Factors associated with the recruitment of foreign nurses in Japan: A nationwide survey of hospitals

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Research

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Abstract

Background: Nurse migration under bilateral agreements is a recent global trend; though lack of consultation with health industries has led to challenges in the recruitment of foreign nurses by hospitals. To analyze the prevailing opinion of hospitals on the Economic Partnership Agreement (EPA), under which Japan officially recruits foreign nurses, we surveyed the hospitals that are yet to employ foreign nurses.

Method: An anonymous questionnaire was developed and distributed to eligible hospitals; it requested the managers’ opinions on Japan’s policy on recruitment of foreign nurses and their intentions to hire foreign nurses. We randomly selected 1,879 hospitals, or 22% of the hospitals in Japan (n = 8,540) with more than 20 beds. We used descriptive statistics, a Chi-square test, and a logistic regression analysis to identify the predictors and developed a model to predict the likelihood of their intention to recruit foreign nurses in the future.

Results: In total, 432 hospitals were eligible for further analysis (response rate: 22.9%). Half (50%) of the hospital managers were very/quite interested in Japan’s policy on recruiting foreign nurses, though only 20% intended to recruit under the EPA in the future. The likelihood of foreign nurse recruitment under the partnership agreement was associated with the degree of interest in the policy (OR 9.38; 95% CI 4.42–19.90) and managers’ perception of foreign nurses (OR 5.32, 95% CI 2.38–11.89).

Conclusion: To attract more hospitals by reviewing the EPA policy, scrutinizing the needs of hospitals is key. EPA has challenges in accommodating the requests from the hospitals that urgently need foreign nurses, so it may render the new business model which effectively yields the eligible nurses from abroad. To review the EPA, it is essential to reflect upon the opinions of the medical institutions, including those who have yet to employ foreign nurses.

Background

Scarcity of nursing professionals is a global issue. According to the World Health Organization (WHO) [1], the worldwide needs-based shortfall in nurses and midwives is 9 million. Japan is not an exception: the Ministry of Health, Labour and Welfare (MHLW) has predicted that 1,960,000 to 2,060,000 nurses will be needed by 2025, when the baby boomers reach age 75. To fill the gap between demand and supply, 30,000 to 130,000 additional nurses will be needed in Japan [2]. To compensate for the scarcity of nurses, some Japanese hospitals attempted to employ foreign nurses during the 1990s. However, the Japanese government at the time did not support the hospitals by providing special concerns for foreign nurses.

Nurses should have the right to migrate and work abroad if they comply with the destination country’s immigration/work policies [3]. Employers and recruiters should fully observe and promote the WHO
Global Code of Practice on International Recruitment of Health Personnel [4]. In 2006, the Japanese government signed an economic partnership agreement (EPA) with the Philippines, Indonesia, and Vietnam to allow the active recruitment of nurses from these countries. According to the agreement, after applicants qualify the Japanese language program offered by the Japanese government (12 to 14 months), they can work at the hospital with which they were contracted. Foreign nurses are expected to pass Japan’s National Board Examination (NBE) within three years, or leave the country. The pass rate for foreign nurses, however, was noted to be 16.3% in 2019, which is substantially lower than for Japanese examinees (89.3%) [5].

As of January, 2019, only 136 foreign registered nurses remain in Japan [6], which is just 10.5% of the 1,300 foreign nurse candidates who have entered Japan since 2008. This is too few to meet the demand for nurses in Japan. A bureaucratic regulation, such as obliging foreign nurses to pass the national board examination without considering any language issues, make the effective implementation of the EPA in hospitals which employ foreign nurses difficult [7], and is likely to impede the recruitment of foreign nurses. While the MHLW does not routinely disclose the number of hospitals that had accepted foreign nurses under the EPA, but following a request, provided figures to show that in 2012, a year before we conducted our survey, only 191 hospitals (2.2% of the 8,540 across Japan) accepted foreign nurses. It is important to investigate why only a few hospitals employed foreign nurses, by studying hospitals that have and have not done so. There are many studies on hospitals that have employed foreign nurses [10–18, 20, 28], but very few on hospitals that have not yet employed foreign nurses.

A study [8] before the EPA implementation found that more than 80% of hospitals in Japan were interested in the foreign nurse recruitment policy, regardless of their plans to recruit. Investigating the factors associated with the recruitment of foreign nurses in hospitals that have not previously employed such nurses may, therefore, shed light on the perceptions of hospital staff and the implementation of nurse employment under the EPA.

**Methods**

The aim of this study was to determine the factors affecting the recruitment of foreign nurses among managers of hospitals in Japan who have not previously employed these nurses. A questionnaire was developed and distributed to a stratified random sample of the target population.

**Participants**

Participants included managers in Japanese hospitals that had not employed foreign nurses. Stratified random sampling was used with lists of registered hospitals disclosed by each prefectural branch of MHLW. The selection criterion used the number of hospitals per prefecture. We selected hospitals with more than 20 beds, to meet the condition of the Japan International Corporation of Welfare Services (JICWELS) [9], the only official agency accepting foreign nurses under the EPA. Initially, questionnaires were mailed to 2,000 hospitals that were selected. Of these, 121 questionnaires did not reach their destination. The study sample therefore included 1,879 hospitals (22% of hospitals in Japan; n = 8,540).
Instruments

We developed an eight-page questionnaire after carefully examining previous studies on hospitals that employed foreign nurses under the EPA and unpublished interviews conducted by the research team. The questionnaire contained questions about (1) the characteristics of the hospitals, including their type (Medical Corporation enacted by Medical Care Act Article 6 or Public Medical Institutions enacted by Medical Care Act Article 31) and number of beds; (2) the independent variables, which included the difficulties faced while recruiting Japanese nurses, degree of knowledge about recruiting nurses under the EPA, perceptions of foreign nurses, and political perceptions about recruiting foreign nurses; and (3) the dependent variable, which was the intention to recruit foreign nurses under the EPA program. The perception of foreign nurses was measured using eight items on a four-point Likert-type scale, (ranging from 1 = do not agree at all to 4 = strongly agree). The item scores were summed to quantify the image of foreign nurses, or the “image score”. The content validity was examined by the research team through discussions, and reliability was examined using Cronbach’s alpha. Image scores were divided into two groups based on the average score.

Nine items, listed in Table 2, measured political perceptions about recruiting foreign nurses, on a four-point Likert-type scale (ranging from 1 = do not agree at all to 4 = strongly agree). Intention to recruit foreign nurses in the future under the EPA was measured on a four-point Likert-type scale (ranging from 1 = definitely do not intend to recruit nurses to 4 = definitely intend to recruit nurses). Scores were divided into two groups: those who were likely to recruit and those who were not.

Data analysis

We used IBM SPSS Statistics for Windows, Version 25J for the statistical analyses. Descriptive statistics were used for hospital characteristics, and the Chi-square test was used to test the correlation between the future intention to recruit foreign nurses, the characteristics, and each independent variable. A logistic regression analysis was used to identify factors influencing the intention to recruit foreign nurses in the future. The independent variables were selected from the results of the Chi-square test. A stepwise method was used to select the independent variables to develop the most appropriate models. The level of statistical significance was set at p < 0.05.

Ethical considerations

Ethics approval was granted by the Biomedical Sciences Ethics Board at Nagasaki University (permission number: 18030817).

Results

Respondents
A total of 485 hospital managers participated in this study. I excluded 53 hospitals because they had either employed foreign nurses or did not answer the question. In total, 432 questionnaires were analyzed (respondent rate: 23.0%) (Table 1).
Table 1
Characteristics of the responding hospitals (n = 432).

<table>
<thead>
<tr>
<th>Item</th>
<th>Response option</th>
<th>n</th>
<th>(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respondents</td>
<td>Directors/CEOs</td>
<td>166</td>
<td>38.4</td>
</tr>
<tr>
<td></td>
<td>Managers</td>
<td>163</td>
<td>38.2</td>
</tr>
<tr>
<td></td>
<td>Head Nurses</td>
<td>98</td>
<td>23.0</td>
</tr>
<tr>
<td>Type of hospital</td>
<td>Medical Corporations</td>
<td>381</td>
<td>88.2</td>
</tr>
<tr>
<td></td>
<td>Public Medical Institutions</td>
<td>50</td>
<td>11.6</td>
</tr>
<tr>
<td></td>
<td>N.A.</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Number of beds</td>
<td>Less than 99</td>
<td>305</td>
<td>70.6</td>
</tr>
<tr>
<td></td>
<td>100–499</td>
<td>116</td>
<td>26.9</td>
</tr>
<tr>
<td></td>
<td>500 and above</td>
<td>11</td>
<td>2.5</td>
</tr>
<tr>
<td>Recruiting Japanese nurses</td>
<td>Very hard/hard</td>
<td>347</td>
<td>80.3</td>
</tr>
<tr>
<td></td>
<td>Not so hard/not hard</td>
<td>75</td>
<td>17.4</td>
</tr>
<tr>
<td></td>
<td>N.A.</td>
<td>10</td>
<td>2.3</td>
</tr>
<tr>
<td>Knowledge about EPA</td>
<td>Know very much/much</td>
<td>136</td>
<td>31.5</td>
</tr>
<tr>
<td></td>
<td>Not so much/not at all</td>
<td>292</td>
<td>67.6</td>
</tr>
<tr>
<td></td>
<td>N.A.</td>
<td>4</td>
<td>0.9</td>
</tr>
<tr>
<td>Degree of interest in Japan's foreign nurses recruitment policy under EPA</td>
<td>Very much/much</td>
<td>216</td>
<td>50.0</td>
</tr>
<tr>
<td></td>
<td>Not so much/not at all</td>
<td>211</td>
<td>48.8</td>
</tr>
<tr>
<td></td>
<td>N.A.</td>
<td>5</td>
<td>1.2</td>
</tr>
<tr>
<td>The intention to recruit foreign nurses under the EPA in the future</td>
<td>Very much/much</td>
<td>86</td>
<td>20.4</td>
</tr>
<tr>
<td></td>
<td>Not so much/not at all</td>
<td>336</td>
<td>79.6</td>
</tr>
<tr>
<td></td>
<td>N.A.</td>
<td>10</td>
<td>2.3</td>
</tr>
</tbody>
</table>

Managers’ perception of foreign nurses

About 96.3% of the hospital managers felt that training foreign nurses would be difficult, that foreign nurses found it hard to master the Japanese language while working (94.8%), and that very few passed
the NBE (93.4%). A large proportion also thought that accepting foreign nurses was costly (61.9%). However, a few managers thought that foreign nurses had high nursing skills (33.3%), acquired good reputations among patients and families (27.3%), remained in Japan for a long time (25.1%), and adjusted easily to Japanese hospitals (22.6%).

The mean image score was 15.17 (standard deviation [SD] = 2.98) with a minimum of eight and a maximum of 25. The Cronbach's alpha was 0.636. We divided the image score into two groups: lower image (less than 14) and higher image (15 or above).

Opinion on the policy on recruitment of foreign nurses

The respondents’ opinion on the foreign nurse recruitment policy is shown in Table 2 (left side).
Table 2
Opinion on policy by degree of intention to recruit foreign nurses (n = 432).

<table>
<thead>
<tr>
<th>Questions</th>
<th>Opinion on policy (n = 432)</th>
<th>Opinion on policy by degree of intention to recruit foreign nurses under the EPA in the future (n = 432)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly agree/agree (%)</td>
<td>Not agree / not at all (%)</td>
</tr>
<tr>
<td>Strongly agree/agree (%) (%)</td>
<td>Not agree / not at all (%)</td>
<td>p value</td>
</tr>
<tr>
<td>The Japanese government should require nurses to pass certain level of</td>
<td>85.5</td>
<td>14.5</td>
</tr>
<tr>
<td>Japanese language test before coming to Japan</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Japanese government should support the hospitals in preparing the</td>
<td>83.5</td>
<td>16.5</td>
</tr>
<tr>
<td>nurses for the NBE</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Japanese government should require foreign nurses who pass the NBE</td>
<td>82.8</td>
<td>17.2</td>
</tr>
<tr>
<td>to stay for several years</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Japanese government should articulate to introduce foreign nurses</td>
<td>70.8</td>
<td>29.2</td>
</tr>
<tr>
<td>to combat the shortage of nurses</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Japanese government should invite private agencies under the</td>
<td>58.1</td>
<td>41.9</td>
</tr>
<tr>
<td>supervision of the government to stimulate the principle of market</td>
<td></td>
<td></td>
</tr>
<tr>
<td>mechanism</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Japanese government should admit the multi-recognition of nursing</td>
<td>56.8</td>
<td>43.2</td>
</tr>
<tr>
<td>license between Japan and the partner countries</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Japanese government should admit <em>jun-kangoshi</em> (certified prefectural</td>
<td>48.6</td>
<td>51.4</td>
</tr>
<tr>
<td>nurse) under the EPA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Japanese government should prepare foreign nurses to pass the NBE</td>
<td>38.4</td>
<td>61.6</td>
</tr>
<tr>
<td>The Japanese government should not require foreign nurses to pass the</td>
<td>32.4</td>
<td>67.6</td>
</tr>
<tr>
<td>NBE, but to accept them as Japanese nurses’ assistants</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Chi-square test
The result of the Chi-square test indicated that the intention to recruit foreign nurses in the future under the EPA was significantly correlated with perceived difficulties in recruiting Japanese nurses ($p = 0.040$), image score ($p < 0.001$), and degree of interest in Japan's foreign nurse recruitment policy under the EPA ($p < 0.001$). The result of the Chi-square test between opinion on policy and degree of intention to recruit foreign nurses under the EPA in the future is shown in Table 2 (right side).

Logistic regression analysis

Table 3 presents the final model of logistic regression, which was significant ($p < 0.0001$) and accounted for 37.6% of variance (Nagelkerke R square = 0.376).

<table>
<thead>
<tr>
<th>Variables</th>
<th>OR</th>
<th>(95%CI)</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Degree of interest in government's policy to recruit foreign nurses under the EPA</td>
<td>9.38</td>
<td>(4.42–19.90)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>Image score</td>
<td>5.32</td>
<td>(2.38–11.89)</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>The Japanese government should articulate to introduce foreign nurses to combat the shortage of nurses</td>
<td>3.09</td>
<td>(1.387–7.51)</td>
<td>.013</td>
</tr>
<tr>
<td>The Japanese government should admit the multi-recognition of nursing license between Japan and the partner countries</td>
<td>1.89</td>
<td>(1.01–3.53)</td>
<td>.048</td>
</tr>
</tbody>
</table>

Discussion

This study identified a number of factors associated with the intention to recruit foreign nurses under the EPA in Japanese hospitals that have not previously done so. The strongest factor was the managers' degree of interest in the government's foreign nurse recruitment policy, followed by their perception of foreign nurses, and their opinion on the government policy to implement recruitment.

The findings indicate that reviewing the EPA regulation is essential to increase the number of hospitals that wish to employ foreign nurses. The number of hospitals interested in Japan's policy to recruit foreign nurses under the EPA has decreased since 2008 (50% vs. 83%) [8], before foreign nurse recruitment started. This is due to the burden on hospitals that employ foreign nurses, and particularly, providing support to them [10, 11–17] (e.g. providing assistance with daily living and instruction for the NBE in Japanese) as well as the cost, which is estimated to be as much as 3.6 million yen per nurse, including 26% to cover the “extra” work of Japanese nurses to support foreign colleagues during the three-year contract [18]. The respondents in this study had not employed foreign nurses, but they seem to be aware that supporting foreign nurses who are not fluent in Japanese is a burden for the hospital. This is consistent with the fact that, regardless of their intention to recruit foreign nurses in the future, 85.5% of the respondents said that the government should require foreign nurses to be proficient in Japanese
before entering Japan, to ease the burden on the hospitals. This suggests that a fundamental review of the EPA is required, particularly in terms of language training.

Study participants may have been influenced by their negative perceptions of foreign nurses, including their low pass rate of the NBE. Shinohara’s study [19] on certified care workers who entered Japan under the EPA indicated that Japanese people were more likely to respond negatively to healthcare worker migration. Considering the mean image score in this study, this tendency may also be applicable to foreign nurses. However, there are some advantages to employing foreign nurses. Ogawa et al [20] reported that 75% of hospitals that employed the first batch of Indonesian nurses were satisfied or very satisfied with them, and that these nurses had a bright personality (92.9%), and an appropriate attitude towards patients (89.3%). This led hospitals to change their mindset, and encouraged Japanese staff to develop a better understanding of different cultures. This tendency has also been observed in other countries recruiting foreign nurses [21–23], and the process may even regenerate the workplace. We suggest that it may be helpful for the government to emphasize the advantages of employing foreign nurses to encourage their recruitment by hospitals.

The EPA is a government-led program, so it should explain the need to introduce foreign nurses into Japan in intelligible terms. Currently, the MHLW states that “introducing foreign nurses is not to combat the shortage of nurses in Japan, but to respond to the request of the partner countries to accept the nurses” [24]. The statement is not helpful in persuading hospitals with nurse shortages, especially in rural regions [25]. Its ambiguity also confuses Japanese taxpayers, who paid more than 380,000,000 yen per year [26] in 2016 towards the costs of EPA nurses. It is, therefore, necessary for the Japanese government to make clear that the main purpose of bringing foreign nurses to Japan is to address the shortage of nurses.

As a destination country for migrant nurses, the Japanese government is required to respond to both international and domestic communities by reviewing the EPA scheme to attract nurses who wish to learn the use of advanced technology in Japan [27] and to encourage hospitals to recruit qualified nurses from South-East Asian countries. To do so, shared recognition of nursing licenses between Japan and its partner countries is necessary. The Japan Nursing Association (JNA) opposes this idea [28]. However, refusing to recognize nursing licenses might result in the stagnation of career development for migrant nurses who return to their countries of origin, or who wish to apply “points” or credits obtained in Japan in a partner country. Approving shared recognition would allow more flexibility between partner countries; Japan can then persuade partner countries to encourage nurses to obtain further qualification or “points” that can be used when they return from Japan to their home country.

This study is not immune to respondent bias. The majority of participants were from medical corporations (88.2%) and small institutions with fewer than 99 beds (70.6%). Recruiting foreign nurses will help to secure the nurse supply and reducing the risk of building an “inefficient medical service system” that was set out in the mid-term report published by the National Committee for Social Security in 2008 [29]. The report called for changes in hospitals in Japan, the majority of which are small medical
corporations, with too few medical staff. Further research, including public medical institutions and hospitals equipped with more beds, is therefore needed to confirm these results.

**Conclusion**

This study identified a number of factors associated with hospital managers’ intention to recruit foreign nurses under the EPA, including the government’s policy on recruiting foreign nurses, managers’ perception of foreign nurses, and managers’ opinion of the government’s policy. To increase the number of hospitals recruiting foreign nurses, the Japanese government should include the interests of Japanese hospitals in the foreign nurse recruitment policy, and improve perceptions of foreign nurses among medical staff. The policy must also be reviewed to focus on its main goal, and further approve shared recognition of nursing licenses between partner countries.

**Abbreviations**

EPA
Economic Partnership Agreement
JICWELS
Japan International Corporation of Welfare Services
JNA
Japan Nursing Association
MHLW
Ministry of Health, Labour and Welfare
NBE
National Board Examination
WHO
World Health Organization

**Declarations**

**Ethics approval and consent to participate**

Ethics approval was granted by the Biomedical Sciences Ethics Board at Nagasaki University (permission number: 18030817).

**Consent for publication**

Not applicable.

**Availability of data and materials**
Data will be released upon completion of the study and is available upon reasonable request from the first author.

**Competing interests**

The authors declare that they have no competing interests.

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**Author’s contribution**

YH developed the questionnaire and conducted the analysis and basic writing. SO and KT advised YH in developing questionnaire.

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