

Original Paper

# A Survey on Nurses Balancing Child Care and Work

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## Abstract

This study aimed to investigate the use of maternal protection and child care support systems used by female nurses raising children, their demands for nurse administrators, and other organizational systems and procedures they require to facilitate their work. This study was conducted as part of a larger study regarding nurses' work-life balance, using anonymous self-administered questionnaires between June and September 2015. An analysis of 208 responses revealed that the most commonly experienced problems were scheduling and dealing with unexpected events, followed by the inability to arrange for night-time child care, and the lack of nurseries. Further, reliance on family members was more commonly reported than demands for improving work environments. Although around 80% of the participants noticed that their workplaces had provisions for shorter working hours and night shift exemptions, only about 44% had used them. In terms of the demands for the nurse administrators, the most commonly cited (42.5% of the responses) need was "creating a culture that encourages the use of systems." We concluded that participants were unable to effectively use available child care support systems, demanding that their managers should create organizational climates with better and easier formal support systems and provisions. Thus, both establishing a child care system for nurses to maintain their work and fostering a culture where nurses can utilize the system are crucial. For the latter to be realized under the current shortage of nurses, mutual support among nurses and consistent efforts from nurse managers in promoting it are essential.

## 1. Introduction

The proportion of older adults (aged 65 years and above) in Japan has been increasing each year, and is expected to reach 38.4% by 2065<sup>1)</sup>. This growth necessitates increasing numbers of health care professionals and caregivers, such as doctors, gerontological caregivers, and nurses. The employment rate of nurses has been increasing, but their numbers are insufficient in areas with high health care demand in Japan<sup>2)</sup>. It is estimated that, by 2025, there will be a shortage of 60,000 to 270,000 nurses against the requirement of 1.88 million to 2.02 million nurses<sup>2)</sup>. Since the birth rate has continued to decline, it will not be easy to increase the number of newly graduated nurses. Moreover, approximately 710,000 potential nurses, equaling about 30% of the total number of qualified nurses in Japan, are currently not registered with

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any specific organization<sup>3</sup>). Many factors contribute to nurses not practicing their profession formally, or choosing to leave it. In the financial year (FY) 2019, the turnover rate for full-time nurses was 11.5%; for newly hired nurses, it was 8.5%; and for previously hired nurses, it was 16.4%<sup>4</sup>). The most common reasons for resignation were childbirth and raising young children, followed by marriage. It has been noted that the high turnover of nurses exacerbates patient safety and organizational effectiveness<sup>5,6</sup>). The COVID-19 epidemic raised awareness of the importance of adequate nurse staffing in preparation for epidemics and disasters. Therefore, reducing nurse turnover has become a critical issue.

Previous studies investigating nurses' work-life balance have reported that factors which encourage nurses to continue working include: emotional support from colleagues<sup>7,8</sup>), improved workplace culture<sup>9</sup>), organization-wide support system at hospitals<sup>10</sup>), basic nursing abilities<sup>11</sup>), and balanced, undemanding workplaces<sup>12</sup>). For nurses to continue working while raising their children, it is necessary to develop various work environment and mutually supportive organizational cultures for them to work without the stresses of child care<sup>13</sup>). Moreover, nursing managers' roles and management support are essential in preventing nurses from terminating their employment<sup>7,9,14</sup>).

A report issued by the Ministry of Health, Labor and Welfare stated that the main reason for nurses leaving their jobs was pregnancy and childbearing<sup>15</sup>). Nurses who play central roles in their workplaces have often spent 5-10 years as professionals<sup>16</sup>); hence, many are in the childrearing stage of their lives. The attitudes and behaviors of mid-career nurses significantly impact their workplace choices and decisions, based on the potential for work-life balance. Therefore, we believe that investigating the perspectives of female nurses raising children in their work environments will significantly contribute to understanding their experiences and employment decisions.

## 2. Aim

This study aimed to investigate the use of maternal protection and child care support systems by female nurses raising children, their demands for nurse administrators, and other organizational systems and procedures they require to continue working.

## 3. Methods

### 3.1 Operational definition

We defined "nurses" as nurses, midwives, and certified associate nurses employed at hospitals.

### 3.2 Procedures and participants

The survey was conducted between June and September 2015. The participating hospitals were selected using a stratified random sampling method, according to the hospital size<sup>17</sup>). From a list of 8,450 hospitals on a list of insured hospitals and clinics in Japan, we selected 450 facilities in total: 100 small-sized facilities with 100 or fewer beds; 150 mid-sized facilities with 101-300 beds; and 200 large-sized facilities with 301 or more beds. To invite nurses to participate, we mailed questionnaires, request forms, and consent forms to managers of the Nursing Services Departments at the selected facilities. In addition, we asked the managers of each participating facility to distribute the questionnaires to nurses with 5-11 years of clinical experience. These questionnaires were returned separately in pre-addressed envelopes to the researchers by mail.

### 3.3 Analysis of questionnaire contents

This study was conducted as part of a larger study examining nurses' work-life balance. The researchers had already reported mid-career female nurses' views toward newer nurses' pregnancy and childbearing<sup>18</sup>), and their positive and negative workplace experiences during pregnancy<sup>19</sup>). This time, we analyzed the use of maternal protection and child care support systems by female nurses raising children, and their demands for administrative support.

### 3.4 Ethical considerations

The questionnaire included the objective and methods of the study, and noted that participation was voluntary and that non-participation would not result in any disadvantage. Participants were also informed that all data obtained would only be used for the purpose of this study; returning a completed questionnaire would be considered as a provision of consent to participate in this study; completed questionnaires would be adequately stored and disposed of; the data would be processed in such a way that individuals could not be identified; and that data would be used only for academic purposes. Approval for this study was obtained from the institutional ethics committee of Kawasaki University of Medical Welfare, Okayama, Japan (ref. no. 15-013).

### 3.5 Data analysis

Quantitative data were first examined with descriptive statistics. Chi-square tests were used to compare frequencies of responses. The level of significance was set at 0.05. Analyses were performed using the statistical analysis software SPSS Version 23.0. Conventional content analysis was used to analyze free-description type responses about demands for hospital administrators through the following procedure: first, the semantic content of responses was summarized and coded, with codes integrated into subcategories based on similarities and differences; next, the subcategories were integrated into categories; and finally, the numbers of descriptions in each code, subcategory, and category were quantified.

## 4. Results

### 4.1 Responses and characteristics of participants

Forty-seven facilities consented to participate in the study. Between one to 147 copies of the questionnaire were mailed to each hospital manager, and distributed among 839 target participants. Subsequently, 531 nurses submitted their responses individually by mail. Of these, 526 were valid, out of which we analyzed 208 who responded to all the questions regarding this study.

Table 1 describes participants' attributes and characteristics. Their mean age was  $34.1 \pm 4.7$  years (mean  $\pm$  standard deviation [SD]; range: 26-51 years), with most participants being in their 30s. Their average number of children was  $1.7 \pm 0.7$  (mean  $\pm$  SD; range: 1-5). The mean age of the participants' children was  $5.2 \text{ years} \pm 4.3 \text{ years}$  (mean  $\pm$  SD; range: 0-26), and the mean age of their youngest children was  $4.3 \text{ years} \pm 4.0 \text{ years}$  (mean  $\pm$  SD; range: 0-26).

### 4.2 Use and comparison of maternal protection and child care support systems as determined by hospital size

More than 83% of the participants had used prenatal leave, and almost 80% had taken child care leave. More participants from larger hospitals (i.e., those with 300-499 beds) had used these systems, as compared to those from smaller hospitals ( $p=0.001$ ,  $p<0.001$ ). Nearly 85% replied that their workplaces had shorter working hour systems, but only 44.2% of them had used the system. Furthermore, although 77.8% answered that their hospitals had night shift exemption systems available for pregnant women, only 43.8% of them had utilized the system. Moreover, only 34.6% had taken nursing leave to care for their children during times of sickness, whereas 74.5% had taken annual leave for the same (Table 2).

### 4.3 Problems and desired solutions

Table 3 lists the problems that nurses faced and the solutions they desired. The most commonly experienced challenge was "schedule adjustment" (35.6%), followed by "unexpected events" (32.5%), "no one to care for children at night" (12.5%), and "difficulty in finding a nursery" (11.5%). In addition, the most commonly desired solutions included "cooperation of family members" (40.1%), followed by "child-friendly workplaces" (35.1%), and "availability and ease of use of the night shift exemption system" (24.8%).

Table 1 Responses and characteristics of the participants

		(n=208)	
Variable		Mean $\pm$ SD	% (range)
Age (years)		34.0 $\pm$ 4.6	(26-51)
	26-29	23	11.1
	30-39	164	78.8
	40-49	20	9.6
	51	1	0.5
License	Nurse	197	94.7
	Midwife	6	2.9
	Associate Nurse	5	2.4
Clinical experience		9.0 $\pm$ 1.7	(6-11)
	6th year	26	12.5
	7th year	20	9.6
	8th year	31	14.9
	9th year	33	15.9
	10th year	41	19.7
	11th year	57	27.4
No. of beds in the hospital where employed		367.1 $\pm$ 196.0	(24-1000)
	Less than 300	72	34.6
	300-less than 500	70	33.7
	500 or more	66	31.7
Type of employment	Full-time	186	89.4
	Non-full time	21	10.1
	No answer	1	0.5
No. of children		1.7 $\pm$ 0.7	(1-5)
	1	91	43.8
	2	88	42.3
	3	28	13.5
	5	1	0.5
Age of children (years)	Overall	5.2 $\pm$ 4.3	(0-26)
	Youngest	4.3 $\pm$ 4.0	(0-26)

#### 4.4 Demands for nurse administrators

In total, 538 descriptive units were obtained. Content analysis of the same revealed two categories: "improvement of the work environment" (65.0%) and "consideration for individuals" (35.0%). The category "improvement of the work environment" consisted of two subcategories: "creating a culture that encourages the use of support systems" (42.5%) and "staffing strategies" (22.5%). The other category, "consideration for individuals," also consisted of two subcategories: "consideration for staff nurses' health conditions" (17.5%) and "understanding of balancing work and care" (17.5%) (Table 4).

## 5. Discussion

According to the Basic Survey of Gender Equality in Employment Management conducted by the Ministry of Health, Labor and Welfare<sup>20)</sup>, the rate of female workers taking child care leave was 81.5% in FY 2015, and 81.6% in FY 2020. However, the rate for all participants in this study was 79.8%, which is 1.5-1.6% lower; moreover, the rate for hospitals with 300-499 beds was 91.4%, significantly higher than

Table 2 Use and comparison of maternal protection and child-raising support systems as determined by hospital size

Item	Total (n=208)	Number of beds in your hospital n(%)			$\chi^2$	p-value	n(%)
		Less than 300 (n=72)	300-499 (n=70)	500 and more (n=66)			
I used prenatal leave.	173 (83.2)	50 (69.4)	65 (92.9)	58 (87.9)	18.599	0.001	
I used child care leave.	166 (79.8)	46 (63.9)	64 (91.4)	56 (84.8)	21.299	<0.001	
My current workplace has a shorter working hour system.	176 (84.6)	58 (80.6)	55 (78.6)	63 (95.5)	6.377	0.387	
I used the shorter working hour system.	92 (44.2)	29 (40.3)	35 (50.0)	28 (42.4)	1.369	0.850	
My current workplace has a night shift exemption system.	161 (77.4)	49 (68.1)	59 (84.3)	53 (80.3)	1.800	0.773	
I used the night shift exemption system.	91 (43.8)	32 (44.4)	36 (51.4)	23 (34.8)	4.012	0.404	
I took nursing-leave to care for my child when my child was sick.	72 (34.6)	17 (23.6)	27 (38.6)	28 (42.4)	10.765	0.096	
I used annual leave when my child was sick.	155 (74.5)	55 (76.4)	49 (70.0)	51 (77.3)	1.369	0.85	

Table 3 Problems and desired solutions

Category	Typical description	n	%
Schedule adjustment	It was hard to fit my work schedule into my children's events.	137	35.6
Unexpected events	There was no one to pick up my child when he or she was sick, such as with a sudden fever.	125	32.5
No one to care for children at night	There was no one to take care of my children during the night shift.	48	12.5
Difficulty in finding a nursery	It was hard to find a nursery where I could leave my child.	44	11.5
Cooperation of family members	I wanted my parents to be in the neighborhood to help me take care of my children.	77	40.1
Desire to solve the problems (n=242)	I wanted my husband to help me care for my child.		
Availability and ease of use of the night shift exemption system	I wanted to use the night shift exemption system and the shorter working hours system.	60	24.8
Child-friendly workplaces	I wanted my workplace to be child-friendly.	85	35.1

n: number of descriptive units

Table 4 Demands for nurse administrators

Category	<i>n</i>	%	Subcategory	<i>n</i>	%	Code	<i>n</i>	%
Improvement of the work environment	26	65.0	Creating a culture that encourages the use of support systems	17	42.5	Understanding and acceptance of the use of the system	10	25.0
						Guaranteed holidays	4	10.0
						Extension and increase of availability of the system	2	5.0
						Correcting bias in the use of systems by departments	1	2.5
Consideration for individuals	14	35.0	Staffing strategies	9	22.5	Consideration of assignment locations to reduce the burden on a single staff nurse	5	12.5
						Consideration of the members working with me	3	7.5
						Assignment to the department of my choice	1	2.5
Consideration for staff nurses' health conditions	7	17.5	Understanding of balancing work and care	7	17.5	Consideration for staff nurses' health conditions	6	15.0
						Understanding the physical and mental toll of work	1	2.5
						Understanding of the hardships of raising children	4	10.0
						Understanding of the hardships of caregiving	3	7.5

*n*: number of descriptive units

that for hospitals with 500 or more, or 299 or fewer beds. Given the workplace diversity of the participant pool, when interpreting the results of the analysis according to hospital size, it is important to note that the responses were not only from one representative per facility. Hospitals with less than 300 beds are often small private hospitals, and their financial base is often weaker than that of large hospitals run by corporations or organizations. Systems and provisions at smaller hospitals, hence, are probably dependent on the fact that they do not have the same level of welfare benefits as public hospitals, who are responsible for immediately implementing policies regardless of their financial conditions. On the other hand, large hospitals with more than 500 beds include many university hospitals and special function hospitals that provide highly advanced medical care. The Promotion of Female Participation and Career Advancement in the Workplace Act, implemented in 2016, had required companies with 301 or more employees to establish an environment conducive to work-life balance, including benefits like child care leave acquisition. It was extended to companies with 101 or more employees in 2020. This survey was conducted prior to the enactment of this Act, and the rate of nurses in hospitals with less than 300 beds taking child care leave was notably low at 63.9%, but is expected to increase in the future.

Only 34.6% of the participants took nursing leave when their children were sick; while as many as 74.5% took paid leave for the same reason. No significant difference was found in the utilization rate of nursing leave among hospitals of different sizes. Nursing leave is one of the leave provisions stipulated in the Child Care and Family Care Leave Law and must be sanctioned separately from the paid leave stipulated in the Labor Standards Law. Until December 2020, the leave could be taken on a daily or half-day basis, but the Child Care and Family Care Leave Law has been amended to allow the leave to be taken on an hourly basis starting in January 2021. Up to five days of leave can be taken in a year for each child younger than elementary school age. To reduce the number of professionals who are unaware use these systems, additional activities to promote awareness and seamless implementation of the same are required.

The most commonly experienced problems were scheduling and dealing with unexpected events, followed by the inability to arrange for night-time child care, and the lack of nurseries. Further, reliance on family members was more commonly reported than demands for improving work environments, possibly because most participants' children were preschoolers. Moreover, although around 80% of participants noticed that their workplaces had shorter working provisions and night shift exemptions, only about 44% had availed themselves of these options.

In terms of the demands for nurse administrators, the most commonly cited need was "creating a culture that encourages the use of systems". This result was based on 42.5% of the responses. Therefore, we can interpret that the participants desired an atmosphere where they could use their benefits and leave systems without hesitation. The Basic Survey of Gender Equality in Employment Management<sup>19)</sup> revealed that the rate of men taking child care leave has dramatically improved recently, reaching 12.65% in 2020, an increase of 5.17% from the previous year. However, it is still less than half the target of 30% set by the Japanese government. Moreover, private babysitting services have increased tremendously. In order for the babysitting system to become more widespread, as it has in other countries, it is necessary to develop a government certification system that guarantees the provision of safe care for small children.

The Hospital Nursing Survey 2019<sup>21)</sup> conducted by the Japanese Nursing Association shows that 21.4% of nurses employed at workplaces with night shifts do not personally choose these times. Therefore, we can see that work environments are becoming more convenient for nurses' circumstances, such as child care and nursing. However, we can assume that there is a difficulty in maintaining night shift workers. Besides, some hospitals are introducing flexible working styles in recent years, treating the nurses as regular employees even if they work shorter hours or two or three days a week, which needs further promotion.

A previous study shows that the highest percentage of nursing staff employed was in the age group of 40 to 44 years old (15.1%), followed by 45 to 49 years old (13.1%), 35 to 39 years old (12.9%), 25 to 29 years old (12.7%), 30 to 34 years old (11.5%), under 25 years old (8.9%), 50 to 54 years old (8.0%), and 60 to 64 years old (4.7%)<sup>22)</sup>. According to the Hospital Nursing Survey 2020<sup>4)</sup>, the turnover rate of experienced nurses was

16.4%, which was higher than that of newly graduated nurses (8.5%). About one in six of the experienced nurses had terminated their employment within a year<sup>4)</sup>. This may have been due to these nurses feeling a lack of confidence about their skills and knowledge. The turmoil caused by the COVID-19 pandemic led to many previously unemployed nurses returning to the workforce, as a countermeasure for the shortage of medical staff. Nurses who returned to work have been primarily engaged in vaccination duties and had to review the process of giving intramuscular injections, an essential clinical skill. In Japan, all licenses for medical professionals have lifetime validity and do not need to be renewed. However, as medical technology advances, the required skills for nurses are also developing. Therefore, consistent work experience and awareness of the changes in medical science are beneficial for nurses and society. Yet, as previously discussed, there are barriers to female nurses continuing to work and balance their lives effectively, even though policies exist to ensure secure employment. The act on the Arrangement of Related Acts to Promote Work Style Reform was enforced in June 2018. Further, the revised act concerning Stabilization of Employment of Older Persons came into effect in April 2021, making it compulsory to secure employment until the age of 65 and makes it an obligation to secure employment until the age of 70. Thus, the solution to the shortage of nurses in the medical field is to create an environment where nurses are provided with services and provisions enabling them to overcome their challenges.

With the current shortage of nurses, simply establishing a child care support system and enacting a law will not actually increase the number of nurses who use the system. Nurses in hospitals work in cooperation with other nurses on a 24-hour basis. To prevent turnover, it is essential to foster a workplace culture where nurses help each other according to their own situations. To this end, the participants of this study demanded that nurse managers be considerate of their personal circumstances. Therefore, the first step in creating a balanced work-life environment is understanding each other's circumstances through communication. To achieve this, nurse managers, who have a great deal of influence in the workplace, must play a major role in fostering support and collaboration among their staff.

## 6. Conclusion

It is clear from the research that participants were unable to effectively use the available child care support systems, and relied on their families to cope with unexpected work events or night shifts. Participants expressed that their managers should create organizational climates with more supportive formal support systems and provisions. To conclude, both establishing a child care system for nurses to maintain their work and fostering a culture where nurses can utilize the system are crucial. For the latter to be realized under the current shortage of nurses, mutual support among nurses and the efforts of nurse managers to promote it are essential.

## 7. Limitations and future research

The participants were nurses who had continued working while raising their children. They likely had a high degree of interest in work-life balance, and it is possible that their workplaces already had initiatives in place to ensure the same. Therefore, we cannot rule out the possibility of bias, and our findings may not faithfully reflect the realities faced by nurses in Japan. It may be worthwhile to conduct a similar survey with nurses who left work due to pregnancy, childbirth, and child care. Future studies should also investigate ways to improve working environments and measures to support work-life balance.

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## Conflict of interest

None declared.

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