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BRIEF REPORT
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Factors related to feelings toward nursing practices for foreign pregnant and postpartum residents among midwives and nurses at perinatal medical centers in Osaka, Japan: A questionnaire survey

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Abstract: The number of foreign residents in Japan continues to increase, and many are of reproductive age. Foreign residents report many difficulties when receiving nursing care. Midwives and nurses also experience negative feelings about nursing care for foreigners. This study clarified the factors related to feelings toward nursing practices for foreign pregnant and postpartum residents among midwives and nurses at perinatal medical centers in Osaka, Japan. A web-based survey was conducted from 1 October to 31 December 2023. A research request form was distributed to 309 midwives and nurses working at nine perinatal medical centers in Osaka. Data for 82 participants were analyzed (response rate: 26.5%). The mean age was 35.7 ± 10.6 years; 76 participants (92.7%) were midwives. Logistic regression analysis was conducted to examine associations between several factors and the proportion of participants scoring above the median on each feeling. Participants with poor English-language skills reported significantly more frustration (multivariable-adjusted odds ratios [ORs] and 95% confidence intervals [CIs] for above-median scoring: 3.16 [1.03–9.66]). Participants who had not attended workshops on nursing care for foreign residents experienced more difficulty (OR: 4.60; 95% CI: 1.32–16.01), helplessness (OR: 4.39; 95% CI: 1.28–15.04), and uncertainty (OR: 5.29; 95% CI: 1.52–18.43). To reduce feelings of difficulty and increase positivity in providing nursing care to foreign residents with different languages, cultures, and customs, it is important to improve cross-cultural competency. Education programs, especially web-based interventions and individualized education programs that include workshops on cross-cultural competence, could be effective.

***Keywords*:** Immigrants, non-Japanese residents, emotions, midwifery, healthcare worker

Introduction

The number of foreign residents in Japan continues to increase. As of June 2024, there were approximately 3.58 million foreign residents in Japan, a 5.2% increase over the previous year and a record high (*1,2*). Approximately 85% of Asian foreign residents are from China, Vietnam, Korea, or the Philippines, in that order; many are in their 20s and 30s and are thus of reproductive age (*2*). Osaka Prefecture has the third highest number of foreign residents in Japan (*1*), so many foreign pregnant and postpartum women visit the obstetric outpatient departments at medical centers in Osaka.

Previous studies (*3-5*) have reported on various difficulties experienced by foreigners when receiving healthcare in other countries, including language barriers and cultural differences. Language barriers negatively affect patient outcomes, and linguistic assistance is essential for adequate healthcare provision (*4*). The increased susceptibility of migrant women to poor perinatal outcomes is associated with socioeconomic instability, limited healthcare access, and cultural and linguistic barriers (*5,6*). Hospitals and healthcare professionals can be rather reluctant to accept foreign patients because of difficulties providing translation services and culturally diverse care, lack of sufficient staff owing to increasing numbers of Japanese patients, and other reasons (*7*). Previous studies have found that the two main areas of difficulty for nurses providing care to immigrants are communication and cultural differences (*8-10*). There is also evidence that cultural differences are a major obstacle in the delivery of nursing services (*11*). Additionally, a previous study suggested that cultural differences and language barriers are factors that affect work experience (*10*). Effective communication between patients and healthcare

professionals is essential for the provision of safe, high-quality care (*8*); however, many immigrants from Asian countries experience communication challenges because they do not have native language skills in either Japanese or English.

In a previous study, we found that midwives experienced negative feelings such as frustration and helplessness when trying to convey their meaning, and difficulties making themselves understood, when explaining concepts and providing health guidance to foreign mothers at a perinatal medical center in Japan (*12*).

Although there are clearly challenges for both patients and healthcare providers in the provision of nursing care for foreign patients, there have been no studies focusing on the feelings of midwives and nurses when providing nursing care to foreign patients. Therefore, the purpose of this study was to identify factors related to feelings toward nursing practices for foreign pregnant and postpartum residents among midwives and nurses at perinatal medical centers in Osaka, Japan.

Materials and Methods

Study participants and procedure

This web-based questionnaire survey was conducted from 1 October to 31 December 2023. The questionnaire was originally developed by our research team from several references (*9,10,12-15*). Target participants were all midwives and nurses working in obstetric wards at 23 perinatal medical centers in Osaka, Japan. A research request form was distributed to 309 midwives and nurses working at nine perinatal medical centers in Osaka where research was permitted. In total, 93 (30.1%) midwives and nurses agreed to participate in the survey. After excluding 9 participants with missing data, a total of 82 (26.5%) midwives and nurses were included in the analysis.

Feelings toward nursing practices for foreign pregnant and postpartum residents among midwives and nurses: Outcomes

Feelings toward nursing practice for foreign pregnant and postpartum residents among midwives and nurses were assessed using the following five items: feelings of frustration at not being able to convey their meaning (frustration), a sense of difficulty in making themselves understood (difficulty), feelings of helplessness when trying to communicate explanations (helplessness), feelings of uncertainty about whether they are being understood (uncertainty), and feelings of satisfaction in providing nursing care to foreigners (satisfaction). Responses were on a visual analog scale.

Exposure factors and potential confounding factors

The following demographic information was obtained using a web-based, self-administered questionnaire: age, midwifery and nursing work experience (cumulative), type of certification (midwife or nurse), educational background (graduate school, university, junior college, or vocational school), number of experienced nurses to foreign patients (cumulative), self-reported English-language level (able to use medical terms, able to hold daily conversations, able to communicate using gestures and simple words, unable to communicate in English at all), foreign language learning experience (presence or absence), global nursing study experience as a student (presence or absence), and participation in workshops on nursing care for foreign residents as a midwife or a nurse (presence or absence).

Statistical analysis

Descriptive statistics were calculated for all data collected. The normality of continuous data was confirmed using the Shapiro–Wilk test, and these data were presented as mean (standard deviation), or median (interquartile range; IQR). Continuous data were classified into two groups according to the median because of the non-normal distribution. The visual analog scale scores for feelings were also non-normally distributed; therefore, the median was calculated and analyzed separately for two groups: those scoring above and those scoring below the median. Differences in demographic characteristics and feelings toward nursing practice for foreign pregnant and postpartum residents were analyzed using the chi-squared test and shown as percentages. Logistic regression models were used to estimate the multivariable-adjusted odds ratios (ORs) and 95% confidence intervals (CIs) of each factor (response variable: 1 = the feelings score is above the median, 0 = the feelings score is below the median). Work experience (> 9.5 years or ≤ 9.5 years), number of experienced nurses to foreign patients (≥ 31 or ≤ 30), English level (very good/good/average or poor), and participation in workshops on nursing care for foreign residents (presence or absence) were included in the model. All data were analyzed using SPSS statistical software version 27 for Windows (IBM SPSS Japan, Tokyo, Japan). All reported *p*-values were two-tailed, and values < 0.05 were considered statistically significant.

Ethical considerations

The study protocol was prepared in accordance with the Declaration of Helsinki and was approved by the Institutional Review Boards of Osaka Metropolitan University (date of approval: 27 September 2023; approval no. 2023-38). Informed consent was obtained from all participants whose data were included in the study.

Results and Discussion

Participant characteristics and feelings toward nursing practice for foreign pregnant and postpartum residents

A total of 82 midwives and nurses completed the survey (response rate: 26.5%). Descriptive data for the demographic characteristics of participants in this study are shown in Table 1. The mean age was 35.7 ± 10.6 years, the median (IQR) years of midwifery and nursing experience was 9.50 (4.00–20.25) years. Most participants were midwives (92.7%); four had attended graduate school (4.9%) and 37 (45.1%) had attended university. More than half of participants (56.1%) had experience in providing nursing care to foreign pregnant and postpartum residents aged under 30 years. A total of 37 participants (45.1%) had foreign language learning experience and 62 (75.6%) self-reported very good, good, or average English-language skills. Only 24 participants (29.3%) had had global nursing study experience as a student, and 19 (23.2%) had participated in workshops on nursing care for foreign residents.

Table 2 shows the scores for feelings toward nursing practice for foreign pregnant and postpartum residents among midwives and nurses. The highest score (median [IQR]) was for frustration (87.00 [77.00–97.25]). The next highest scores were for difficulty (80.00 [71.75–95.25]), helplessness (79.00 [60.00–88.50]), and uncertainty (68.50 [52.00–85.25]). The lowest score was for satisfaction (52.00 [39.00–70.25]).

Previous studies (*3-12*) have shown that the main challenges experienced by medical professionals in providing nursing care to foreign residents are differences in language and cultural values. Of these, language is reportedly the greatest challenge for nurses who provide medical care to foreign patients (*13*). Most of our participants could communicate in English using gestures and simple words. However, almost all the foreign residents in Japan are from Asia and are not native speakers of either Japanese or English (*2,14,15*). Therefore, communicating in a language in which both parties are not native speakers can lead to difficulty and anxiety. Of participants' reported feelings, the highest scores were for frustration. The field of obstetrics is unique in that care for deliveries must be provided 24 hours a day, 365 days a year. Additionally, in many deliveries, the health and mortality risk of mothers and children are directly related. Although it is desirable to have interpreters available 24 hours a day in obstetrics departments, where emergencies often occur and medical explanations are required, many facilities (even perinatal medical centers) do not have them (*14*). Even though many foreign residents from Asia are not native English speakers, healthcare personnel in Japan often use simple English words when communicating with them. Although it is difficult for midwives and nurses to develop high proficiency in another language, it is likely that learning English vocabulary commonly used in daily nursing would help to reduce frustration and improve communication even with patients who are not native English speakers.

Table 1. Demographic characteristics among midwives and nurses (*n* = 82)

Characteristics	Mean ± SD M (IQR)
Age, years	35.7 ± 10.6 33.00 (26.00–45.25)[a]
Work experience, years (cumulative)	12.39 ± 9.64 9.50 (4.00–20.25)[a]
	***n* (%)**
Type of certification, %	
Midwife	76 (92.7)[b]
Nurse	6 (7.3)
Educational background, %	
Graduate school	4 (4.9)
University	37 (45.1)
Junior college	6 (7.3)
Vocational school	35 (42.7)
Number of foreign patients (cumulative)	
1–10	17 (20.7)
11–30	29 (35.4)
31–50	21 (25.6)
51–100	7 (8.5)
> 100	8 (9.8)
Self-reported English-language level, %	
Able to use medical terms: very good	1 (1.2)
Daily conversation is possible: good	2 (2.4)
Able to use gestures and simple words: average	59 (72.0)
Unable to communicate in English at all: poor	20 (24.4)
Foreign language learning experience: presence, %	37 (45.1)
Global nursing study experience as a student: presence, %	24 (29.3)
Participation in workshops on foreign patient nursing as a midwife or nurse: presence, %	19 (23.2)

SD: standard deviation; M: median; IQR: interquartile range. [a]The Shapiro–Wilk test was used to confirm the normality of continuous data, which are presented as median (interquartile range). [b]Dichotomous and categorical data are presented as number (percentage).

Table 2. Feelings toward nursing practice for foreign pregnant and postpartum residents among midwives and nurses (*n* = 82)

Feelings[a]	M (IQR)[b]
Frustration	87.00 (77.00–97.25)
Difficulty	80.00 (71.75–95.25)
Helplessness	79.00 (60.00–88.50)
Uncertainty	68.50 (52.00–85.25)
Satisfaction	52.00 (39.00–70.25)[c]

M: median; IQR: interquartile range. [a]The scores on feelings toward nursing practice for foreign pregnant and postpartum residents were evaluated using a visual analog scale (range: 0–100). [b]The Shapiro–Wilk test was used to confirm the normality of continuous data, which are presented as median (IQR). [c]Normal distribution.

Factors related to feelings toward nursing practice for foreign pregnant and postpartum residents among midwives and nurses

Table 3 shows the differences in demographic characteristics and feelings toward nursing practice for foreign pregnant and postpartum residents among midwives and nurses, along with the multivariable-adjusted ORs and 95% CIs for each factor (response variable: 1 = feelings score above the median, 0 = feelings score below the median). The table shows the associations between several factors and the proportion of participants scoring above the median for each assessed feeling.

Participants with poor English-language skills experienced significantly higher frustration ($p = 0.029$). Having experience of nursing more than 31 foreign patients and lack of participation in workshops on nursing care for foreign residents were significantly associated with greater difficulty ($p = 0.048$, $p = 0.025$, respectively). Lack of participation in workshops on nursing care for foreign residents was significantly associated with greater helplessness ($p = 0.008$) and uncertainty ($p = 0.004$). Finally, participants with less than 9.5 years of midwifery and nursing experience and those who had experience learning a foreign language experienced significantly greater satisfaction ($p = 0.015$, $p = 0.016$, respectively).

After adjustment for work experience (> 9.5 years or ≤ 9.5 years), number of foreign patients nursed (≥ 31 or ≤ 30), English-language level (very good/good/average or poor), and participation in workshops on nursing care for foreign residents (presence or absence), the multivariable-adjusted ORs and 95% CIs for scoring above the median on frustration were 3.16 (1.03–9.66) for participants with poor English-language level (*vs.* very good/good/average). The multivariable-adjusted ORs and 95% CIs for scoring above the median on difficulty were 0.30 (0.11–0.83) for participants with ≤ 30 years of experience nursing foreign patients (*vs.* ≥ 31) and 4.60 (1.32–16.01) for those who had not attended workshops on nursing care for foreign residents (*vs.* presence). The multivariable-adjusted ORs and 95% CIs for scoring above the median on helplessness were 4.39 (1.28–15.04) for participants who had not attended workshops on nursing care for foreign residents (*vs.* presence), and the multivariable-adjusted ORs and 95% CIs for scoring above the median on uncertainty were 5.29 (1.52–18.43) for those who had not attended workshops on nursing care for foreign residents (*vs.* presence). Finally, the multivariable-adjusted ORs and 95% CIs for scoring above the median on satisfaction were 3.17 (1.25–8.04) for participants with ≤ 9.5 years of nursing experience (*vs.* > 9.5).

A previous review study identified a communication barrier between patients and healthcare workers who demonstrate low cultural competency (*10*). A key way of reducing the sense of difficulty and increasing positive feelings in practicing nursing care for foreign pregnant women and postpartum mothers with different languages, cultures, and customs is to improve cross-cultural competency. Such competency is generally defined as "the ability to work and communicate effectively and appropriately with people from culturally different backgrounds" (*16*). The development of cross-cultural competency in healthcare professionals is a useful strategy for reducing cultural disparities in healthcare. Conceptualizations of cultural competence refer to the attitudes, knowledge, and skills of professionals when working with culturally diverse populations (*17*). Cross-cultural competence is also considered essential in understanding the client's cultural context and delivering effective and culturally responsive services to diverse clients (*18*). A previous study suggested that cross-cultural competency is associated with experiences of travel abroad, foreign language skills, and training in intercultural care, and that learning about cross-cultural care is necessary to improve the cross-cultural competency of healthcare professionals (*19*). Thus, learning opportunities to improve foreign language proficiency and cross-cultural competence are important for midwives and nurses.

In our previous study (*14*), the respondents wanted more learning opportunities in foreign nursing to improve their nursing practice with foreign pregnant women and postpartum mothers; such opportunities are effective in improving cross-cultural competence. It is possible that greater cross-cultural competence and confidence in nursing foreign patients would increase the positive experiences of nurses and midwives. In one previous study of nurses in Japan, only 16% of participants reported having training in cross-cultural nursing, and there was no significant difference between age groups in the data (*19*). In the present study, less than 30% of midwives and nurses had participated in workshops on nursing care for foreign residents. This figure is notably different from data from previous studies in Europe, which reported that most participants had been trained in cross-cultural care (*17,20*). A previous study suggested that some nurses are interested in intercultural care but lack the opportunity to receive training to improve their cross-cultural nursing skills (*19*). Many training programs for midwives and nurses are organized within the hospital, and training protocols are established according to the level and years of experience of midwives and nurses. However, in Japan, such programs contain little content related to nursing foreign patients or improving cross-cultural competence. The present findings that midwives and nurses who had attended workshops on nursing care for foreign residents had experienced less difficulty, helplessness, and uncertainty indicate the need to implement training for all midwives and nurses nursing foreign patients to reduce negative feelings.

Table 3. Logistic regression analysis of factors related to feelings toward nursing practice for foreign pregnant and postpartum residents among midwives and nurses (*n* = 82)

Factors	Comparison[a]	Proportion scoring > median on frustration, % (case/n)[b]	Logistic regression ORs (95% CIs) for frustration scores > median
Age, years	> 33.00	44.7 (17/38)	
	≤ 33.00	52.3 (23/44)	
		p = 0.496	
Work experience, years	> 9.5	46.3 (19/41)	1.0
	≤ 9.5	51.2 (21/41)	1.41 (0.55–3.57)
		p = 0.659	*p* = 0.474
Number of foreign patients	≥ 31	50.0 (18/36)	1.0
	≤ 30	47.8 (22/46)	0.82 (0.32–2.11)
		p = 0.845	*p* = 0.683
Educational background	Graduate school, university, Junior college, vocational school	43.9 (18/41) 53.7 (22/41)	
		p = 0.377	
Foreign language learning experience	Presence	40.5 (15/37)	
	Absence	55.5 (25/45)	
		p = 0.176	
English-language level	Very good/good/average	41.9 (26/62)	1.0
	Poor	70.0 (14/20)	3.16 (1.03–9.66)
		p = 0.029	*p* = 0.043
Participation in workshops on nursing foreign patients	Presence	31.6 (6/19)	1.0
	Absence	54.0 (34/63)	2.40 (0.78–7.44)
		p = 0.087	*p* = 0.129
Factors	**Comparison**	**Proportion scoring > median on difficulty, % (case/n)**	**Logistic regression ORs (95% CIs) for difficulty scores > median**
Age, years	> 33.00	52.6 (20/38)	
	≤ 33.00	40.9 (18/44)	
		p = 0.812	
Work experience, years	> 9.5	48.8 (20/41)	1.0
	≤ 9.5	48.8 (20/41)	1.28 (0.49–3.36)
		p = 1.000	*p* = 0.617
Number of foreign patients	≥ 31	61.1 (22/36)	1.0
	≤ 30	39.1 (18/46)	0.30 (0.11–0.83)
		p = 0.048	*p* = 0.020
Educational background	Graduate school, university Junior college, vocational school	53.7 (22/41) 48.8 (20/41)	
		p = 0.659	
Foreign language learning experience	Presence	40.5 (15/37)	
	Absence	55.6 (25/45)	
		p = 0.176	
English-language level	Very good/good/average	43.5 (27/62)	1.0
	Poor	65.0 (13/20)	2.16 (0.70–6.64)
		p = 0.095	*p* = 0.181
Participation in workshops on nursing foreign patients	Presence	26.3 (5/19)	1.0
	Absence	55.6 (35/63)	4.60 (1.32–16.01)
		p = 0.025	*p* = 0.016

ORs: odds ratios; CIs: confidence intervals. [a]Differences in demographic characteristics and feelings toward nursing practice for foreign pregnant and postpartum residents were determined using chi-squared tests. [b]Response variable: 1 = The feelings score is above the median and 0 = The feelings score is below the median. Adjusted for years of nursing experience (> 9.5 years or ≤ 9.5 years), Number of foreign patients (≥ 31 people or ≤ 30 people), English-language level (very good/good/average or poor), participation in workshops on foreign nursing (presence or absence).

Table 3. Logistic regression analysis of factors related to feelings toward nursing practice for foreign pregnant and postpartum residents among midwives and nurses (n = 82) (continued)

Factors	Comparison[a]	Proportion scoring > median on frustration, % (case/n)[b]	Logistic regression ORs (95% CIs) for frustration scores > median
Age, years	> 33.00	42.1 (16/38)	
	≤ 33.00	52.3 (23/44)	
		p = 0.358	
Work experience, years	> 9.5	43.9 (18/41)	1.0
	≤ 9.5	51.2 (21/41)	1.40 (0.55–3.58)
		p = 0.507	p = 0.479
Number of foreign patients	≥ 31	44.4 (16/36)	1.0
	≤ 30	50.0 (23/46)	1.04 (0.40–2.68)
		p = 0.617	p = 0.944
Educational background	Graduate school,university	48.8 (20/41)	
	Junior college,vocational school	46.3 (19/41)	
		p = 0.825	
Foreign language learning experience	Presence	43.2 (16/37)	
	Absence	51.1 (23/45)	
		p = 0.478	
English-language level	Very good/good/average	43.5 (27/62)	1.0
	Poor	60.0 (12/20)	1.84 (0.62–5.44)
		p = 0.200	p = 0.272
Participation in workshops on nursing foreign patients	Presence	21.1 (4/19)	1.0
	Absence	76.1 (35/46)	4.39 (1.28–15.04)
		p = 0.008	p = 0.019
Factors	**Comparison**	**Proportion scoring > median on uncertainty, % (case/n)**	**Logistic regression ORs (95% CIs) for uncertainty scores > median**
Age, years	> 33.00	44.7 (17/38)	
	≤ 33.00	54.5 (24/44)	
		p = 0.376	
Work experience, years	> 9.5	46.3 (19/41)	1.0
	≤ 9.5	53.7 (22/41)	1.50 (0.58–3.89)
		p = 0.508	p = 0.405
Number of foreign patients	≥ 31	50.0 (18/36)	1.0
	≤ 30	50.0 (23/46)	0.78 (0.30–2.06)
		p = 1.000	p = 0.616
Educational background	Graduate school, university	46.3 (19/41)	
	Junior college, vocational school	53.7 (22/41)	
		p = 0.508	
Foreign language learning experience	Presence	45.9 (17/37)	
	Absence	53.3 (24/45)	
		p = 0.506	
English-language level	Very good/good/average	45.2 (28/62)	1.0
	Poor	65.0 (13/20)	2.12 (0.69–6.49)
		p = 0.123	p = 0.189
Participation in workshops on nursing foreign patients	Presence	21.1 (4/19)	1.0
	Absence	58.7 (37/63)	5.29 (1.52–18.43)
		p = 0.004	p = 0.009

ORs: odds ratios; CIs: confidence intervals. [a]Differences in demographic characteristics and feelings toward nursing practice for foreign pregnant and postpartum residents were determined using chi-squared tests. [b]Response variable: 1 = The feelings score is above the median and 0 = The feelings score is below the median. Adjusted for years of nursing experience (> 9.5 years or ≤ 9.5 years), Number of foreign patients (≥ 31 people or ≤ 30 people), English-language level (very good/good/average or poor), participation in workshops on foreign nursing (presence or absence).

Table 3. Logistic regression analysis of factors related to feelings toward nursing practice for foreign pregnant and postpartum residents among midwives and nurses (*n* = 82) (continued)

Factors	Comparison[a]	Proportion scoring > median on frustration, % (case/n)[b]	Logistic regression ORs (95% CIs) for frustration scores > median
Age, years	> 33.00	39.5 (15/38)	
	≤ 33.00	54.5 (24/44)	
		p = 0.173	
Work experience, years	> 9.5	34.1 (14/41)	1.0
	≤ 9.5	61.0 (25/41)	3.17 (1.25–8.04)
		p = 0.015	*p* = 0.015
Number of foreign patients	≥ 31	47.2 (17/36)	1.0
	≤ 30	47.8 (22/46)	1.07 (0.42–2.74)
		p = 0.957	*p* = 0.887
Educational background	Graduate school, university	51.2 (21/41)	
	Junior college, vocational school	43.9 (18/41)	
		p = 0.507	
Foreign language learning experience	Presence	62.2 (23/37)	
	Absence	35.6 (16/45)	
		p = 0.016	
English-language level	Very good/good/average	48.4 (30/62)	1.0
	Poor	45.0 (9/20)	0.93 (0.32–2.71)
		p = 0.792	*p* = 0.896
Participation in workshops on nursing foreign patients	Presence	57.9 (11/19)	1.0
	Absence	44.4 (28/63)	0.54 (0.18–1.61)
		p = 0.303	*p* = 0.267

ORs: odds ratios; CIs: confidence intervals. [a]Differences in demographic characteristics and feelings toward nursing practice for foreign pregnant and postpartum residents were determined using chi-squared tests. [b]Response variable: 1 = The feelings score is above the median and 0 = The feelings score is below the median. Adjusted for years of nursing experience (> 9.5 years or ≤ 9.5 years), Number of foreign patients (≥ 31 people or ≤ 30 people), English-language level (very good/good/average or poor), participation in workshops on foreign nursing (presence or absence).

Midwives and nurses require ongoing professional development to help foreign patients address their multifaceted needs. However, it is often difficult for nursing professionals to attend workshops, seminars, and training during their busy daily work schedules. Web-based education models and organizational support can provide educational opportunities to midwives and nurses with limited time and opportunity to improve their competency. Previous intervention studies (*21-24*) have found that web-based individual education programs are effective in improving competency, knowledge, skills, and resilience in nurses and health professionals. There are no studies on the effects of web-based cross-cultural seminars or education for clinical midwives and nurses. However, cross-cultural competency is associated with relevant training *(20,25*), and the development of web-based programs that are free and demand minimal time may be effective.

The midwives and nurses in this study experienced not only negative feelings such as frustration and difficulty, but also positive feelings such as satisfaction. Previous research shows that midwives and nurses caring for foreign patients have positive experiences of joy and satisfaction from being understood, relied upon, and appreciated (*12,14*). The successful experience of building relationships and feeling rewarded and happy while transcending language barriers can improve midwifery and nursing practice skills. Nurses who attend training on nursing care for foreign patients to improve their cross-cultural competency would likely find it more rewarding to care for foreign patients. Such positive experiences would lead to better midwifery and nursing care, thus improving the quality of midwifery and nursing care for foreign patients.

This study had several study limitations. First, the cross-sectional design precludes any conclusions about the causal nature of the observed associations. Therefore, a prospective study is needed to confirm our findings. Second, data were obtained only from midwives and nurses who agreed with the study aims and fully completed the questionnaire. As such, there is a possibility of selection bias because of the low response rate (26.5%); additionally, the sample was small and drawn from only one prefecture in Japan. Third, other potential confounding factors that were not considered in this study include living environment and personality differences. Despite these potential limitations, these findings are important as they clarify the current state

of nursing care for foreign pregnant and postpartum residents in perinatal medical centers in Japan, which provide care for many foreign patients.

In conclusion, this study findings showed that participants who had fewer English-language skills experienced greater frustration nursing foreign patients. We also found that the experience of participating in workshops on support for foreign patients was effective in eliminating negative feelings such as difficulty, helplessness, and uncertainty. Therefore, to reduce negative feelings toward nursing foreign patients, participation in educational programs — especially web-based interventions and individualized education programs on nursing care for foreign residents — and daily simple English-language education could be effective in improving nurses' cross-cultural competency and English-language skills.

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