

Factors Related to Job Satisfaction of Visiting Nurses in Japan: A Cross-Sectional Study

Yumiko Oyama^{1*} Masayo Kashiwagi^{2*}

1. Nursing Career Pathway Center, Graduate School of Health Care Sciences, Tokyo Medical and Dental University, 1-5-45 Yushima, Bunkyo-ku, Tokyo 113-8510 Japan
2. School of Medicine, Yokohama City University, 3-9 Fukuura, Kanazawa-ku, Yokohama, Kanagawa 236-0004 Japan

* E-mail of the corresponding author: mkashi@yokohama-cu.ac.jp

The research is financed by grants from the Japanese Ministry of Health, Labour and Welfare, and the Japanese Ministry of Education, Culture, Sports, Science, and Technology (Grant-in-Aid for Young Scientists (B) and Grant-in-Aid for Scientific Research (C)).

Abstract

With an aging population, the demand for home-visit nursing has been increasing in most developed countries. Workforce stability in the home-visit nursing field is relevant to meet the demands for home-visit nursing care. Job satisfaction among home care nurses is an established predictor of their retention. Thus, it is important to know what are the factors related to job satisfaction among visiting nurses. The aim of this cross-sectional study was to explore factors related to visiting nurses' job satisfaction in Japan, with the goal of improving satisfaction and retaining visiting nurses. The participants in the present study were 109 visiting nurses working in Ibaraki prefecture, Japan. The survey explored the relationship between job satisfaction among visiting nurses and possible related factors, with reference to the theoretical model of job retention for home health care nurses. Job satisfaction was measured through an ordinal scale ranging from 1 to 10 and was subsequently divided into three levels and set as the dependent variable in a proportional odds model. The result obtained from multiple ordinal logistic regression analysis showed that three factors are related to job satisfaction among visiting nurses: the number of full-time or equivalent nurses, which constitutes market characteristics (OR 2.42; 95% CI 1.09–5.55), working according to a highly desired working schedule, which constitutes the nurse characteristic (OR 5.55; 95% CI 1.99–16.44), and intention to leave the agency (OR 0.09; 95% CI 0.03–0.24). Large-scale agencies might be providing opportunities that improve job satisfaction among visiting nurses, such as intra- or extra-agency instruction courses. A possible solution in Japan is to ensure collaboration between smaller agencies in neighboring areas when providing these opportunities.

Keywords: Home care services, Job satisfaction, Nursing staff, Visiting nurse, Workforce

1. Introduction

The demand for home health care has been increasing in most developed countries due to aging populations, advances in medical technology, and an increase in the number of people living with chronic diseases and medical conditions. Especially in Japan, improvement of the community-based medical service system of home-visit nursing is necessary to meet these changing needs.

Unfortunately, the supply of visiting nurses is well below demand in Japan (Japan Ministry of Health, Labour and Welfare [MHLW] 2010). Half of Japanese home-visit nursing agencies are very small, with fewer than five full-time or equivalent nursing employees (MHLW 2011). This results in a heavy burden for most visiting nurses, thus reducing the retention rate (Nakano 2008). The resignation of even one visiting nurse from an agency can seriously affect the management status of that agency. A large-scale survey conducted on home-visit nursing agencies reported that, if agencies could not replace their nurses, half were forced to restrict their service offering or turn down applications from new service users. Since 40% of the agencies surveyed reported at least one visiting nurse resigning every six months, the retention of visiting nurses is a crucial issue in Japan (The National Association for Home-Visit Nursing Care 2006).

Job satisfaction among home care nurses is an established predictor of their retention (Caers *et al.* 2008; Ellenbecker 2004; Ellenbecker *et al.* 2008; Lynch 1994). Because it is so crucial to the retention of nurses, studies have already been conducted on job satisfaction among visiting nurses. These studies found that shorter nursing experience (Tullai-McGuinness 2008), longer hours of direct patient care (Shuster 1992), and skill variety (Jansen *et al.* 1996) were all positive predictors of job satisfaction in the West. However, few studies have examined job satisfaction among visiting nurses in Japan (Mochizuki *et al.* 2009; Tomioka *et al.* 2007). According to the theoretical model of job retention for home health care nurses (Ellenbecker 2004; Ellenbecker *et al.* 2008), the characteristics of a home-visit nursing agency could affect visiting nurses' job satisfaction. Despite this, no study has considered the characteristics of home-visiting agencies. Therefore, the aim of this study was to explore the factors related to job satisfaction for visiting nurses in Japan by considering the characteristics of home-visit nursing agencies, with the ultimate goal of informing measures aimed at

maintaining job satisfaction among this group.

2. Methods

For the present cross-sectional study, we used secondary data derived from a questionnaire survey conducted by the National Association for Home-Visit Nursing Care in 2009. This survey data covered the functional capability and infrastructure of home-visit nursing agencies, with the goal of improving managerial stability and efficiency. The questionnaire for this original survey was developed by an expert panel that included one of the authors. Each item of the questionnaire was determined by literature review and clinical experience. The face validity of the questionnaire was confirmed by visiting nurses affiliated with home-visit nursing agencies. The details of this survey are described elsewhere (The National Association for Home-Visit Nursing Care, 2009). Approval to conduct this study was obtained from the Ethical Committee of the National Association for Home-Visit Nursing Care in Japan (Approval No: 20).

2.1 Participants

The participants in the original survey were visiting nurses ($n = 551$) working in Ibaraki Prefecture, Japan. When choosing the sample, we compiled a list of all 98 home-visit nursing agencies in Ibaraki Prefecture (Ibaraki Prefecture 2009), and then calculated the number of nurses working for each agency using publicly available information from the Welfare and Medical Service Agency (Welfare and Medical Service Agency 2008). The questionnaire was sent to all of the nurses in these home-visit nursing agencies between January and February 2009. An informed consent sheet was provided along with the questionnaire. Of the 551 surveys mailed out, 221 were returned (response rate = 40.1%). A total of 109 surveys were included in the present study due to missing data.

2.2 Job Satisfaction

We used an ordinal scale to measure job satisfaction; participants were asked, "How satisfied are you with your job?" and chose a number from 1 to 10 denoting this, with "1" indicating complete dissatisfaction and "10" indicating complete satisfaction. This scale's design is similar to that of the visual analog scale (VAS) used in previous studies (Tomioka *et al.* 2007; Tullai-McGuinness 2008). Responses were divided into three groups to maintain sufficient number of observations in each group (Low: 1–5, Middle: 6–7, and High: 8–10) (Stokes *et al.* 2000).

2.3 Measurements of factors possibly related to job satisfaction

For the present study, the variables that could possibly be related to job satisfaction among visiting nurses were selected from survey data, on the basis of the theoretical model of job retention for home health care nurses, developed by Ellenbecker and colleagues (Ellenbecker 2004; Ellenbecker *et al.* 2008). This model shows the relationship between home health care nurses' job satisfaction and retention, as well as the relationship between job satisfaction and factors related to job satisfaction. We gathered information regarding agency characteristics, market characteristics, nurse characteristics, and turnover intention as factors that are possibly related to job satisfaction.

Regarding agency characteristics, we gathered the information about whether the agency was a department within a hospital or clinic and the number of patients per full-time or equivalent nurse. The variable relating to the agency's status as either a department within a hospital or clinic was used as an extrinsic factor affecting visiting nurses' job satisfaction.

Nurse characteristics were measured with eleven variables, namely, age, gender, living arrangements, license type, years working as a visiting nurse, working arrangements (full time or part time), average length of shift, administrative position, number of acquired skills, on-call duty, and the extent to which the nurses could work according to their preferred schedules. For the "number of skills acquired in the workplace," participants selected as many of the 21 skills listed as applicable to them; all of the skills are typically required in the home-visit nursing field. Examples of these skills include respirator management, peritoneal dialysis management, home parenteral nutrition management, pain control for cancer patients, terminal care, dementia care, and psychiatric nursing care. "On-call duty" refers to a mobile-phone-based emergency contact system for users, allowing them or their families to call a designated number for advice from a visiting nurse. Visiting nurses who formed part of this on-call rotation system answered "Yes" to this item and were classified as the "participating" group. Those not taking part in on-call duty were classified as the "non-participating" group.

Market characteristics were measured by three variables, namely, the type of service provision entity (i.e., public sector, private sector, medical sector, or other) (Yoshioka *et al.* 2010), the number of full-time or equivalent nurses employed, and salary. Turnover intention was determined through the question, "do you intend to leave the current agency?" to which the participants could respond dichotomously ("Yes"/"No").

2.4 Statistical Analyses

Job satisfaction was set as the dependent variable. Given the ordinal nature of the variable of interest, we used an ordinal logistic regression model to determine the relationship between job satisfaction among visiting nurses and several other variables. The modeling was based on the steps outlined by Hosmer *et al.* (2013). First, we conducted univariate ordinal logistic regression in order to understand the relationship between the dependent

variable and set of covariates. Variables with a p -value $< .20$ in the univariate ordinal logistic regression model were included in the multiple ordinal logistic regression model. The proportional assumption was tested because ordinal variables were used as the dependent variables; this assumption was satisfied for all the univariate analyses (Stokes *et al.*, 2000). Next, multicollinearity was examined using the variance inflation factor (VIF), followed by a selection of a set of covariates for the preliminary model. Since the maximum VIF value between covariates was 1.21, we judged there to be no multicollinearity. Next, we examined the Wald test for each covariate in the preliminary model to assess the contribution to the model; covariates with a p -value $< .05$ were retained. Variables that were not retained were added one at a time to assess changes to the beta. The proportional assumption was tested in the same manner as the univariate analyses, thus confirming satisfaction of the assumption. We did not check the interaction effect because of problems with convergence. All statistical analyses were conducted using SAS version 9.2 software for Windows (SAS Institute Inc., Cary, NC).

3. Results

Table 1 shows the characteristics of home-visit nursing agencies, the participants' personal characteristics, and the results of univariate ordinal logistic regression. Thirty, 33, and 46 participants were classified as low, middle, and high job satisfaction groups, respectively. Two agency characteristics variables and six personal characteristics variables were included in the preliminary model.

Table 2 shows the multivariate ordinal logistic regression results. Three covariates were included in the final model. With regard to agency characteristics, visiting nurses working at large-scale agencies (odds ratio (OR) 2.42; 95% confidence interval (CI) 1.09–5.55) tended to have high job satisfaction. Regarding personal characteristics, visiting nurses who were intending to leave the agency (OR 0.09; 95% CI 0.03–0.24) and those with a work schedule that they highly desired (OR 5.55; 95% CI 1.99–16.44) tended to have lower and higher job satisfaction, respectively.

Table 1. Characteristics of participants and the results of univariate logistic regression analysis (n = 109)

	Low (n = 30)		Middle (n = 33)		High (n = 46)		Univariate ordinal logistic regression analysis		
	n	%	n	%	n	%	OR	95% CI	p-value
Agency characteristics									
Number of patients per full-time or equivalent nurse [‡]	11.5 (10.9–15.7)		13.8 (10.0–16.8)		15.7 (12.4–18.8)		1.07	(0.99–1.16)	0.104
Department within a hospital or clinic									
Yes	22	73.3	22	66.7	31	67.4	1.20	(0.57–2.56)	0.635
No	8	26.7	11	33.3	15	32.6		1	
Nurse characteristics									
Gender									
female	30	27.5	33	30.3	46	42.2			
Age [‡]	44.5 (40.0–49.0)		44.0 (40.0–47.0)		42.5 (38.0–52.0)		1.00	(0.96–1.05)	0.869
Living arrangements									
Living alone	1	3.3	3	9.1	3	6.5	0.62	(0.13–3.17)	0.985
Living with someone	27	90.0	24	72.7	32	69.6		1	
Living with child or someone who requires nursing care	2	6.7	6	18.2	11	23.9	0.40	(0.15–1.01)	0.141
License type									
Licensed practical nurse	29	96.7	31	93.9	43	93.5		1	
Registered nurse	1	3.3	2	6.1	3	6.5	0.65	(0.12–2.96)	0.594
Years working as visiting nurse [‡]	3.7 (2.0–8.0)		6.6 (3.0–11.0)		6.8 (3.1–10.2)		1.08	(1.01–1.17)	0.045
Working arrangements									
Full time	22	73.3	24	72.7	34	73.9	1.03	(0.47–2.26)	0.941
Part time	8	26.7	9	27.3	12	26.1		1	
Average length of shift (hours) [‡]	8.0 (7.0–8.0)		8.0 (7.0–8.0)		8.0 (8.0–9.0)		1.12	(0.89–1.43)	0.355
Administrative position									
Yes	7	23.3	8	24.2	11	23.9	1.02	(0.45–2.32)	0.964
No	23	76.7	25	75.8	35	76.1		1	
Number of acquired skills	7 (6–8)		7 (6–9)		7 (6–9)		1.16	(1.02–1.36)	0.040
On-call duty									
Participating	18	60.0	21	63.6	36	78.3		1	
Not participating	12	40.0	12	36.4	10	21.7	0.51	(0.24–1.07)	0.078
The extent to which they could work according to their preferred schedules [†]									
Low	12	40.0	6	18.2	3	6.5		1	
Middle	6	20.0	11	33.3	4	8.7	2.33	(0.77–7.34)	0.698
High	12	40.0	16	48.5	39	84.8	7.80	(2.94–22.05)	< .001
Market characteristics									
Type of service provision entity									
Public sector	0		0		0				
Private sector	5	16.7	4	12.1	5	10.9		1	
Medical sector	13	43.3	14	42.4	17	36.9	1.22	(0.40–3.77)	0.870
Other	12	40.0	15	45.5	24	52.2	1.70	(0.56–5.18)	0.266
Number of full-time or equivalent nurses [‡]									
≤4.3	17	56.7	19	57.6	18	39.1		1	
≥4.4	13	43.3	14	42.4	28	60.9	1.82	(0.90–3.70)	0.096
Salary (10,000 yen) ^{‡,§}									
<19	10	33.3	8	24.2	9	19.6		1	
20–24	5	16.7	8	24.2	9	19.6	1.60	(0.57–4.56)	0.682
≥25	15	50.0	17	51.5	28	60.8	1.78	(0.76–4.19)	0.343
Intention to leave the agency									
Yes	19	63.3	5	15.2	5	10.9	0.11	(0.04–0.27)	< .001
No	11	36.7	28	84.8	41	89.1		1	

[†] These two items were translated continuous into category because of sustaining proportional odds assumption.

Number of full-time or equivalent nurses: the average number of full-time workers for home-visit nursing agencies is 4.4 in 2008; thus, 4.4 was set as the cut-off value. The extent to which they could work according to their preferred schedules: it was asked as continuous variable (percentage) and then classified based on distribution of participants. Low, middle and high group were ranged from 0% to 59%, 60% to 79% and more than 80%, respectively.

[‡] Median (IQR)

[§] In December 2008, 1 USD = 90 JPY.

Table 2. The result of multivariate ordinal logistic regression analysis to identify factors related to job satisfaction of visiting nurses (n = 109)

	OR	95% CI	p -value
Nurse characteristics			
The extent to which they could work according to their preferred schedules [†]			
Low		1	
Middle	1.31	(0.39–4.49)	0.289
High	5.55	(1.99–16.44)	< .001
Market characteristics			
Number of full-time or equivalent nurses			
≥4.4 (vs. ≤4.3)	2.42	(1.09–5.55)	0.030
Intention to leave the agency			
Yes (vs. No)	0.09	(0.03–0.24)	< .001
Score test for proportional odds assumption: Chi-square = 6.26, p-value = 0.181			
Maximum likelihood test: Chi-square = 46.72, p-value < .001			

4. Discussion

We identified three factors that are associated with job satisfaction among visiting Japanese nurses. Our findings showed that visiting nurses working in large-scale agencies and those working according to their preferred schedules had high job satisfaction. Not surprisingly, turnover intention in relation to the current agency was related to low job satisfaction. This result was consistent with past findings (Caers *et al.* 2008; Ellenbecker 2004; Ellenbecker *et al.* 2008; Lynch 1994).

Visiting nurses who worked at an agency with a relatively higher number of full-time or equivalent nurses tended to have higher job satisfaction. The size of the home-care agency was reported as a factor related to job satisfaction among visiting nurses in the United States (Ellenbecker *et al.* 2008). We assumed that, as opposed to the size of the agency, certain characteristics of large agencies affected job satisfaction among visiting nurses. Specifically, in Japan, large-scale home-visit nursing agencies that typically have more than ten full-time or equivalent nurses have better financial performance (Fukui *et al.* 2014). Thus, large agencies could be providing visiting nurses with opportunities that improve job satisfaction, such as intra- or extra-agency instruction courses (Tomioka *et al.* 2007). However, it is not feasible to expect each agency to provide such opportunities, as most home-visit nursing agencies in Japan operate on a small scale. A possible solution in this regard is collaboration between agencies in neighboring areas to provide such opportunities.

The collaborative system could also enable visiting nurses to work according to their desired schedules. A large number of nurses prefer to work in home-visit nursing agencies after a separation period, which refers to instances wherein individuals do not work in the occupation for which they are qualified (Okada 2008; Preston 2009). In Japan, most qualified nurses spend the separation period as housewives. Additionally, Ogata *et al.* (2008) pointed out that Japanese female nurses' labor participation and the time that they dedicate to their jobs—as is the case with other female workers—are affected by their partners' income or number of children. This reflects an increasingly common situation for Japanese women aged 30 years or older. Hence, a desired work schedule must take precedence in ensuring higher job satisfaction among visiting nurses. However, it is not always easy to offer flexible schedules, due to the varying sizes of agencies in Japan. It might be useful to establish a network of nursing human resources, such as a relief system in which patients are cared for by a community of visiting nurses. This could improve job satisfaction among visiting nurses and possibly promote retention.

As with all research, this study had several limitations. First, job satisfaction was measured using a single scale, which was aggregated as a variable with three levels. This may have resulted in the loss of important information not gathered by the scale. Additionally, we could not confirm the validity of our job satisfaction measure. Caers *et al.* (2008) found that the Home Healthcare Nurses' Job Satisfaction Scale is a highly reliable scale. However, this scale was developed in the West, which has a vastly different cultural and social context, rendering it unsuitable for use in our study. Nevertheless, the results of the present study could serve as preliminary research on the development of a job satisfaction scale for visiting nurses in Japan. Second, visiting nurses who responded to this survey might, in any case, have had high or low job satisfaction. Thus, job satisfaction among visiting nurses might be either overestimated or underestimated. Furthermore, the accumulation of missing data for each variable reduced the number of participants included in the model, which could increase sampling bias. Therefore, the results should be generalized with caution. Effective ways to maximize the response rate, such as sending a reminder (Hayashi 2006), were not employed in the original

survey. Furthermore, the number of items in the original survey could have been too many for the respondents. Thus, in future studies, the response rate would have to be maximized and the questionnaire restructured appropriately. Additionally, in order to facilitate a thorough understanding of factors underlying the relationship between job satisfaction and the variables identified in this study, the cultural context and factors within a specific health care system must be considered.

References

- Caers, R., Du Bois, C., Jegers, M., De Gieter, S., De Cooman, R., & Pepermans, R. (2008). Measuring community nurses' job satisfaction: Literature review. *Journal of Advanced Nursing*, 62, 521-529
- Ellenbecker, C. H. (2004). A theoretical model of job retention for home health care nurses. *Journal of Advanced Nursing*, 47, 303-310
- Ellenbecker, C. H., Porell, F. W., Samia, L., Byleckie, J. J., & Milburn, M. (2008). Predictors of home healthcare nurse retention. *Journal of Nursing Scholarship*, 40, 151-160
- Fukui, S., Yoshiuchi, K., Fujita, J., & Ikezaki, S. (2014). Determinants of financial performance of home-visit nursing agencies in Japan. *BMC Health Service Research*, 14. doi: 10.1186/1472-6963-14-11
- Hayashi, H. (2006). *Mail surveys*. (augmented ed.). Osaka, Japan: Kansai University Press
- Hosmer, D. W., Lemeshow, S., & Sturdivant, R. X. (2013). *Applied logistic regression*. (3rd ed.). New York: Wiley Interscience, (Chapter 4)
- Ibaraki Prefecture, (2009), List of long-term care service providers. [Online] Available: <http://www.pref.ibaraki.jp/bukyoku/hoken/kaigo/jigyousha/jigyoushaichiran18.htm> (April 20, 2014)
- Jansen, P. G., Kerkstra, A., Abu-Saad, H. H., & van der Zee, J. (1996). The effects of job characteristics and individual characteristics on job satisfaction and burnout in community nursing. *International Journal of Nursing Studies*, 33, 407-421
- Japan Ministry of Health, Labour and Welfare, (2010), Nursing staff supply and demand forecast: Report No. 7. [Online] Available: <http://www.mhlw.go.jp/stf/houdou/2r9852000000z68f-img/2r9852000000z6df.pdf> (April 20, 2014)
- Japan Ministry of Health, Labour and Welfare, (2011), Survey of institutions and establishments for long-term care. [Online] Available: <http://www.mhlw.go.jp/toukei/saikin/hw/kaigo/service11/index.html> (April 20, 2014)
- Lynch, S. A. (1994). Job satisfaction of home health nurses. *Home Healthcare Nurse*, 12, 21-28
- Mochizuki, S., Mogi, M., & Iijima, S. (2009). An approach to work satisfaction and burnout among visiting nurses in a prefecture in Japan. *Yamanashi Nursing Journal*, 8, 9-14
- Nakano, Y. (2008). The relation between retention and job satisfaction of visiting nurses. *UH CNAS, RINCP Bulletin*, 15, 43-59
- Ogata, Y., Fukuda, T., Hashimoto M., Yoshida C., Nitta A., & Otsuka K. (2008). Workplace preferences of visiting nurses: An application of conjoint analysis. *Japanese Journal of Health Economics and Policy*, 19, 33-252
- Okada, N. (2008). Visiting nurses in Saitama Prefecture. *Houmonkango to Kango*, 13, 406-408
- Preston, B. (2009). The Australian nurse and midwifery workforce: Issues, developments and the future. *Collegian*, 16, 25-34
- Shuster, G. F., 3rd. (1992). Job satisfaction among home healthcare nurses: What they report and what it means. *Home Healthcare Nurse*, 10, 33-38
- Stokes, M. E., Davis, C. S., & Koch, G. G. (2000). *Categorical data analysis Using SAS system*. (2nd ed.). Cary, NC: SAS Institute, (Chapter 9)
- The National Association for Home-Visit Nursing Care, (2006), Investigation for new business deployment of home-visit nursing care agency. [Online] Available: <http://www.zenhokan.or.jp/pdf/surveillance/H18-5.pdf> (April 20, 2014)
- The National Association for Home-Visit Nursing Care, (2009), Research report on strengthen the foundation and functional capability of home visit nursing agencies. 2009. [Online] Available: <http://www.zenhokan.or.jp/pdf/surveillance/H20-1.pdf> (April 20, 2014)
- Tomioka, S., Ishizawa, M., Ohtake, M., et al. (2007). Factors related to job satisfaction of visiting nurses. *Journal of Japan Academy of Home Care*, 11, 43-51
- Tullai-McGuinness, S. (2008). Home healthcare practice environment: Predictors of RN satisfaction. *Research in Nursing & Health*, 31, 252-260
- Welfare and Medical Service Agency, (2008), Information regarding long-term care service providers. [Online] Available: <http://www.wam.go.jp/content/wamnet/pcpub/kaigo/service/> (April 20, 2014)
- Yoshioka, Y., Tamiya, N., Kashiwagi, M., Sato, M., & Okubo, I. (2010). Comparison of public and private care management agencies under public long-term care insurance in Japan: A cross-sectional study. *Geriatrics & Gerontology International*, 10, 48-55

The IISTE is a pioneer in the Open-Access hosting service and academic event management. The aim of the firm is Accelerating Global Knowledge Sharing.

More information about the firm can be found on the homepage:
<http://www.iiste.org>

CALL FOR JOURNAL PAPERS

There are more than 30 peer-reviewed academic journals hosted under the hosting platform.

Prospective authors of journals can find the submission instruction on the following page: <http://www.iiste.org/journals/> All the journals articles are available online to the readers all over the world without financial, legal, or technical barriers other than those inseparable from gaining access to the internet itself. Paper version of the journals is also available upon request of readers and authors.

MORE RESOURCES

Book publication information: <http://www.iiste.org/book/>

Recent conferences: <http://www.iiste.org/conference/>

IISTE Knowledge Sharing Partners

EBSCO, Index Copernicus, Ulrich's Periodicals Directory, JournalTOCS, PKP Open Archives Harvester, Bielefeld Academic Search Engine, Elektronische Zeitschriftenbibliothek EZB, Open J-Gate, OCLC WorldCat, Universe Digital Library, NewJour, Google Scholar

