Original

Factors Influencing the Role Performance of Middle-aged Generalist Nurses

Kazuko Kawaguchi[1] and Yoko Hatono[2]

[1]Faculty of Nursing, Fukuoka International University of Health and Welfare

[2]Division of Health Sciences, Graduate School of Medicine, Kyushu University

(Received: May 11, 2021)

Abstract

Aim: To clarify the factors that influence the role performance of middle-aged generalist nurses.

Methods: An anonymous self-administered questionnaire survey was conducted on 837 middle-aged generalist nurses working in hospitals with more than 200 beds nationwide.

The survey included the participants' individual factors (attributes, learning motivation and behavior, human relationships in the workplace) and role performance of middle-aged generalist nurses. The analysis included descriptive statistics, a test of the difference in average scores, and multiple comparisons. In addition, multiple regression analysis was performed by the stepwise method with the role performance scale score as the dependent variable.

Results: Valid responses were 504 (60.2%). The age of participants was 69.9% in their 40s and 30.1% in their 50s, with an average age of 47.0 (SD = 5.1). Factors that influence the role performance of middle-aged generalist nurses are "human relations with new nurses," "human relations with mid-level nurses," "participation in in-hospital training," "hope to participate in external training," "years of service at the current hospital," "number of beds," and "hospital affiliation (National Hospital Organization)." The item with the greatest influence on the role performance was human relations with new nurses (β=0.229). The adjusted R^2 value for the seven factors was 0.168.

Conclusion: This study identified the following seven factors influencing the role performance of middle-aged generalist nurses. The results suggest that formation of workplace human relations and opportunities for learning are important for promoting the role performance of middle-aged generalist nurses. Also, the findings reveal that the role performance of middle-aged generalist nurses is affected by the years of service at the current hospital, number of beds and the characteristics of hospital affiliation.

(JJOMT, 69: 274—284, 2021)

—Key words—

middle-aged, nurses, role performance

Introduction

The world's population is rapidly aging, and Japan's society is aging at a pace unparalleled in any other country. In this context, the global population of the elderly was 36.22 million, or 28.8% of the total population, at the end of 2020. With this proportion continuing to rise, the elderly population is anticipated to reach 35.3% of the total global population by 2040[1].

Nurses who care for the elderly are aging as well. In the United States, Canada, and Australia, 40–50% of nurses were 50 years or over by 2015[2]. In Japan, of the approximately 1.22 million-strong population of working nurses, 45.5% were aged 39 years or younger, while 54.5%[3] or more than half were aged 40 years or over, showing the same trend as in other countries. In recent years, the demand for nurses has increased because of Japan becoming a super-aging society. Additionally, with many nurses engaged in supporting COVID-19-

infected patients in the ongoing pandemic, the shortage of nurses providing medical care is even more serious than before.

Most of Japan's nurses, apart from new nurses, nursing managers, and specialists, are generalists. According to the Japanese Nursing Association, generalist nurses are defined as "those able to manifest knowledge, skills, and ability, based on a wealth of tacit knowledge acquired through experience and continuous learning, whoever their patients may be, and regardless of specific profession or nursing field"[4].

Middle-aged generalist nurses are vital human resources in supporting medical services. This is because they perform many roles that help maintain and improve the quality of nursing. For example, guidance to junior staff, consideration and oozing atmosphere cultivated through experience[5], and, through their rich experience, provide outstanding care to patients[6)–8)]. These generalist nurses work with a conviction nourished by experience, drawing solid trust from their surroundings.

On the other hand, some middle-aged generalist nurses may be unconcerned with a spirit of self-improvement and positivity[9]. Considering the social background and the large number of middle-aged nurses, it is important for nursing management to enable middle-aged generalist nurses to thoroughly fulfill the roles required of them by society and organizations.

Previous research on middle-aged nurses reveals much focus on work continuation factors[7)10)–14)] and career development support[15)–17)]. This research indicates that, since the majority of nurses are women, they are impacted by work continuation difficulties and career continuation support due to life events, such as pregnancy, childbirth, child-rearing, and home care. Items common to multiple research on work continuation factors are workplace relations[7)10)–14)], manifesting expertise[7)11)12)], and adaptation to changing times[12)13)]. Workplace relations[15)–17)] are important for career development support in the same way as for work continuation factors. The research of career development support has suggested that the following two factors are important: head nurse receptivity and approval[5)15)18)], and finding meaning in one's work in retrospective[19].

Although these previous studies provide some of the factors to keep in mind in promoting role performance for middle-aged generalist nurses, there are no studies on the background factors of middle-aged generalist nurses who demonstrate high-level performance of the roles. We believe that clarifying these factors would provide the basic support to encourage the role performance of middle-aged nurses. Thus, this research aims to shed light on the factors influencing the role performance of middle-aged generalist nurses.

Methods

Participants and survey method

We requested in advance the cooperation for our questionnaire survey from the nursing managers of 320 hospitals nationwide with 200 beds or more and, of the 71 hospitals from which we obtained consent, we took 837 middle-aged generalist nurses as our participants. We defined "middle-aged generalists" as female nurses aged 40–59 years who were directly involved in patient care (not managers or specialists) and who had ≥ 10 years of experience. Male nurses accounted for approximately 7% of the total (in 2017), and thus, we limited the sample to female nurses. Self-administered anonymous questionnaires were delivered to participants and returned via mail between December 2017 and March 2018.

Survey items

Attributes. These included age, sex, years of nursing experience, academic background, number of hospitals at which employed up to now, years of service at the current hospital (hereafter, "hospital years"), years of service at the current ward（hereafter, "ward years"), marital status, child-care experience, family-care experience, number of beds at hospitals where employed (hereafter, "number of beds"), hospital affiliation.

Desire for learning and action. This included status of participation in in-house hospital training and hope to participate in external training.

Workplace relations. Workplace relations included relations with head nurses, mid-level nurses, and new nurses.

Status of the role performance of middle-aged generalist nurses.

The Role Performance Scale for Middle-Aged Generalist Nurses in Japan[20](RSMGN) was used to assess

nurses' role performance (see Appendix). The RSMGN comprises five factors: backing up head nurses, instructing young nurses on practices as an informal mentor, providing young nurses with mental support, providing empathic support for patients and their families, and coordinating team medical care. In addition, there are 25 items. Rating occurs in five stages: 1: does not apply at all; 2: mostly does not apply; 3: cannot say; 4: mostly applies; and 5: fully applies. The range of scores is 25–125, with a higher score indicating more satisfactory role performance. The reliability and validity of this scale has been well confirmed.

Analytical methods

Descriptive statistics were applied to the RSMGN scores and responses to the items set as factors. Next, we analyzed the average differences in the RSMGN scores according to the set factors chosen. For this study, where the choices fell into two groups, a t-test was applied, where they fell into three groups, one-way analysis of variance was conducted; and where significant differences were evident, a multiple comparison was conducted using the Bonferroni method.

Taking the RSMGN scores as dependent variables, a multiple regression analysis was performed using the stepwise method. Prior to this analysis, the correlation coefficients between the independent variables were calculated using the Spearman method. Since the correlation coefficient of age and years of nursing experience was high (0.769), the years of nursing experience, which has a high correlation coefficient with the RSMGN score, was taken as an independent variable. For nominal variables among attributes, a dummy variable of 1 or 0 was substituted.

Scores for status of participation in in-house hospital training were set as 1 for "attend all" and "attend almost all" and 0 for "hardly attend any" and "attend none." Scores for hope to participate in outside training were set as 1 for Yes and 0 for No. Scores for workplace relations with head, mid-level, and new nurses were 1 for "good" and "quite good" and 0 for "not very good" and "not good at all."

With the variance inflation factor level between 1 and 2, no multicollinearity problem was detected. The analysis used SPSS version 25 with significance below 5%.

Ethical considerations

This study was approved by the Ethics Committee of the International University of Health and Welfare (approval number: 17-Ifh-32). Participants were given written information, which included an overview of the study objectives. They were informed that they were free to drop out at any time and that their privacy was guaranteed. They were also explained how their data would be handled and disposed and informed that some findings would be presented at public forums (e.g., conferences). The researchers also gave their contact information to the participants. All data collected were kept anonymous and confidential.

Results

Characteristics of participants

Table 1 shows the characteristics of participants. Of the 837 middle-aged generalist nurses to whom questionnaires were mailed, 559 responded, and 504 responses were included in the analysis (valid response rate of 60.2%). All participants were female, with 69.9% aged in their 40s and 30.1% in their 50s, with an average age of 47 years (standard deviation, SD=5.1) and average nursing experience is 23.5 years (SD=6.1). With regard to status of participation in in-house hospital training, 56.2% of participants reported attending all or almost all, while 62.9% stated that they hope to participate in external training. Meanwhile, 86.9%, 95.8%, and 90.3% reported "good" or "quite good" relations with head, mid-level, and new nurses, respectively.

Relationship between role performance and characteristics

Table 1 shows the relationship between role performance and characteristics. The RSMNG average total score was 90.1 (SD=12.3), with average scores for the five factors as follows: support provided by head nurse, 20.0 (SD=4.3); practical guidance as informal mentoring of young nurses, 26.1 (SD=3.9); offering psychological support to young nurses, 17.3 (SD=3.2); offering sympathetic support to patients and families, 11.0 (SD=2.1); and coordinating team care, 15.7 (SD=1.9). The results of the t-test and one-way analysis of variance showed significant differences in hospital years, number of beds, status of participation in in-house hospital training, hope to participate in external training, and relations with head, mid-level, and new nurses.

Appendix Role Performance Scale for Middle-Aged, Generalist Nurses in Japan (RSMGN)

The items are the roles of middle-aged generalist nurses. Please select one of the 5 options that apply to each item.
1: does not apply at all, 2: mostly does not apply, 3: cannot say, 4: mostly applies, 5: fully applies

1	I inform head nurses about ward operations when they might not be aware.	1・2・3・4・5
2	I inform head nurses when staff have grown professionally when they might not be aware.	1・2・3・4・5
3	I discuss ward operations and goals with head nurses.	1・2・3・4・5
4	I solicit opinions from staff, and as their representative, make proposals to head nurses about how to improve our work.	1・2・3・4・5
5	I relay head nurses' words and intentions to junior nurses in an easy-to-understand way.	1・2・3・4・5
6	I support head nurses by indicating that I understand their policies and actions related to ward operations.	1・2・3・4・5
7	I keep a close eye on young nurses' practices and give them feedback.	1・2・3・4・5
8	When teaching young nurses, I tailor my instruction to match their experience and skill level.	1・2・3・4・5
9	I educate young nurses based on my professional insight as a nurse cultivated through my own experiences.	1・2・3・4・5
10	I consciously choose where and when I perform certain procedures to maximize the experience gained by young nurses.	1・2・3・4・5
11	I act as a role model, helping young nurses develop the nursing skills and care practices I have learned through experience.	1・2・3・4・5
12	I actively train young nurses to improve their nursing skills.	1・2・3・4・5
13	I don't make blind assumptions about care and treatment methods; together with young nurses, I consider the options based on our view of the situation.	1・2・3・4・5
14	I act as a confidante for young nurses and listen and respond to their feelings.	1・2・3・4・5
15	By actively reaching out to them, I have created an environment in which young nurses feel they can easily approach me for advice.	1・2・3・4・5
16	I try to keep young nurses motivated by acknowledging their hard work.	1・2・3・4・5
17	I give advice to young nurses on non-work-related matters as a kind of "life coach."	1・2・3・4・5
18	I communicate the rewards and benefits of being a nurse to my young colleagues.	1・2・3・4・5
19	I create opportunities to communicate with patients and their families and listen closely to what they have to say.	1・2・3・4・5
20	I provide emotional care to patients' families as well because I believe it is part of a nurse's role.	1・2・3・4・5
21	I speak with patients candidly to identify their true feelings.	1・2・3・4・5
22	I act quickly to deal with changes in patient status with the help of staff.	1・2・3・4・5
23	I provide patients with suitable care in collaboration with specialists (e.g., expert nurses, certified nurses).	1・2・3・4・5
24	I communicate well with other professionals, helping to coordinate work.	1・2・3・4・5
25	I recognize and respect patients' lives and lifestyles.	1・2・3・4・5

[Subscales and applicable items]
Factor 1: Backing up head nurses; 1. 2. 3. 4. 5. 6
Factor 2: Instructing young nurses on practices as an informal mentor; 7. 8. 9. 10. 11. 12. 13
Factor 3: Providing young nurses with mental support; 14. 15. 16. 17. 18
Factor 4: Providing empathic support for patients and their families; 19. 20. 21
Factor 5: Coordinating team medical care; 22. 23. 24. 25

Multiple regression analysis of role performance

Table 2 shows the multiple regression analyses of role performance. Significant differences were observed in seven items: relations with new nurses, relations with mid-level nurses, status of participation in in-house hospital training, hope to participate in external training, hospital years, number of beds, and hospital affiliation (national hospital organizations). Of these, the item with the greatest influence on the RSMNG was related to new nurses (β=0.229). The adjusted R^2 value for the seven items was 0.168.

Discussion

The following factors were found to influence the role performance of middle-aged generalist nurses: hospital years, relationships with new nurses and mid-level nurses, status of participation in in-house hospital training and hope to participate in external training, number of beds, and hospital affiliation.

Relationship between role performance and workplace relations

Relations with new nurses and relations with mid-level nurses influenced the performance of middle-aged generalist nurses. A possible reason why the relationship with the new nurses affect is that supporting new nurses is an important part of middle-aged generalist nurses' roles, and favorable human relations are the foundation. New nurses who have just transitioned from students to clinical practice often face challenges such as anxiety, uncertainty, and lack of self-confidence[21]. There are several studies on the subject of supporting new nurses to help them adapt to the workplace[22)–24)]. Okawa et al[25]clarified that the support new nurses seek from their seniors is "involvement that enables one to complete a task" and "a relationship that enables listening, speaking, and conversing." If favorable relationships are formed, it is easier to understand the thoughts and

Table 1 Relationship between role performance and characteristics (N = 504)

	n	%	Mean	SD	Multiple comparison	*p*
Sex (A)						
Female	504	100.0	90.1	12.3		0.000
Male	0	0.0	0	0		
Age range (years) (B)						
Mean = 47.0 (SD = 5.1)						
40–44	196	38.9	88.8	12.5		0.210
45–49	156	31.0	91.5	12.7		
50–54	97	19.2	90.0	11.0		
55–59	55	10.9	91.1	12.5		
Nursing experience (years) (B)						
Mean = 23.6 (SD = 6.2)						
10–14	29	5.9	86.8	13.5		0.567
15–19	95	18.9	89.8	14.1		
20–24	165	32.7	89.8	10.9		
25–29	113	22.4	91.3	13.3		
31–34	78	15.5	90.1	11.7		
35–40	23	4.6	92.0	10.3		
Educational background (B)						
Technical college (3-year)	343	68.1	90.2	12.7		0.973
Junior college (3-year)	46	9.1	90.7	8.9		
University	8	1.6	88.9	16.2		
Graduate school	4	0.8	90.5	6.6		
Other	103	20.4	89.5	12.3		
Marital status (B)						
Married	323	64.1	90.3	12.1		0.623
Single	124	24.6	89.3	12.4		
Divorced	57	11.3	91.1	13.4		
Child-care experience (A)						
Yes	335	66.5	90.3	12.4		0.615
No	169	33.5	89.7	12.3		
Family-care experience (A)						
Yes	54	10.7	91.1	11.9		0.514
No	450	89.3	90.0	12.4		
Number of hospitals at which employed to date (B)						
Mean = 2.2 (SD = 1.3)						
1	193	38.3	90.0	12.4		0.909
2	141	28.0	90.7	12.1		
3	95	18.8	89.2	12.2		
4	48	9.5	90.0	13.1		
5–8	27	5.4	91.2	12.6		
Years of service at the current hospital (year) (B)						
Mean = 17.6 (SD = 8.7)						
1–5	47	9.3	85.3	13.2	┐	0.009
6–10	85	16.8	90.1	10.1	*	
11–15	78	15.5	87.5	15.2		
16–20	99	19.6	92.6	10.7	┘	
21–25	91	18.1	89.9	12.8		
26–30	71	14.1	92.2	11.6		
31–35	27	5.4	90.9	11.6		
35–40	6	1.2	96.7	8.1		
Years of service at the current ward (year) (B)						
Mean = 5.3 (SD = 4.0)						
1–5	319	63.3	89.4	12.6		0.343
6–10	131	26.0	90.9	11.8		
11–15	39	7.7	91.8	12.2		
16–20	15	3.0	93.5	11.1		

Table 1 Relationship between role performance and characteristics (N = 504) (continued)

	n	%	Mean	SD	Multiple comparison	*p*
Hospital affiliation (B)						
National public university corporation	44	8.7	89.2	11.4		0.663
National hospital organization	112	22.2	91.8	13.6		
Prefectural, municipal	133	26.5	89.8	11.8		
Private educational corporation	26	5.2	91.8	13.3		
Medical corporation	88	17.5	89.1	12.3		
Social medical corporation	21	4.2	92.1	11.6		
Japanese Red Cross	21	4.2	88.8	10.4		
Other	58	11.5	88.8	12.5		
Number of beds (B)						
200–300	102	20.2	87.1	12.1		0.039
301–500	174	34.5	91.0	12.7		
501–800	183	36.4	90.5	11.4		
801–	45	8.9	92.0	14.1		
Status of participation in in-house hospital training (B)						
Attend all	119	23.6	92.8	11.5		0.000
Attend almost all	164	32.5	92.2	12.2	** **	
Hardly attend any	216	42.9	87.3	12.4		
Attend none	5	1.0	80.0	4.5		
Hope to participate in external training (A)						
Yes	317	62.9	92.4	11.9		0.000
No	187	37.1	87.2	12.3		
Relationship with head nurses (B)						
Good	130	25.8	96.1	10.7	*** ***	0.000
Quite good	308	61.1	88.5	11.8		
Not very good	49	9.7	85.0	12.8		
Not good at all	17	3.4	88.7	16.2		
Relationship with mid-level nurses (B)						
Good	132	26.2	96.0	10.1	*** * *** *** ***	0.000
Quite good	351	69.6	88.7	11.7		
Not very good	19	3.8	80.3	15.1	**	
Not good at all	2	0.4	48.0	21.2		
Relationship with new nurses (B)						
Good	91	18.1	96.8	10.4	*** *** * *** ***	0.000
Quite good	364	72.2	89.9	11.4		
Not very good	34	6.7	78.6	13.8		
Not good at all	15	3.0	80.6	14.8		

(A) Non-paired t test, (B) One-way ANOVA, SD: Standard Deviation
Multiple comparison, *p < 0.05, ** < 0.01, *** < 0.001

Table 2 Multiple regression analysis of role performance (N = 504)

Selected independent variables	standardized coefficient β	*P-value*	VIF
Relationship with new nurses	0.229	0.000	1.115
Relationship with mid-level nurses	0.165	0.000	1.080
Status of participation in in-house hospital training	0.154	0.000	1.113
Hope to participate in external training	0.118	0.005	1.053
Number of beds	0.118	0.005	1.040
Hospital affiliation (National hospital organization)	0.086	0.036	1.010
Years of service at the current hospital	0.083	0.045	1.022

Stepwise method multiple regression analyses: Adjusted $R^2 = 0.168$, $F = 15.518$, $P < 0.001$.
Note: VFI: variance inflation factor.

needs of new nurses through daily communication and situations, and it will be possible to provide support in a timely manner. In this way, relations with new nurses are believed to influence generalist nurses' role perform-

ance.

On the other hand, unlike new nurses, mid-level nurses are juniors of similar age for middle-aged nurses. For nurses to carry out their duties while cooperating as a team, trust between members is a vital factor[26]. Honda[27]states that approval from their juniors, not just middle-aged nurses, enhances intrinsic motivation. According to Deci and Flaste[28], "intrinsic motivation consists of feelings of pleasure and achievement and a sense that one's own work has value in itself, leading to a manifestation of best efforts." That is, high intrinsic motivation in middle-aged nurses is linked to high performance, which is a reason for the significance of relationships with mid-level nurses.

Furthermore, the reason why relationships with new nurses and mid-level nurses influenced the role performance of middle-aged nurses is that they are responsible for the coordination of the team. For this to occur, a demonstration of leadership between multiple occupations (including nursing) is needed, which can be considered as a factor that influences role performance.

Meanwhile, the results for relations with head nurses were not significant and we could not confirm its influence on the role performance of middle-aged generalist nurses. However, according to much research, regardless of generation, head nurse receptivity and approval elevate the motivation and performance of their subordinates[21)29)-32)]. Given that the RSMNG indicates that backing up role of head nurse is most typical for middle-aged nurses, it is considered important that both parties maintain mutual understanding of their roles and maintain favorable relations.

Relationship between role performance and desire for learning

Status of participation in in-house training and hope to participate in external training both influenced the role performance of middle-aged generalist nurses. We assumed that the significantly high RSMNG scores of nurses frequently attending in-house training were due to the use of knowledge and techniques acquired in training being applied to daily nursing practice. Moreover, since the scores of nurses who hope to participate in external training were high, it was confirmed that there was a learning need other than in-hospital. In fact, for those nurses who support diabetic patients, the improvement of their practical ability is based on learning behavior, which is related to their participation in diabetes training[33]. And it is clear that the learning behavior of nurses is related to practical ability[34].

At present, with the rapid change in medicine and nursing, it goes without saying that acquisition of new knowledge and techniques are needed to practice the required roles at a high level. While there are no surveys focusing specifically on middle-aged nurses in this regard, it has been reported that nurses' learning needs are, in general, high and that the contents of learning that are sought differ according to years of experience[35)-38)]. While in-house educational programs are being implemented at many hospitals to improve nursing quality and capability, there is almost no training being conducted that targets middle-aged nurses. So that, for middle-aged nurses who are inclined to seek learning spaces, including external training, and who are achieving high-level role behaviors, there is a need to increase study opportunities to match their learning needs and to fulfill the demand for improving nursing practice.

Relationship between role performance and hospital years

Hospital years influenced the role performance of middle-aged generalist nurses. The participants of this research were nurses aged 40 years or older who had 10 years or more of nursing experience. While hospital years influenced the RSMNG scores, no significant relationship was observed between hospital years and years of nursing experience. This can be considered as indicating that "familiarity" with the same organization of affiliation is needed to achieve role performance. There is multiple, previous research[39)-41)] linking years of nursing experience to nursing ability, but since it has not surveyed hospital years, the reasons for this link are unclear. However, in order to support head nurses, young nurses, patients, and families, and to coordinate medical teams, it is necessary to build human relationships and be familiar with the rules of the institution, including the unwritten rules. Therefore, hospital years was considered as an influencing factor.

Furthermore, hospital years was 17.6 (SD=8.7), with current ward years at 5.3 (SD=4.0), this study assumed that the participants transferred between multiple wards within the same hospital. It is thought that the transfer of wards has accumulated knowledge and experience regarding new diseases and treatments, and

nursing for patients and their families, and their practical abilities have improved. This is the reason why the number of years of experience at the hospital where they work was significant.

Relationship between role performance and number of beds and hospital affiliation

The number of beds and hospital affiliation influenced the role performance of middle-aged generalist nurses. Hospital data for the number of beds in 2019 showed that, out of a total of 8,300 hospitals, approximately 30% had 200 beds or more[42]. This survey targeted nurses employed at hospitals with 200 beds or more, and these institutions are considered to treat patients with more serious illnesses that would be difficult to handle at small-scale institutions. Moreover, hospitals belonging to national hospital organization have mission to contribute as regional, medical centers to medical treatment where risk management is required in response to medical fields not necessarily handled by other hospital affiliation, such as disasters and new epidemics, using a nationwide hospital network[43]. Because sophisticated medical treatment is provided by these hospitals which possess multiple diagnostic and treatment positions, leading-edge knowledge and techniques are needed for nurses working there. In addition, since coordination of various positions and specializations is required for providing high-level medical treatment, nurses working in those areas should have advanced nursing abilities. Previous research has reported on the link between the number of beds, hospital affiliation, and nurses' career consciousness[44]. Nurses with career growth mindsets who enthusiastically tackle learning and nursing practice are considered to be the reason that number of beds and hospital affiliation influence the role performance of middle-aged generalist nurses.

Research limitations and future directions

The adjusted R^2 value from the multiple regression analysis was low, indicating that there are other factors influencing the role performance of middle-aged generalist nurses. Thus, it is necessary to re-examine the factors and conduct further research based on careful selection of survey items.

Conclusion

This study identified the following seven factors influencing the role performance of middle-aged generalist nurses: relations with new nurses, relations with mid-level nurses, status of participation in in-house hospital training, hope to participate in external training, hospital years, number of beds, and hospital affiliation (national hospital organizations). The results suggest that formation of workplace human relations and opportunities for learning are important for promoting the role performance of middle-aged generalist nurses. Also, the findings reveal that the role performance of middle-aged generalist nurses is affected by the years of service at the current hospital, number of beds and the characteristics of hospital affiliation.

Acknowledgments

The authors express their sincere thanks to all the generalist nurses, nurse managers who participated in this study.

Funding

This study was supported by a Grant-in-Aid for Scientific Research (C) from the Japan Society for the Promotion of Science (No. 17K12176).

Author contributions

KK, YH contributed to the conception and design of the study, statistical analyses, and drafting of the manuscript. All authors read and approved the final manuscript.

References

1) Ministry of Internal Affairs and Communications: Population estimate Reiwa December 2nd Report. 2020. http://www.stat.go.jp/data/jinsui/ (accessed 2021-3-10).
2) Ryan C, Bergin M, Wells JS: Valuable yet vulnerable: A review of the challenges encountered by older nurses in the workplace. International Journal of Nursing Studies 72: 42—52, 2017. https://doi.org/10.1016/j.ijnurstu.2017.04.006

3) Ministry of Health, Labour and Welfare: Overview of 2018 Health Administration Report (working healthcare professionals). 2018. https://www.mhlw.go.jp/toukei/saikin/hw/eisei/18/dl/kekka1.pdf (accessed 2021-3-10).
4) Standard of Continuous Education: Ver. 2, Japanese Nursing Association: 6, 2012. https://www.nurse.or.jp/nursing/education/keizoku/pdf/keizoku-ver2.pdf (accessed 2021-3-10).
5) Suzue C: Support to intra-organizational career development of non-managerial, middle-aged nurses - Process of head nurses shaping methods of support. Human Environmental Studies 15 (2): 173—180, 2017.
6) Takashiba R, Sato N: What work means for nurses in their forties. Journal of the Japan Academy of Nursing Administration & Policies 17 (1): 57—66, 2013.
7) Kawakami M, Tsumoto Y, Uchida H: Factors influencing the will to continue working of late-career nurses without job title. Bulletin of the Medical Faculty of Shimane University 36: 23—30, 2013.
8) Kagawa S, Nagoshi T, Awani Y, et al: Process of practice for skilled nurses regarding discharge support to long-term schizophrenic patients. Journal of Japan Academy of Nursing Science 33 (1): 61—70, 2013.
9) Katsuhara Y: Theory of a nursing career: Discovering the road to growth in the course of a life passing many milestones. Tokyo, Japan, Life Support, 2007, pp 188—191.
10) Takeuchi K, Yoshimura E, Kuratani N: Research into factors of career continuation by middle-aged nurses. Bulletin of the Kawasaki City College of Nursing 14: 1—14, 2009.
11) Kato E, Ozaki F: A study of factors related to middle-aged nurses' will to continue working and job satisfaction. Japan Academy of Nursing Science 3 (3): 12—20, 2011.
12) Yamazaki K, Uchida H, Osada K, Onoda M: The process and perception of career continuation among middle-aged and senior nurses. Journal of the Japan Academy of Nursing Administration & Policies 16 (1): 34—44, 2012.
13) Muya M, Ikegame M, Kawamura M, et al: Studies of factors related to career continuation intentions of nurses working in hospitals. Bulletin of the Faculty of Nursing, Osaka Prefectural University 20 (1): 29—37, 2014.
14) Ono Y, Asakura K, Sugiyama S: Middle-aged female nurses overcoming challenges and continuing their careers—A qualitative study. Journal of the Japan Society of Traditional Medicine & Nursing 1 (1): 20—29, 2020.
15) Mizuno N, Mikami R: Research into the process of career development of clinical nurses. Japan Academy of Nursing Administration & Policies 4 (1): 13—22, 2000.
16) Miyata Y: A study of factors influencing the career development of middle-aged nurses. Journal of Nursing Health Science Research 5 (1): 113—122, 2005.
17) Haratani T: Research relating to nursing administrator support committees for nurses' career development. Bulletin of Hokkaido Bunkyo University Research 37: 109—113, 2013.
18) Miyata C, Arai H, Suga S: Nurse manager's recognition behavior with staff nurses in Japan—Based on semi-structured interviews. Open Journal of Nursing 4: 1—8, 2014. http://dx.doi.org/10.4236/ojn
19) Tamada M, Misuzu G, Yagi Y, et al: Evaluation of 'veteran nurse training'—From the mouths of nurses participating in training. Bulletin of Kobe City College of Nursing 19: 9—17, 2015.
20) Kawaguchi K, Hatono Y: Development of the Role Performance Scale for middle-aged generalist nurses in Japan. Japan Journal of Nursing Science 18 (2): e12397, 2021. https://doi.org/10.1111/jjns.12397
21) Baumberger-Henry M: Registered nurses' perspectives on the new graduate working in the emergency department or critical care unit. The Journal of Continuing Education in Nursing 43 (7): 299—305, 2013. https://doi.org/10.3928/00220124-20111115-02
22) Arimura M: Trends in research on newly graduated nurses employed by hospitals—A literature review focusing on working adaptation, turnover and intention to continue working. Bulletin of Aichi Prefectural University School of Nursing & Health 25: 33—45, 2019.
23) Kamijo K: Documentary research on organizational challenges related to human relations surrounding new nurses in the workplace. Bulletin of Nagano College of Nursing 20: 25—32, 2019.
24) Sumida C, Hosoda Y: Support from mid-level nurses contributing to improving competency in new nurses. Journal of the Japan Society of Medical Nursing Education 25 (1): 33—37, 2016.
25) Okawa T, Muroi Y, Ikeda Y, et al: Seniors' support recognized by newly graduated nurses. Bulletin of the Faculty of Nursing of Fukushima Medical University 6: 9—23, 2004.
26) Ylitormanen T, Turunen H, Nikkonen S, Kvist T: Good nurse-nurse collaboration implies high job satisfaction, A structural equation modelling approach. Nursing Open 6 (3): 998—1005, 2019.
27) Honda K: Approval by others of the work nurses are conscious of at emergency and critical care centers. Journal of Human Nursing Studies 11: 61—66, 2013.
28) Deci EL, Flaste R: Why we do what we do: Understanding self-motivation. S Sakurai, translator. Tokyo, Japan, Shin-yo-sha Publishing, 1999, pp 86—88.
29) Blegen MA, Goode CJ, Johnson M, et al: Recognizing staff nurse job performance and achievements. Research in Nursing & Health 15: 57—66, 1992. http://dx.doi.org/10.1002/nur.4770150109
30) Hagimoto T, Kasamatsu Y, Aizawa K, Yanai H: Developing a scale for head nurses' approval. Japan Academy of Nursing Administration & Policies 18 (1): 56—65, 2014.

31) Ito C, Tsumoto Y, Uchida H: Relation between nurses' career intentions and approval behaviors expected of head nurses. Bulletin of the Medical Faculty of Shimane University 38: 19—27, 2016.
32) Sato N, Ito O: Structure and characteristics of approval provided to subordinates by head nurses. Bulletin of the Faculty of Nursing, Iwate Prefectural University 22: 1—3, 2020.
33) Kahn Y, Aoki K, Takaya M: Supporting the self-management of diabetes for diabetic patients, and related factors by nurses working in acute-phase care. Japan Academy of Diabetes Education & Nursing 24 (1): 73—81, 2020.
34) Uemura C, Takase M, Kawamoto M: Relationship between nurses' learning activity and practical nursing ability. Journal of Japanese Society of Occupational Medicine & Traumatology 64 (2): 88—92, 2016.
35) Nakaoka A, Kutsumi M, Yagi N, et al: Study of educational programs by years of experience − Analysis of educational needs by hospital nurses and necessary awareness of training details. Bulletin of Senrikinran University 8: 123—131, 2011.
36) Nishiwaki K, Komatsu M, Takeuchi H: Learning needs of nurses involved with terminal-phase cancer patients and relationship between years of experience and sense of adversity towards care. Japanese Journal of Clinical Research on Death & Dying 34 (1): 121—127, 2011.
37) Ishikawa H, Ishii N: Nurses' learning activities and relationship to organizational & professional commitment. Bulletin of Akita University Graduate School of Health Sciences 20 (1): 31—41, 2012.
38) Hara R: Career needs of nurses employed at mid-sized, acute-phase hospitals and factors linked to settlement in workplace. Journal of North Japan Academy of Nursing Science 19 (1): 1—3, 2016.
39) Okuda N, Okegawa K: Professional autonomy and basic attributes of nurses. Seisen Journal of Nursing Studies 1: 63—72, 2012.
40) Pool I, Poell R, Ten Cate O: Nurses' and managers' perceptions of continuing professional development for older and younger nurses: A focus group study. International Journal of Nursing Studies 50 (1): 34—43, 2013. https://doi.org/10.1016/j.ijnurstu.2012.08.009
41) Yamada T: Factors influencing the practical nursing ability of female, mid-level nurses. Nursing Science Journal of Hiroshima International University 14 (1): 45—56, 2016.
42) Ministry of Health, Labor & Welfare: Overview of surveys of (dynamics of) medical facilities and hospital reports, 2019. https://www.mhlw.go.jp/toukei/saikin/hw/iryosd/18/ (accessed 2021-3-10).
43) National Hospital Organization Medium-term Goal. Updated: February 26, 2021. https://nho.hosp.go.jp/files/000150100.pdf (accessed 2021-3-10).
44) Nakayama Y, Aota T, Katahira Y: Descriptive research on nurses' awareness, level of satisfaction and career continuation intentions regarding work: Comparative studies of survey results targeting nurses working at hospitals with different organizational bases. Bulletin of St. Luke's Nursing University 23: 1—14, 1997.

Reprint request:
Kazuko Kawaguchi
Faculty of Nursing, Fukuoka International University of Health and Welfare, 1-7-4, Momochihama, Sawara-ku, Fukuoka-city, Fukuoka, 814-0001, Japan.

別刷請求先 〒814−0001 福岡県福岡市早良区百道浜 1—7—4
福岡国際医療福祉大学看護学部看護学科
川口賀津子

中高年ジェネラリスト看護師の役割遂行に影響する要因

川口賀津子[1)]，鳩野 洋子[2)]
[1)]福岡国際医療福祉大学看護学部看護学科
[2)]九州大学医学研究院保健学部門看護学分野

—キーワード—
中高年，看護師，役割遂行

目的：中高年ジェネラリスト看護師の役割遂行に影響を与える要因を明らかにする．

方法：全国 200 床以上の病院で働く 837 人の中高年ジェネラリスト看護師を対象に無記名自記式質問紙調査を実施した．調査内容は，参加者の個人要因（属性，学習意欲と行動，職場での人間関係）と中高年ジェネラリスト看護師の役割遂行であった．分析は，記述統計，得点の平均の差の検定，および多重比較を行った．また役割遂行尺度得点を従属変数としてステップワイズ法による重回帰分析を行った．

結果：有効回答は 504（60.2%）であった．参加者の年齢は 40 代が 69.9%，50 代が 30.1% で，平均年齢は 47.0±5.1 歳であった．中高年ジェネラリスト看護師の役割遂行に影響を与える要因は，「新人看護師との人間関係」「中堅看護師との人間関係」「院内研修への参加状況」「院外研修への参加希望」「現在の病院での勤続年数」「病床数」「所属病院（国立病院機構）」であった．役割遂行に最も影響を与えた要因は，新人看護師との人間関係であった（β= 0.229）．抽出された 7 要因の調整済み R^2 値は 0.168 であった．

結論：本研究では，中高年ジェネラリスト看護師の役割遂行に影響を与える 7 つの要因を特定した．中高年ジェネラリスト看護師の役割遂行を促進するためには，職場の人間関係の形成と学習の機会が重要であることが示唆された．また，中高年ジェネラリスト看護師の役割遂行は，現在の病院での勤続年数，病床数，所属病院の特徴に影響されることが明らかになった．

［COI 開示］本論文に関して開示すべき COI 状態はない

（日職災医誌，69：274—284，2021）