developing a nurse training program for clinical education instructors responsible for clinical nursing competence and career development" with nurses in Japan from 2016 to 2018.

Participants

The participants were nurses working in 789 welfare facilities and health care facilities for the older adults requiring long-term care (hereafter jointly referred to as "residential long-term care facilities"), registered in Aichi and Gifu areas. The list of care facilities for older adults in Aichi and Gifu included 350 welfare facilities and 186 health care facilities, and 174 welfare facilities and 79 health care facilities, respectively. In Japan, welfare facilities for older adults require long-term care that provide care services through inter-professional work. Health care facilities for older adults serve long-term care and mainly provide professional rehabilitation through registered therapists.

To recruit participants in 2018, the nursing managers of care facilities for older adults were mailed a copy of the research cooperation request form describing the study's purpose and methods, and three to four copies each of the research explanation form, questionnaire, and return envelopes to be given to the nurses if they agreed to participate. If the nursing managers did not agree to participate, they were asked to discard these. A total of 2,535 copies were distributed. Nurses who received the research instructions, questionnaires, and return envelopes from their respective nursing supervisors answered the questionnaires and mailed them to the researcher using the return envelopes, to express their willingness to cooperate in the study. A reply by a nurse to the questionnaire sent to the university was considered as the granting of consent. The purpose of the study, research methods, freedom of participation, and data handling were explained in writing to each research participant. Of the 336 participants, 295 (11.6%) with no missing values in the variables were included in the analysis.

Data collection and measurements

The survey method was an anonymous self-administered questionnaire. The items surveyed were the nurses' satisfaction with their current job, which was the dependent variable, as well as the degree of support from supervisors and colleagues, the participant's age, sex, years of clinical experience as a nurse, type of residential long-term care facilities, employment status, and whether the participant held a management position.

Nurses were asked, "Are you satisfied with your current job as a nurse?" and responses were rated as "very satisfied," "fairly satisfied," "undecided," "not very satisfied," and "not satisfied at all."

The Brief Job Stress Questionnaire,¹⁸ developed in Japan, was used to assess the degree of support from supervisors and colleagues. This questionnaire can be used easily in all types of workplaces and is characterized by its standardized assessment method. The three questions about support from supervisors and colleagues are, "How easy is it for you to talk to your supervisor (or colleagues)?," "How reliable is your supervisor (or colleagues) when you are

in trouble?,” and “How willing is your supervisor (or colleagues) to listen to you when you discuss personal problems?” The response options are, “not at all,” “somewhat,” “considerably,” and “very much.” The score conversion table in the implementation manual of the stress check system, based on the Occupational Health and Safety Law, is used here: “not at all” was scored as one points, “somewhat” as two points, “considerably” as three points, and “very much” as four point, and scores are calculated based on the calculation formula. Further, based on the prime score conversion table, evaluation points for support from supervisors are divided into the following five levels: for men, 3–4 points for “low,” 5–6 points for “slightly low,” 7–8 points for “normal,” 9–10 points for “slightly high,” and 11–12 points for “high”; for women, 3 points for “low,” 4–5 points for “slightly low,” 6–7 points for “normal,” 8–10 points for “slightly high,” and 11–12 points for “high.” Both men and women rate the support from their colleagues on five levels: 3–5 as “low,” 6–7 as “slightly low,” 8–9 as “normal,” 10–11 as “slightly high,” and 12 as “high.” Higher scores indicate higher levels of support from supervisors or colleagues. Subsequently, “low,” “slightly low,” and “normal” are classified as “low” support, while “slightly high” and “high” were classified as “high” support.

Statistical analysis

The χ^2 test and one-way analysis of variance were conducted as univariate analyses to examine the relationship between other variables with nurses’ satisfaction. Nurses’ satisfaction was reclassified into two groups: the “satisfied group,” which consisted of “very satisfied” and “fairly satisfied,” and the “unsatisfied group,” which consisted of “undecided,” “not very satisfied,” and “not satisfied at all.” Binary logistic regression analysis was then conducted using nurses’ satisfaction as the dependent variable; support from supervisors and colleagues as the independent variable; and sex, years of clinical experience as a nursing professional, and other factors as adjustment factors. In addition, logistic model was created to ascertain the strength of the association between high support from either and both the supervisors and colleagues and nurses’ satisfaction, using the group with low support from both supervisors and colleagues as the reference group (criteria). The statistical significance level was set at 5%, and IBM SPSS Statistics 27 for Windows was used for analysis.

Ethical considerations

The questionnaire survey for nurses was conducted with the informed consent of each participant and the nursing supervisor of each care facility. This study was conducted with the approval of the Research Ethics Committee of Gifu College of Nursing (ethical approval number, 0174; receipt number, 2825-2).

RESULTS

Overview of the participants

A summary of the participants is shown in Table 1. Regarding satisfaction with their current job as a nurse, 21 participants (7.1%) were very satisfied, 145 (49.2%) were fairly satisfied, 80 (27.1%) were undecided, 43 (14.6%) were not very satisfied, and 6 were not satisfied (2.0%).

Table 1 Participants' characteristics

		Job satisfaction as a nurse					<i>P</i> -value
		Not satisfied at all	Not very satisfied	Undecided	Fairly satisfied	Very satisfied	
		n=6	n=43	n=80	n=145	n=21	
Total	n	n (%) or Mean (SD)	n (%) or Mean (SD)	n (%) or Mean (SD)	n (%) or Mean (SD)	n (%) or Mean (SD)	
Age (years)							
29 or less	6	1 (16.7)	1 (2.3)	1 (1.3)	2 (1.4)	1 (4.8)	0.336
30 to 39	47	1 (16.7)	8 (18.6)	16 (20.0)	20 (13.8)	2 (9.5)	
40 to 49	94	1 (16.7)	14 (32.6)	28 (35.0)	47 (32.4)	4 (19.0)	
50 or older	148	3 (50.0)	20 (46.5)	35 (43.8)	76 (52.4)	14 (66.7)	
Sex							
Men	10	2 (33.3)	1 (2.3)	2 (2.5)	5 (3.4)	0 (0.0)	0.002
Women	285	4 (66.7)	42 (97.7)	78 (97.5)	140 (96.6)	21 (100.0)	
Clinical experience as a nurse (years)^a	295	16.7 (15.5)	21.1 (10.2)	20.4 (9.0)	22.4 (9.5)	25.1 (9.0)	0.155
Intention to advance career							
No	104	4 (66.7)	23 (53.5)	32 (40.0)	45 (31.0)	0 (0.0)	<0.001
Yes	191	2 (33.3)	20 (46.5)	48 (60.0)	100 (69.0)	21 (100.0)	
Type of residential long-term care facility							
Welfare facilities	159	2 (33.3)	21 (48.8)	47 (58.8)	76 (52.4)	13 (61.9)	0.576
Health care facilities	136	4 (66.7)	22 (51.2)	33 (41.3)	69 (47.6)	8 (38.1)	
Employment status							
Regular employee	234	5 (83.3)	32 (74.4)	61 (76.3)	117 (80.7)	19 (90.5)	0.573
Non-regular employee	61	1 (16.7)	11 (25.6)	19 (23.8)	28 (19.3)	2 (9.5)	
Management position							
No	213	5 (83.3)	33 (76.7)	63 (78.8)	102 (70.3)	10 (47.6)	0.059
Yes	82	1 (16.7)	10 (23.3)	17 (21.3)	43 (29.7)	11 (52.4)	

SD: standard deviation

^a Mean ± standard deviation.

Results of a one-way analysis of variance and a Chi-square test.

The relationship between supervisor and colleague support and nurses' satisfaction is shown in Table 2. There was a significant association between mean evaluation points of support from supervisors and nurses' satisfaction; higher satisfaction of nurses involved higher mean evaluation points of support from supervisors ($p < 0.001$). There was also a significant association between nurses' satisfaction and supervisor support rating scores on a five-level scale and a two-level scale.

There was a significant association between mean evaluation points and nurses' satisfaction with support from colleagues; the higher the satisfaction, the higher the mean evaluation points of support from colleagues ($p < 0.001$). There was also a significant association between nurses' satisfaction and five-point and two-level categorization of support rating scores from colleagues. There was a significant positive correlation between supervisor support and colleague support evaluation points ($r = 0.586$, $p < 0.001$).

Of the 295 nurses, 125 (42.4%) had low support from both supervisors and colleagues, 110 (37.3%) had high support from either supervisors or colleagues, and 60 (20.3%) had high support from both. There was a significant association between nurses' satisfaction and the degree of support from supervisors and colleagues.

Table 2 Association between support and nurses' job satisfaction

	Total n	Job satisfaction as a nurse					P- value	Trend P
		Not satisfied at all	Not very satisfied	Unde- cided	Fairly satisfied	Very satisfied		
		n=6 n (%) or Mean (SD)	n=43 n (%) or Mean (SD)	n=80 n (%) or Mean (SD)	n=145 n (%) or Mean (SD)	n=21 n (%) or Mean (SD)		
Supervisor support								
Evaluation points ^a	295	5.2 (2.3)	6.8 (1.8)	7.2 (1.9)	8.2 (2.0)	9.8 (2.0)	<0.001	<0.001
Five levels of the evaluation points								
Low	7	3 (50.0)	0 (0.0)	4 (5.0)	0 (0.0)	0 (0.0)	<0.001	
Slightly low	23	1 (16.7)	7 (16.3)	4 (5.0)	11 (7.6)	0 (0.0)		
Normal	110	1 (16.7)	22 (51.2)	41 (51.2)	42 (29.0)	4 (19.0)		
Slightly high	119	1 (16.7)	13 (30.2)	25 (31.3)	71 (49.0)	9 (42.9)		
High	36	0 (0.0)	1 (2.3)	6 (7.5)	21 (14.5)	8 (38.1)		
Two levels of the evaluation points								
Low	140	5 (83.3)	29 (67.4)	49 (61.3)	53 (36.6)	4 (19.0)	<0.001	
High	155	1 (16.7)	14 (32.6)	31 (38.8)	92 (63.4)	17 (81.0)		
Colleague support								
Evaluation points ^a	295	7.0 (3.0)	6.8 (1.7)	8.2 (1.9)	8.7 (1.9)	9.8 (2.0)	<0.001	<0.001

Five levels of the evaluation points

Low	13	2 (33.3)	6 (14.0)	3 (3.8)	2 (1.4)	0 (0.0)	<0.001
Slightly low	103	2 (33.3)	26 (60.5)	30 (37.5)	41 (28.3)	4 (19.0)	
Normal	104	0 (0.0)	7 (16.3)	27 (33.8)	65 (44.8)	5 (23.8)	
Slightly high	42	2 (33.3)	2 (4.7)	15 (18.8)	18 (12.4)	5 (23.8)	
High	33	0 (0.0)	2 (4.7)	5 (6.3)	19 (13.1)	7 (33.3)	

Two levels of the evaluation points

Low	220	4 (66.7)	39 (90.7)	60 (75.0)	108 (74.5)	9 (42.9)	0.002
High	75	2 (33.3)	4 (9.3)	20 (25.0)	37 (25.5)	12 (57.1)	

Supervisor support/colleague support levels

Low/Low	125	4 (66.7)	27 (62.8)	41 (51.2)	50 (34.5)	3 (14.3)	<0.001
Low/High	15	1 (16.7)	2 (4.7)	8 (10.0)	3 (2.1)	1 (4.8)	
High/Low	95	0 (0.0)	12 (27.9)	19 (23.8)	58 (40.0)	6 (28.6)	
High/High	60	1 (16.7)	2 (4.7)	12 (15.0)	34 (23.4)	11 (52.4)	

SD: standard deviation

^a Mean ± standard deviation.

Results of a one-way analysis of variance and a Chi-square test.

Association between support and nurse satisfaction

Even after statistically adjusting for adjustment factors such as sex and years of clinical experience, there was still an association between support from supervisors and nurses' satisfaction (odds ratio [OR]=3.31, 95% confidence interval [CI], 2.02–5.43; p<0.001). Nurses' satisfaction was higher when support from supervisors was also high. Support from colleagues was not associated with nurses' satisfaction after controlling for adjustment factors (OR=1.65; 95% CI, 0.93–2.90; p=0.086).

Table 3 presents the results of support status from both supervisors and colleagues related to nurses' satisfaction. Model results showed that based on the criterion of low support from both supervisors and colleagues, high support from either or both was significantly associated with nurses' satisfaction (OR=2.04; 95% CI, 1.18–3.51; p=0.010; OR=4.02; 95% CI, 1.99–8.12; p<0.001). In addition, the association with nurse satisfaction increased with increasing support status (Trend p<0.001).

Table 3 Factors related to nurses' job satisfaction

	Crude				Model			
	OR	95% CI	P-value	Trend P	Adjusted OR	95% CI	P-value	Trend P
Supervisor support/ Colleague support levels								
Low support from both	1 (Reference)			<0.001	1 (Reference)			<0.001
High support from either	2.20	1.30– 3.71	0.003		2.04	1.18– 3.51	0.010	
High support from both	4.08	2.06– 8.07	<0.001		4.02	1.99– 8.12	<0.001	

CI: confidence interval

OR: odds ratio

Logistic regression analysis. Dependent variable: nurses' job satisfaction (0, unsatisfied; 1, satisfied). Confounding factors: sex, clinical experience as a nurse, employment status, type of residential long-term care facilities, management position, intention to advance career.

DISCUSSION

The results showed an association between supervisor support and nurses' satisfaction. Furthermore, based on the criterion of low support from supervisors and colleagues, high support from either or both was significantly associated with nurses' satisfaction (OR of 2.04 in the case of support from either and 4.02 in the case of support from both). Large-scale studies have reported that a supportive nursing practice environment is associated with job satisfaction among nurses in nursing homes.¹⁹ The percentage of caregivers, including nurses in Swiss nursing homes, who were satisfied with their jobs was as high as 86.6%, and factors such as supportive leadership, better teamwork, a resident safety climate, and a resonant nursing home administrator were reported to be associated with nurse satisfaction. These results suggest the need for strategic recruitment and ongoing leadership training of nursing home leaders.²⁰ Staff working in Canadian long-term care settings were also reported to rate their job satisfaction as higher than "neutral" but less than "satisfied," rating their supervisors as building connections with staff more often.²¹ Reports show that support from supervisors and co-workers is associated with workers' affective commitment and work engagement,^{22,23} and that there is a strong association between a work-related sense of coherence and affective organizational commitment.²⁴ In countries other than Japan, nurses may feel satisfied with receiving support, which leads to increased commitment and engagement. In Japan, managers should be trained to provide support to staff in care facilities for older adults, strategically recruit individuals with the required experience, and strengthen teamwork to ensure mutual support. Team leadership, mutual performance monitoring, backup behavior, adaptability, and team orientation are the core components of teamwork.²⁵ Japanese long-term care facilities need to strengthen these components to enhance nurses' intrinsic motivation.

The results of the present study showed a moderate correlation between supervisor and colleague support scores, with 42.4% of the participants having low scores for both supervisor and colleague support, 37.3% having high scores for support from either group, and only 20.3%

having high scores for support from both groups. Studies outside Japan have reported a weak to moderate positive correlation between supervisor support and co-worker support scores,^{22,23} and the findings of this study were similar. Supervisor support has been shown to buffer the adverse effects of job demands on the emotional exhaustion of care staff working in care facilities for older adults,²⁶ and the establishment of a support system is urgently needed.

Regarding job satisfaction among women, it has been reported that nurses working at nursing care medical facilities in Japan have higher subjective job satisfaction than working women in general.²⁷ Additionally, compared to nurses working in hospitals, nurses and care workers working in care facilities for older adults report higher scores on physical exhaustion and lower scores on job satisfaction.²⁸ Meanwhile, this study was conducted before the COVID-19 pandemic. The pandemic context contributed to increased emotional exhaustion and fear of COVID-19 for nurses.²⁹ High frequencies of functional, cognitive, emotional, and nutritional decline were found after the first wave of COVID-19 among institutionalized older adults.³⁰ These issues may be affecting the working environment in facilities, and there is a need for even greater support from supervisors and colleagues to increase nurses' satisfaction.

This study has a few limitations. The response rate was low. The nursing managers of care facilities received three to four copies of the research explanation form, questionnaire, and return envelopes to recruit participants. These forms were to be given to the nurses. However, it is unknown whether the manager consented to the surveys and distributed them to the nurses. Furthermore, it is possible that nurses who were interested in this study responded to this study, which could imply that only those nurses interested in the study content were included in the results. Despite being adjacent, there are geographical differences between the two areas. Aichi area is a plain and densely populated area, while part of the Gifu area is a mountainous region. Thus, the facility environment and the characteristics of older persons living there may be different, which may have affected nurses' satisfaction. Given that this study was cross-sectional, it is not possible to draw conclusions about the causality of the results. Future research should reexamine these findings.

CONCLUSIONS

We identified relationships between the level of support from supervisors and colleagues and job satisfaction among nurses working in residential long-term care facilities for older adults. The results showed that there was an association between support from supervisors and nurses' satisfaction, and, with low support as the referent category, nurses' satisfaction was higher when the level of support was high.

CONFLICT OF INTEREST

The authors declare that there are no competing interests.

FUNDING

This work was supported by JSPS KAKENHI under Grant number JP15K11554.

ACKNOWLEDGMENT

The authors would like to thank the nurses who participated in this survey.

REFERENCES

- 1 Prince MJ, Wu F, Guo Y, et al. The burden of disease in older people and implications for health policy and practice. *Lancet*. 2015;385(9967):549–562. doi:10.1016/s0140-6736(14)61347-7
- 2 Storms H, Marquet K, Aertgeerts B, Claes N. Prevalence of inappropriate medication use in residential long-term care facilities for the elderly: A systematic review. *Eur J Gen Pract*. 2017;23(1):69–77. doi:10.1080/13814788.2017.1288211
- 3 World Health Organization. *Framework for countries to achieve an integrated continuum of long-term care*. World Health Organization; 2021. Accessed January 10, 2025. <https://iris.who.int/bitstream/handle/10665/349911/9789240038844-eng.pdf?sequence=1>
- 4 Organization for Economic Co-operation and Development. *Health at a Glance 2023: OECD Indicators*. OECD Publishing; 2023. doi:10.1787/7a7afb35-en
- 5 Organization for Economic Co-operation and Development. Elderly population. Accessed January 10, 2025. <https://www.oecd.org/en/data/indicators/elderly-population.html>
- 6 Ura C, Okamura T, Takase A, Shimmei M, Ogawa Y. Mental well-being of staff in long-term care facilities at risk. *Geriatr Gerontol Int*. 2021;21(10):966–967. doi:10.1111/ggi.14260
- 7 Arai A, Ozaki T, Katsumata Y. Behavioral and psychological symptoms of dementia in older residents in long-term care facilities in Japan: a cross-sectional study. *Aging Ment Health*. 2017;21(10):1099–1105. doi:10.1080/13607863.2016.1199013
- 8 Zeng D, Takada N, Hara Y, et al. Impact of intrinsic and extrinsic motivation on work engagement: A cross-sectional study of nurses working in long-term care facilities. *Int J Environ Res Public Health*. 2022;19(3):1284. doi:10.3390/ijerph19031284
- 9 Cooper E, Spilsbury K, McCaughan D, Thompson C, Butterworth T, Hanratty B. Priorities for the professional development of registered nurses in nursing homes: a Delphi study. *Age Ageing*. 2017;46(1):39–45. doi:10.1093/ageing/afw160
- 10 Stewart C, Berta WB, Laporte A, Deber R, Baumann A. Nurses' work, work psychology, and the evolution & devolution of care provision in nursing homes: A scoping review. *Int J Nurs Stud Adv*. 2023;5:100133. doi:10.1016/j.ijnsa.2023.100133
- 11 Willemse BM, de Jonge J, Smit D, Dasselaar W, Depla MF, Pot AM. Is an unhealthy work environment in nursing home care for people with dementia associated with the prescription of psychotropic drugs and physical restraints? *Int Psychogeriatr*. 2016;28(6):983–994. doi:10.1017/S1041610216000028
- 12 Eltaybani S, Noguchi-Watanabe M, Igarashi A, Saito Y, Yamamoto-Mitani N. Factors related to intention to stay in the current workplace among long-term care nurses: A nationwide survey. *Int J Nurs Stud*. 2018;80:118–127. doi:10.1016/j.ijnurstu.2018.01.008
- 13 Plaku-Alakbarova B, Punnett L, Gore RJ; Team PR. Nursing home employee and resident satisfaction and resident care outcomes. *Saf Health Work*. 2018;9(4):408–415. doi:10.1016/j.shaw.2017.12.002
- 14 Lee J. Nursing home nurses' turnover intention: A systematic review. *Nurs Open*. 2022;9(1):22–29. doi:10.1002/nop2.1051
- 15 Schmidt SG, Dichter MN, Bartholomeyczik S, Hasselhorn HM. 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. *Geriatr Nurs*. 2014;35(1):42–46. doi:10.1016/j.gerinurse.2013.09.006
- 16 Rondeau KV, Wagar TH. Nurse and resident satisfaction in magnet long-term care organizations: do high involvement approaches matter? *J Nurs Manag*. 2006;14(3):244–250. doi:10.1111/j.1365-2934.2006.00594.x
- 17 Nakayama A, Hoshino J, Hotta M, Hashimoto M, Furukawa N. Characteristics associated with career self-reliance behaviors of nurses working in nursing homes in Japan: A cross-sectional study. *Belitung Nurs J*. 2025;11(1):91–100. doi:10.33546/bnj.3665
- 18 Shimomitsu T. Final development of the Brief Job Stress Questionnaire mainly used for assessment of the individuals. Article in Japanese. In: Kato M ed. *The Ministry of Labor sponsored grant for the prevention of work-related illness: The 1999 report*. Tokyo Medical College; 2000:126–164.
- 19 Choi J, Flynn L, Aiken LH. Nursing practice environment and registered nurses' job satisfaction in nursing homes. *Gerontologist*. 2012;52(4):484–492. doi:10.1093/geront/gnr101
- 20 Schwendimann R, Dhaini S, Ausserhofer D, Engberg S, Zúñiga F. Factors associated with high job satisfac-

- tion among care workers in Swiss nursing homes – a cross sectional survey study. *BMC Nurs.* 2016;15:37. doi:10.1186/s12912-016-0160-8
- 21 Tourangeau AE, Widger K, Cranley LA, Bookey-Bassett S, Pachis J. Work environments and staff responses to work environments in institutional long-term care. *Health Care Manage Rev.* 2009;34(2):171–181. doi:10.1097/HMR.0b013e31819ea9c8
 - 22 Sarti D. Job resources as antecedents of engagement at work: Evidence from a long-term care setting. *Hum Resour Dev Q.* 2014;25(2):213–237. doi:10.1002/hrdq.21189
 - 23 Rousseau V, Aubé C. Social support at work and affective commitment to the organization: The moderating effect of job resource adequacy and ambient conditions. *J Soc Psychol.* 2010;150(4):321–340. doi:10.1080/00224540903365380
 - 24 Grødal K, Innstrand ST, Haugan G, André B. Affective organizational commitment among nursing home employees: A longitudinal study on the influence of a health-promoting work environment. *Nurs Open.* 2019;6(4):1414–1423. doi:10.1002/nop.2.338
 - 25 Salas E, Sims DE, Burke CS. Is there a “Big Five” in Teamwork? *Small Group Res.* 2005;36(5):555–599. doi:10.1177/1046496405277134
 - 26 Willemse BM, de Jonge J, Smit D, Depla MF, Pot AM. The moderating role of decision authority and coworker- and supervisor support on the impact of job demands in nursing homes: a cross-sectional study. *Int J Nurs Stud.* 2012;49(7):822–833. doi:10.1016/j.ijnurstu.2012.02.003
 - 27 Hyoudo H. A Study of the work conditions, daily living habits and occupational stress of nurses and care workers employed by nursing care medical facilities. *J Rural Med.* 2009;4(1):7–14. doi:10.2185/jrm.4.7
 - 28 Septarina L, Sumii H, Kunisada M, Matsumoto Y. Comparative study of stress and burnout among nurses and caregivers during end-of-life care. *Humanit Sci: J Fac Health Welf Pref Univ Hiroshima.* 2017;17(1):65–71.
 - 29 Altintas E, Boudoukha AH, Karaca Y, et al. Fear of COVID-19, emotional exhaustion, and care quality experience in nursing home staff during the COVID-19 pandemic. *Arch Gerontol Geriatr.* 2022;102:104745. doi:10.1016/j.archger.2022.104745
 - 30 Pérez-Rodríguez P, Díaz de Bustamante M, Aparicio Mollá S, et al. Functional, cognitive, and nutritional decline in 435 elderly nursing home residents after the first wave of the COVID-19 Pandemic. *Eur Geriatr Med.* 2021;12(6):1137–1145. doi:10.1007/s41999-021-00524-1