

Characteristics associated with career self-reliance behaviors of nurses working in nursing homes in Japan: A cross-sectional study



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Abstract

Background: With an aging global population, establishing integrated systems for long-term care is challenging in several countries. Adequate and quality service for older adults in nursing homes can improve their quality of life. The career self-reliance of nurses working in nursing homes may affect the quality of life of older adults; this suggests a need for educational support for career self-reliance behavior.

Objective: Our study aimed to identify characteristics associated with the career self-reliance behaviors of nurses working in nursing homes.

Methods: Data were collected from nurses working in 789 nursing homes in Japan using questionnaires in 2018. The questionnaire consisted of the Scale of Career Self-Reliance Attitude, Career Self-Reliance Behavior to measure the degree of nurses' career self-reliance, questions about personal attributes, work environment, and work commitment; and the Clinical Nursing Competence Self-Assessment Scale. A multiple regression analysis was conducted using career self-reliance as the dependent variable and characteristics as the independent variables.

Results: Consequently, a total of 336 questionnaires were collected, of which 289 without missing data were analyzed. Of the 289 participants, 79 (27.3%) had certifications or licenses other than those for nursing or had completed graduate school. As a result of multiple regression analysis, a higher frequency of nursing practice ($\beta = 0.38, p < 0.001$) was associated with career self-reliance attitudes. Having certifications or licenses other than those for nursing or completing graduate school ($\beta = 0.11, p = 0.03$), job satisfaction as a nurse ($\beta = 0.12, p = 0.03$), higher frequency of nursing practice ($\beta = 0.28, p < 0.001$), and a higher degree of career self-reliance attitude ($\beta = 0.45, p < 0.001$) were associated with career self-reliance behavior. Relationships with supervisors or colleagues were not associated with career self-reliance.

Conclusion: It is important for nurses working in nursing homes to enrich their nursing practice, continue learning, and be satisfied with their jobs to improve their career self-reliance. Nurses and administrators working in nursing homes should make efforts to obtain these characteristics for nurses' career self-reliance behaviors. Particularly, maintaining nursing practice frequency is essential for improving the quality of life of older adults through nurses' career self-reliance.

Keywords

career; competence; nurse; nursing home; nursing practice

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Background

With an aging global population ([United Nations Department of Economic and Social Affairs, 2022](#)), establishing integrated systems for long-term care is challenging in many countries ([World Health Organization \[WHO\], 2015](#)). Japan is already witnessing rampant aging, with a rate of approximately 30%, the highest in the world ([United Nations Department of Economic and Social Affairs, 2022](#)). Against this background,

Japan has focused on building a community-based integrated care system since 2000s, which “enables citizens to keep living in a familiar environment, regardless of the type of housing, through the use of various services provided locally, around the clock and 365 days a year” ([Tsutsui, 2014](#)). The two core types of facilities in this system that support the lives of older adults are intensive care homes and long-term care health facilities.

Nurses play a central role in the delivery of care for older adults and can contribute to the provision of integrated care that results in better outcomes for older adults. As primary care providers, nurses enable dignified end-of-life experiences (World Health Organization [WHO], 2015). To fulfill these roles, nurses working in nursing homes are not only required to continue developing their competence and experience (Cooper et al., 2017; Fitzpatrick et al., 2023), but also to maintain their competence by engaging in continuous development and lifelong learning (International Council of Nurses [ICN], 2021). Career self-reliance refers to lifelong, independent learning and career development. Several prior studies in various countries have reported that adequate and quality service for older adults in nursing homes can improve their quality of life (Dung et al., 2020; Pramesona & Taneepanichskul, 2018). Career self-reliance of nurses working in nursing homes may affect the quality of life of older adults and suggest the need for educational support for career self-reliance behavior. Based on these reasons, the world is monitoring the professional development of Japanese nurses who are responsible for the care system for older adults.

Previous studies have suggested that factors related to the career self-reliance of nurses, in addition to continued learning, include personal attributes, such as years of clinical experience; work environment, such as the existence of role models and mentors; and reflection on nursing practice (Flinkman et al., 2017; Lang et al., 2023; Ma et al., 2022;

Nishimoto et al., 2023). A previous study has shown that in various hospital settings, nurses who have developed careers and strong practical skills beneficially influence patients (Wong et al., 2017). Although it would be possible to examine measures to support career self-reliance behavior if the characteristics associated with it among nurses working in nursing homes were clarified, few prior studies have focused on this issue. These considerations indicate the necessity to conduct more studies on supporting nurses' career self-reliance in order to improve the quality of life of older adults in nursing homes.

Literature Review and Conceptual Framework

Adequate and high-quality service for older adults in nursing homes can improve their quality of life (Dung et al., 2020; Pramesona & Taneepanichskul, 2018). This means that nurses working in nursing homes must build strong careers to provide good care to older adults. Career self-reliance means trying to develop one's career independently and continuously while adapting to changes in the environment based on psychological factors such as self-awareness, a sense of one's own values, and a consciousness of proactively shaping one's own career (Horiuchi & Okada, 2009). Based on these studies, the career of nurses working in nursing homes, who develop their own careers autonomously through continuous learning, was measured using the concept of career self-reliance.

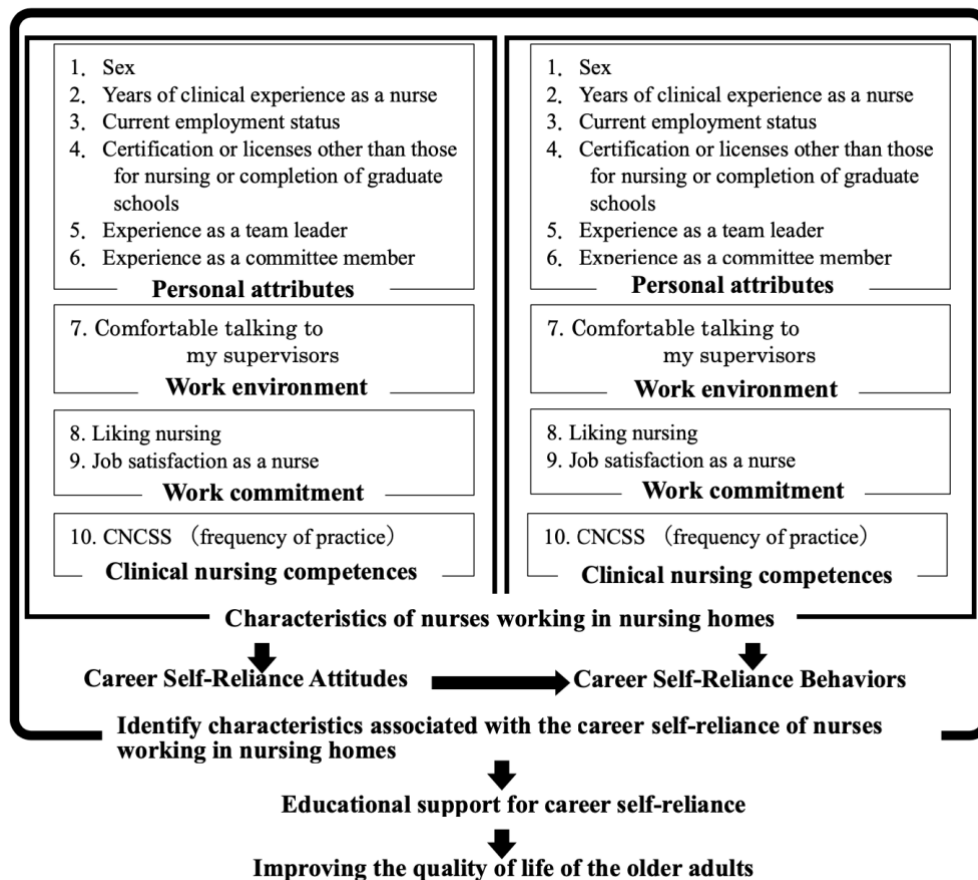


Figure 1 Conceptual framework

Abbreviation: CNCSS, Clinical Nursing Competence Self-Assessment Scale

Some previous studies have found that personal attributes such as years of clinical experience (Ma et al., 2022), employment status (Alameddine et al., 2017), and roles required to perform leadership and educational functions (Clark et al., 2023; Ting et al., 2024) may be associated with professional development. On the other hand, every nurse is responsible for maintaining their competence by engaging in continuous professional development and lifelong learning (International Council of Nurses [ICN], 2021; Smith, 1982). It can be inferred that continuing to learn as a nurse including going for higher studies or obtaining any licenses, is also related to career self-reliance. In addition, in work environment, existence of role models or mentors (Adeniran et al., 2013; Lang et al., 2023) and supportive work climates (Abou Hashish, 2017) can be associated with nurses' careers. Moreover, for work commitment, several studies have indicated an association between nurses' high job satisfaction, commitment, and their careers (Alameddine et al., 2017). Finally, nursing practice competence (Flinkman et al., 2017) and reflection on nursing practice (Nishimoto et al., 2023) are implicated in nurses' career self-reliance.

However, no studies have explored the association between the above-mentioned characteristics and career self-reliance among nurses working in nursing home settings.

Based on the literature review, this study explored the association between career self-reliance as a dependent variable, and characteristics of nurses working in nursing homes as independent variables. In this study, career self-reliance means trying to develop one's career independently and continuously while adapting to changes in the environment based on psychological factors such as self-awareness, a sense of one's own values, and a consciousness of proactively shaping one's own career. The characteristics potentially associated with career self-reliance, were composed of four aspects: 1) personal attributes, 2) work environment, 3) work commitment, and 4) clinical nursing competencies. Figure 1 presents a conceptual framework that is based on the literature review.

Objective

This study aimed to identify characteristics associated with the career self-reliance behaviors of nurses working in nursing homes.

Methods

Study Design

We conducted a descriptive cross-sectional study and followed the STROBE statement for cross-sectional studies (Von Elm et al., 2007).

Sample and Setting

The participants were nurses working at 789 nursing homes in Prefectures A and B, as of 2018. These prefectures were adjacent to each other, and the people commuted to work, school, and shopping to and from the prefectures. This study focused on two types of nursing homes established under the Long-Term Care Insurance Act: intensive care homes and long-term care health facilities. Their main role was to support the daily lives of older adults. The intensive care homes provided care for bathing, bodily waste elimination, meals,

other daily activities, functional training, health management, and medical care to people who required long-term care. By contrast, the long-term care health facilities provided nursing, care, functional training under the control of medical management, and other necessary care for medical treatment and daily activities to those who required long-term care in Japan.

The sample size was considered as follows. This study used multiple regression analysis to identify characteristics associated with the career self-reliance behaviors of nurses working in nursing homes. Multiple regression analysis requires approximately 10 observations per independent variable (Althubaiti, 2023). Over 100 objects were called for analysis in this study to use 10 to 11 independent variables. In addition, the response rate to the questionnaires was expected to be less than 10% because the questionnaires were sent to the nursing directors of nursing homes without asking about their willingness to cooperate. Moreover, we expected missing data. Therefore, it was decided to send around 2,500 questionnaires to the directors.

Data Collection

We used mailed questionnaires to collect data. We sent 2,535 questionnaires to the nurse directors of these facilities in the survey. In some of these nursing homes, nursing directors also directly participate in the care of older adults. Therefore, to reduce the burden on them, we sent the questionnaire to their facilities without asking them if they could cooperate or not. If nurse directors were able to cooperate, we asked them to distribute the questionnaires consisting of three measurement tools to nurses working at the nursing homes. If they could not participate, they were asked to discard the questionnaires. In addition, the nursing directors were asked that the nurses not be forced to answer the questionnaires. The participants responded to the anonymous questionnaires and returned them individually using envelopes.

Instruments

Career Self-Reliance Attitudes and Career Self-Reliance Behaviors scales

We used the Career Self-Reliance Attitudes (CSRA) and Career Self-Reliance Behaviors (CSRB) scales developed by Horiuchi and Okada (2009). They are unique measures scales focusing on career self-reliance, not just career.

The results of factor analysis on CSRA and CSRB for content validity and construct validity showed four and three factors, respectively. It provided their validity. The four factors of CSRA are "professional self-efficacy," "motivation to develop one's own career," "clarity of professional self-concept," and "awareness of self-responsibility related to career." The three CSRB factors are "career development behavior," "adapting behavior to changes in the work environment," and "proactive work behavior." Psychological factors of CSRA promote CSRB (Horiuchi & Okada, 2009).

Participants responded to 25 items each on the CSRA and CSRB scales using a five-point Likert scale ranging from 1 ("not applicable") to 5 ("applicable"). The CSRA included 25 items such as "I believe that I am responsible for my own satisfactory career path"; and those of the CSRB included such as "I invest in myself to develop my skills and abilities." Higher CSRA and CSRB scores indicated a higher degree of

trying to develop one's career independently and continuously. Moreover, Cronbach's $\alpha = 0.65-0.91$ were calculated for internal consistency of its reliability (Horiuchi & Okada, 2009).

Permission was obtained from the developers for the use of CSRA and CSRB. Additionally, they have agreed to translate these instruments into English for this study.

Questionnaire on characteristics of nurses working in nursing homes

In our conceptual framework, the characteristics associated with career self-reliance of nurses working in nursing homes include four aspects: 1) personal attributes, 2) work environment, 3) work commitment, and 4) clinical nursing competencies. To explore the characteristics associated with the CSRA and CSRB of nurses working in nursing homes, we used a questionnaire developed in this study to identify their characteristics. The questionnaire items comprised closed questions and were structured for three of the four aspects associated with the career self-reliance of nurses in nursing homes [Aspect 4 was measured using the Clinical Nursing Competence Self-Assessment Scale (CNCSS)]. Aspect 1 included personal attributes, such as age, sex, years of clinical experience as a nurse, license or certification as a public health nurse or a certified nurse specialist, graduate school, and experience in various committee memberships and team leadership roles related to work within the organization. Aspect 2 included work environment, such as the type and size of the current facility; the educational system in the facility, such as the clinical ladder; and trust in supervisors or colleagues. Aspect 3 covered work commitment and included the worthwhileness of nursing and job satisfaction. We considered the items through literature review and ensured the content validity through expert meetings. The members of the expert meeting comprised nurses with diverse and long clinical experiences, as well as nursing scientists specializing in gerontological nursing and nursing administration.

Clinical Nursing Competence Self-Assessment Scale

We used the Clinical Nursing Competence Self-Assessment Scale (CNCSS) to measure Aspect 4 of the clinical nursing competencies across the abovementioned four aspects associated with the career self-reliance of nurses working in nursing homes (Maruyama et al., 2011). The participants responded to 64 items about the frequency of practice using a four-point Likert scale ranging from 1 ("I never do") to 4 ("I always do"). The results of expert board, factor analysis, and known-group technique on CNCSS for content or construct validity showed four factors. They provided their validity. Moreover, the calculated Cronbach's $\alpha = 0.68-0.85$ for internal consistency provided the reliability of them (Kudo et al., 2009; Maruyama et al., 2011). Permission was obtained from the developers for the use of CNCSS. The developers published this instrument in English, and we followed their wording in this study.

Data Analysis

Data analyses were performed using IBM SPSS Statistic ver.28. A p -value <0.05 was considered statistically significant.

Descriptive statistics were calculated for each measurement tool question.

Prior to the multiple regression analysis, independent variables were examined using the following procedure: first, each variable was divided into two groups and the means of the total CSRA and CSRB scores between the two groups were compared using an unpaired t -test. Variables that did not show significant differences were excluded. Second, to avoid the multicollinearity among independent variables in multiple regression analysis, Pearson's correlation coefficient r between continuous variables was calculated, and variables with relatively strong correlations that showed a statistical significance of $r \geq 0.5$ were excluded based on consideration. Through these procedures, we ensured that the variables that remained on all four aspects were likely to be associated with the career self-reliance of nurses working in nursing homes, and used as independent variables in the multiple regression analysis. After these considerations, to explore the characteristics associated with participants' career self-reliance, we conducted a multiple regression analysis using the forced entry method, in which CSRA or CSRB scores were the dependent variables and the above were independent variables. In the multiple regression analysis, we checked the variance inflation factor (VIF) values to avoid multicollinearity among independent variables.

Ethical Considerations

The purpose, methods, and significance of the research were explained to the participants in documents, and the right to self-determination was guaranteed by clearly stating that participation in the research was voluntary. To ensure anonymity, the questionnaire items did not include any personally identifiable information, and the participants were asked to answer the questions anonymously and return them individually. The study approval was obtained from the Research Ethics Committee of Gifu College of Nursing (Approval number: 0174).

Results

A total of 336 questionnaires were collected (13.3%), of which 289 without missing data were analyzed. The response rate was low because we sent the questionnaire to their facilities without asking the nursing directors if they could cooperate or not.

Participants Characteristics

Table 1 shows the participants' backgrounds. First, regarding Aspect 1, 46.8% of the 289 participants had more than 21 years of clinical experience as nurses, 78.2% were regularly employed. Moreover, 27.3% had certifications or licenses other than those for nursing or had completed graduate school. In addition, around 50% had experience as team leaders, and 66.1% had experience as committee members. Second, regarding Aspect 2, around 50% felt comfortable talking to their supervisors. Third, regarding Aspect 3, more than 90% of participants stated that they liked nursing a lot or fairly well and more than 50% stated that they were very satisfied with their jobs as nurses or fairly well. Finally, regarding Aspect 4, the mean of the CNCSS (frequency of practice) score was 458.4 ± 80.7 .

Table 1 Participants' characteristics (N = 289)

Item		n	%
Aspect 1 Personal attributes			
Age	20s	6	2.0
	30s	47	16.3
	40s	98	33.9
	Over 50s	138	47.8
Sex	Male	9	3.1
	Female	268	92.7
	No answer / Unknown	12	4.2
Years of clinical experience as a nurse	Mean 21.5 ± 9.5		
	10 years	36	12.4
	20 years	104	36.3
	Over 20 years	136	46.8
Current employment status	No answer / Unknown	13	4.5
	Regular	226	78.2
	Non-regular	62	21.5
Certification or licenses other than those for nursing or completion of graduate school	No answer / Unknown, etc.	1	0.3
	Yes	79	27.3
	No	210	72.7
Experience as a team leader	Yes	140	48.4
	No	148	51.2
Experience as a committee member	No answer / Unknown	1	0.3
	Yes	191	66.1
	No	97	33.6
	No answer / Unknown	1	0.3
Aspect 2 Work environment			
Comfortable talking to my supervisors	Very / Fairly	138	47.8
	A little / Not at all	150	51.9
	No answer / Unknown	1	0.3
Aspect 3 Work commitment			
Like nursing	Very / Fairly	263	91.0
	A little / Not at all	23	8.0
	No answer / Unknown	3	1.0
Job satisfaction as a nurse	Very / Fairly	152	52.6
	A little / Not at all	135	46.7
	No answer / Unknown	2	0.7
Aspect 4 Clinical nursing			
CNCSS (frequency of practice) score		Mean 458.4 ± 80.7	

CSRA and CSRB

Table 2 shows the CSRA and CSRB scores. The means of the CSRA and CSRB scores were 79.6 ± 11.1 and 78.1 ± 13.8,

respectively. In this study, the Cronbach's α of CSRA and CSRB were α = 0.87 and α = 0.94, respectively.

Table 2 Career self-reliance attitudes and career self-reliance behaviors scale scores

Measurement	Mean	SD
Total CSRA scores	79.6	11.1
Professional self-efficacy	29.4	5.7
Motivation to develop one's own career	21.4	3.5
Clarity of professional self-concept	16.3	3.8
Awareness of self-responsibility related to career	12.5	2.0
Total CSRB scores	78.1	13.8
Career development behavior	28.3	7.2
Adapting behavior to changes in the work environment	19.6	4.0
Proactive work behavior	30.1	5.3

Abbreviations: CSRA, Scale of Career Self-Reliance Attitudes; CSRB, Scale of Career Self-Reliance Behaviors; SD, Standard Deviation

Selecting Independent Variables to Explore the Characteristics Associated with Career Self-Reliance

Through the consideration mentioned below, we selected 10 independent variables for multiple regression analysis with CSRA as the dependent variable, and 11 independent variables for multiple regression analysis with CSRB as the dependent variable from the four aspects of characteristics

that were likely to be associated with the career self-reliance behaviors of nurses working in nursing homes.

First, among the four characteristic aspect likely to be associated with the career self-reliance behaviors of nurses working in nursing homes, independent variables were selected for Aspect 1 as follows: when the results of the responses to the nine items included in the characteristics

questionnaire were divided into higher or lower groups and the means of the total CSRA and CSRB scores were compared, no significant differences were found in variables such as “sex”; however, significant differences were found in the following six variables for both the CSRA and CSRB: “years of clinical experience as a nurse,” “current employment status,” “current position,” “certifications or licenses other than those for nursing or completion of graduate schools,” “experience as a team leader,” and “experience as a committee member.” The significance of these six variables was also explored. As the years of clinical experience and current position could be related, the latter was excluded from the independent variables. Because of the team leader’s role within the department and the committee member’s role in the whole facility, they were judged to be different and included separately as independent variables. Although we did not find any significant sex differences, we included it as an independent variable because it is a basic demographic variable. The following six variables for Aspect 1 were selected as independent variables for multiple regression analysis with CSRA and CSRB as dependent variables: “sex,” “years of clinical experience as a nurse,” “current employment status,”

“certifications or licenses other than those for nursing or completion of graduate schools,” “experience as a team leader,” and “experience as a committee member.” Furthermore, the correlation coefficient was calculated for age and years of clinical experience as a nurse, $r = 0.68$ ($p < 0.001$). We did not select age as an independent variable because of the possibility of multicollinearity.

Second, when the 13 items included in the characteristics questionnaire were compared in the same manner for Aspect 2, no significant differences were found for variables such as “size of current facility” and “dependability of colleagues when I have problems”; however, significant differences were found for “feeling comfortable talking to my supervisors” and “availability of supervisors for consultation about personal problems.” Next, the correlation coefficient between these two variables was calculated, which was $r = 0.619$. Therefore, “availability of supervisors for consultation about personal problems” was excluded because of a weak relationship with nursing practice. Based on these considerations, we selected “feeling comfortable talking to my supervisors” as the independent variable for Aspect 2 in a multiple regression analysis with CSRA and CSRB as dependent variables.

Table 3 Characteristics associated with career self-reliance attitudes

Aspect	Item	Unstandardized regression coefficient B	SE B	Standardized regression coefficient β	p-value
	Constant	68.64	7.54		<0.001
1) Personal attributes	Sex†	-4.98	3.65	-0.09	0.17
	Years of clinical experience as a nurse	0.11	0.08	0.09	0.21
	Current employment status‡	-0.92	1.86	-0.03	0.62
	Certifications or licenses or completion of graduate schools	2.81	1.61	0.11	0.08
	Experience as a team leader	2.09	1.61	0.09	0.20
	Experience as a committee member	0.48	1.69	0.02	0.78
2) Work environment	Comfortable talking to my supervisors§	1.46	1.55	0.06	0.35
3) Work commitment	Liking nursing§	3.61	2.81	0.09	0.20
	Job satisfaction as a nurse¶	2.53	1.53	0.11	0.10
4) Clinical nursing competences	CNCSS (frequency of practice) score#	8.76	1.50	0.38	<0.001

Note: Multiple regression analysis using the method of forced entry, Dependent variables Total scores of CSRA $R = 0.55$, $R^2 = 0.30$, Adjusted $R^2 = 0.26$

Abbreviations: SE, Standard Error; CNCSS, Clinical Nursing Competence Self-Assessment Scale

† Male: 1, Female: 2

‡ Regular: 1, Non-regular, etc: 2

§ A little / Not at all: 0, Very / Fairly: 1

¶ A little / Not at all / Neither: 0, Very / Fairly: 1

Lower: 1, Higher: 2

Third, when the four items included in the characteristics questionnaire were compared in the same manner for Aspect 3, no significant difference was found for “motivation to continue working as a nurse,” but significant differences were found for “worthwhileness of nursing,” “liking nursing,” and “job satisfaction as a nurse.” Next, the correlation coefficient between these three variables was calculated, and “worthwhileness of nursing” was excluded as it showed a correlation of $r = 0.506$ – 0.557 with the other two variables. Based on these considerations, we selected two variables for Aspect 3: “liking nursing” and “job satisfaction as a nurse” as

the independent variables in a multiple regression analysis, with CSRA and CSRB as the dependent variables.

Finally, when the frequency of practice in CNCSS was divided into higher and lower groups, and the means of the total CSRA and CSRB scores were compared for Aspect 4, significant differences were observed for the higher group. We selected “frequency of practice in CNCSS” as the independent variable in a multiple regression analysis, with CSRA and CSRB as the dependent variables.

Moreover, because a previous study showed that CSRA is related to CSRB (Horiuchi & Okada, 2009), we included CSRA

as an independent variable in the multiple regression analysis, with CSRB as the dependent variable.

Characteristics Associated with CSRA

Table 3 shows the results of the multiple regression analysis with CSRA as the dependent variable. We performed a multiple regression analysis using the forced entry method on the association between the CSRA and the characteristics of the ten variables listed above (Adjusted R² = 0.26). The VIF was examined, and no multicollinearity was found between the variables. Consequently, we found that “frequency of practice in CNCSS” (p < 0.001) for the aspect related to nursing practice competence was associated with the CSRA of the participants in this study.

Characteristics Associated with CSRB

Table 4 shows the results of the multiple regression analysis with CSRB as the dependent variable. We performed a multiple regression analysis using the forced entry method on the association between CSRB and the characteristics of the 11 variables listed above (Adjusted R² = 0.48). The VIF was examined, and no multicollinearity was found between the variables. Consequently, we found that “certifications or licenses other than those for nursing or completion of graduate schools” (p = 0.03) for the aspect related to personal attributes, “job satisfaction as a nurse” (p = 0.03) for the aspect related to work commitment, “frequency of practice in CNCSS” (p < 0.001) for the aspect related to nursing practice competence and CSRA (p < 0.001), which clarified the relationship based on a previous study were associated with and the CSRB of the participants in this study.

Table 4 Characteristics associated with career self-reliance behaviors

Aspect	Item	Unstandardized regression coefficient B	SE B	Standardized regression coefficient β	p-value
1) Personal attributes	Constant	55.21	8.00		<0.001
	Sex†	-8.51	3.76	-0.13	0.03
	Years of clinical experience as a nurse	0.03	0.09	0.02	0.76
	Current employment status‡	0.60	1.91	0.02	0.75
	Certifications or licenses or completion of graduate schools	3.54	1.66	0.11	0.03
	Experience as a team leader	0.40	1.66	0.01	0.81
	Experience as a committee member	1.88	1.74	0.06	0.28
2) Work environment	Comfortable talking to my supervisors§	0.69	1.59	0.03	0.67
3) Work commitment	Liking nursing§	4.56	2.88	0.09	0.12
	Job satisfaction as a nurse¶	3.44	1.58	0.12	0.03
4) Clinical nursing competences	CNCSS (frequency of practice) score#	7.67	1.64	0.28	<0.001
	CSRA Career Self-Reliance Attitudes#	12.41	1.67	0.45	<0.001

Note: Multiple regression analysis using the method of forced entry, Dependent variables Total scores of CSRA R = 0.71, R² = 0.51, Adjusted R² = 0.48

Abbreviations: SE, Standard Error; CNCSS, Clinical Nursing Competence Self-Assessment Scale

† Male: 1, Female: 2

‡ Regular: 1, Non-regular, etc.: 2

§ A little / Not at all: 0, Very / Fairly: 1

¶ A little / Not at all / Neither: 0, Very / Fairly: 1

Lower: 1, Higher: 2

Discussion

Characteristics Associated with the Career Self-Reliance Behavior of Nurses Working in Nursing Homes

At first, the total CSRA scores of the participants in this study tended to be higher than the 72.6 of nurses with up to five years of clinical experience working in hospitals (Hoshino et al., 2024). We also estimated that the total CSRB scores were higher than theirs because of the association between CSRA and CSRB (Horiuchi & Okada, 2009). Moreover, our study showed that male nurses exhibit higher career self-reliance behavior than female nurses. A previous study had shown that male nurses value their careers more than female nurses, supporting our research results (Prosen, 2022; Sugiura et al., 2017).

Following is the discussion discusses two useful implications from this study that apply to nursing home settings rather than general hospitals or acute care settings.

First, nursing practice and the education of nurses working in nursing homes should be discussed. The results revealed that a higher frequency of practice was associated with a higher degree of CSRA and CSRB. CSRB includes the factor “proactive work behavior,” which is constructed from nine items such as “I try to improve the way I work,” “I raise the quality of my work,” and “I am responsible for my work” (Horiuchi & Okada, 2009). On the other hand, CNCSS measures the frequency of practice. Nurses working in nursing homes are required to have advanced skills, knowledge, competence, and experience to improve the safety, well-being, and quality of life of older adults (Cooper et al., 2017).

Therefore, as they perform a more advanced practice, they can try to improve their ways of working with responsibilities and raise the quality of their work. These considerations suggest that the frequency of nursing practice enhances CSRB. This supports the findings of this study that maintaining a high frequency of practice is associated with the career self-reliance attitudes and behaviors of nurses working in nursing homes.

Furthermore, nursing practice is associated with career self-reliance along with nurses' learning. The reasons for this are as follows. Professionals are characterized by a process of learning to reflect on their own practice experiences and resolve contradictions and issues in their practice (Kolb, 1984; Schön, 1983). Professional nurses are expected to develop their careers through continuous learning (International Council of Nurses [ICN], 2021) and are pedagogically placed as adult learners. Adult learners are characterized by their motivation to learn and develop professional competencies by reflecting on their experiences (Knowles, 1990). A previous study also reported a correlation between nurses' learning by reflecting on their practice and their ability to practice (Takase et al., 2015).

These findings support the results of our study, suggesting that frequent practice in nursing homes promotes reflection and learning among nurses and that the accumulation of learning outcomes motivated by practice is associated with career self-reliance, including the acquisition of professional competence. Similarly, the results of our study revealed that having certifications or licenses other than those for nursing or completing graduate school was associated with CSRB. Learning activities are essential for nurses to enter graduate school and obtain various licenses, and these activities are linked to career self-reliance, including the acquisition of professional competencies (Myers et al., 2024; Shen et al., 2019). These considerations suggest that nurses who are more competent in nursing practice, have certifications or licenses other than those for nursing, or have completed graduate school are more likely to develop their careers autonomously through their studies (Bell et al., 2023; Brand et al., 2016).

Second, this study revealed that those who were more satisfied with their jobs as nurses working in nursing homes were more likely to develop their careers autonomously. Several studies have suggested an association between high job satisfaction and career (Bonenberg et al., 2014; Karlsson et al., 2019), confirming the results of the present study. These imply that nurses with higher job satisfaction have higher career self-reliance behaviors.

However, our results showed that only aspects of the work environment, such as relationships with supervisors and colleagues, were not associated with career self-reliance for nurses working in nursing homes. More than 80% of the participants in this study had more than 10 years of clinical experience, and more than 90% were aged over 35. This result may indicate that nurses working in nursing homes have a high degree of autonomy through long-term practical experience and are less likely to be influenced by their relationships with others (Alruwaili & Abuadas, 2023).

Implications for Nursing Practice

First, not only the appropriateness of the nursing care provided but also the social significance, professionalism, and treatment of nursing for older adults should be evaluated from various aspects. The degree of nurses' satisfaction can be increased and extend their continuation of jobs by improving the treatment if one can do it by themselves. Second, nursing home administrators must support nurses to learn through practice to meet the goal of improving outcomes for residents and nurses (Aleo et al., 2024).

These findings of our study were generated by a cross-sectional method and could not mention a cause-effect relationship between these characteristics and career self-reliance. Future studies using longitudinal methods to clarify cause-effect relationships or intervention methods based on our findings are required. Based on the characteristics identified by our study, the quality of life of older adults can be enriched when nursing home administrators provide educational support for nurses' career self-reliance.

Potential Impact of the COVID-19 Pandemic

We collected data in 2018 before the COVID-19 pandemic. In the early phase of the pandemic, nursing was drastically affected, including in nursing homes; nurses were forced to practice under severe conditions (White et al., 2021). Throughout the pandemic, some of the responsibilities of nurses may have been changed, such as having strict infection prevention and crisis management in nursing homes where older adults have a high risk of infection (World Health Organization [WHO], 2021).

Today, nursing responsibilities generally return to normal in nursing homes; hence, the results of this study can be useful. However, the changes and stresses during the pandemic may have still affected the nurses' work environment and job satisfaction, thereby causing changes in career self-reliance. To improve career support and meet the actual needs of nurses, a follow-up study using recent data is required.

Limitations

We have two limitations in this study. First, the low response rate of 13.3% for the questionnaire suggests that the questionnaires requested to be distributed through the nursing directors of the facilities may not necessarily have been distributed to all nurses. We should consider other ways to distribute the questionnaires rather than requesting nurse directors. Additionally, the probability of coercion on nurses by the nurse directors who distributed the questionnaire could not be ruled out. Second, we asked participants about their work environment and commitment as nurses through a single-item question to reduce the burden of participants' responses to the questionnaires. However, they should be surveyed using scales tested for reliability and validity. The next study should be conducted by using scales to ask questions about these kinds of characteristics.

Conclusion

The following four characteristics were associated with the career self-reliance behaviors of nurses working in nursing homes: 1) having certifications or licenses other than those for

nursing or completion of graduate schools, 2) job satisfaction as a nurse, 3) frequency of practice, and 4) career self-reliance attitudes. Nurses and directors working in nursing homes should make an effort to obtain these four characteristics for nurses' career self-reliance behaviors.

Declaration of Conflicting Interest

There is no conflict of interest to declare. Some parts of this paper were presented at the 40th Annual Conference of the Japan Academy of Nursing Science.

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Authors' Contributions

AN analyzed the data and wrote the paper. JH designed the study, collected the data, and assisted with writing the article. MH, MH, and NF collected the data and assisted with writing the article. All authors have read and approved the final manuscript.

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Data Availability

The dataset generated during and analyzed during the current study is available from the corresponding author upon reasonable request.

Declaration of Use of AI in Scientific Writing

There is nothing to declare.

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