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Difficulties faced by public health nurses involved in prevention of child abuse

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Abstract Aims : Child abuse is an important global issue. Public Health Nurses (PHNs) play a vital role in supporting children and their families to prevent child abuse. Considering the complex nature of child abuse, PHNs are likely to encounter various difficulties and supporting them is necessary. This study aimed to identify factors influencing the difficulties faced by PHNs in prevention of child abuse, and to understand the relationship between the PHN's personal attributes and the difficulties faced.

Method : A cross-sectional survey design was used in which 250 PHNs involved in prevention of child abuse participated. They were from public health centers and municipalities all over Japan. Data collected were analyzed using exploratory factor analysis.

Results : Six factors on the difficulties that PHNs faced were extracted and identified as : "support of parents and their families facing problems," "process of assessing the problem and linking to support," "cooperation with relevant organizations," "ability as a PHN to provide support," "collaboration within the workplace," and "support for abused children." These difficulties were related to the PHNs' number of years of experience, their current work position, training on abuse, and the number of child abuse cases they encountered.

Conclusion : PHNs encounter various difficulties in the process of handling child abuse cases, but not all of them experience these difficulties in the same way. The results suggest that it is essential to focus on the nature of these difficulties depending on the personal characteristics of PHNs in order to provide effective support.

Key words : child abuse, difficulties, public health nurses

INTRODUCTION

Child abuse has become an urgent problem in many countries[1]. In Japan, the number of child abuse consultations referred to child consultation centers nationwide continues to increase year after year, with 159, 850 consultations in 2018. To date, this was the largest number of cases[2]. With the Second Phase of the Healthy Parents and Children 21 program, the national program for maternal and child health has suggested that "support for parents finding child-rearing is difficult" and that "child abuse prevention measures from pregnancy onward" should be the focal issues[3]. Professionals from

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multiple disciplines need to be involved when providing support, from pregnancy onward;among these professionals, the public health nurses（PHNs） who are affiliated with public health centers and municipalities play a central role in this effort. In Japan's maternal and child health system, PHNs are continuously involved with the child and their family's healthcare, from the initial notification of the pregnancy, to the provision of support for the children and their families.

Health professionals involved in prevention of child abuse have important responsibilities that go along with their role of care provisions. In the process of providing care, they are required to make judgments based on each situation and work toward building relationships with parents ; providing this type of support is not an easy task. Dahlbo, Jakobsson, & Lundqvist[4] reported that detecting and reporting child maltreatment was stressful for child health care nurses. A study on nurses, doctors, and dentists reported that fears, anxieties, and lack of knowledge act as barriers to recognizing and reporting abuse[5]. Another study reported that emergency department health care providers experienced various barriers to recognizing and reporting abuse, including providers' desire to believe the caregiver, lack of follow-up on reported cases, and negative consequences of reporting such as having to testify in court[6]. Additionally, health professionals face a variety of problems at different stages in the process of providing care ; nurses and midwives experienced problems trying to manage the child and family right from the start of the cases[7]. Maintaining professionalism when dealing with parents suspected of child maltreatment is another difficult aspect of the health professional's role[8].

These problems apply to PHNs as well. In Ireland, they are involved in child protection with difficulties experienced such as with monitoring at-risk children and working with social workers[9]. In Japan, PHNs involved in prevention of child abuse were reported to encounter various difficulties as well, including lack of necessary knowledge, skill, and experience in child abuse cases[10, 11] ; getting in contact with parents[12-14] ; cooperating with other organizations[15] ; and anxiety and bewilderment experienced when dealing with abuse[10, 16]. These difficulties arise because the nurses are handling the issues sincerely, thereby not having these difficulties is not necessarily a good thing. However, although professionals involved in prevention of child abuse have a high level of work satisfaction, they also have high levels of stress and burnout[17]. Previous studies reported that health professionals require supervision[4] and more education through case reviews[6].

In order to provide effective support for PHNs encountering work-related difficulties, it is essential to clarify the details and extent of the difficulties, and to analyze these related factors. The ability of PHNs to execute professional duties may vary according to their level of experience[18-20], and not all PHNs involved in prevention of child abuse may experience work-related difficulties in the same manner and to the same extent. Although a previous study has examined the reasons for and characteristics of difficulties PHNs feel[21], there are only a few studies that examined the nature and structure of these difficulties, and how personal attributes of PHN's can lead to different experiences of work-related difficulties.

The aim of this study was to identify the factors of the difficulties faced by PHNs who are involved in prevention of child abuse, and to determine the role played by personal attributes of PHNs, which led to individual differences in the way these difficulties are experienced.

METHOD

A cross-sectional survey design was used.

SAMPLE

The participants were PHNs who were involved in prevention of child abuse, and working in public health centers and municipalities across Japan. There were 250 participants who completed the survey questionnaire.

DATA COLLECTION

An anonymous self-report questionnaire designed by the researchers was sent by postal mail to selected

participants throughout Japan. One hundred and ten (110) public health centers were randomly selected from existing data records of the Japanese Association of Public Health Center Directors[22], and 393 municipalities were randomly selected as well, from records of the Ministry of Internal Affairs and Communications[23], reaching a total of approximately one-fifth of all the public health centers and municipalities nationwide. A request to participate in the survey was sent to directors of the public health centers and to the directors of municipal health centers or departments in charge of maternal and child health. After obtaining permission from the directors, the questionnaires were distributed to PHNs via the director. A pre-paid return envelope was provided, and completed questionnaires were returned directly to the researcher. The survey was conducted between November 2017 and March 2018.

SURVEY ITEMS

The questionnaire was designed by the researchers and was used to collect data on personal characteristics of the participants, such as gender, age, affiliated organization, years of experience as a PHN, current position, municipality where the respondent worked, number of PHNs in the affiliated organization, training experience in child abuse, and the experience and number of child abuse cases the respondent had been involved in to date.

The survey questionnaire was composed of fifty (50) items derived from content related to difficulties encountered when providing support for child abuse cases from previous research[10-16, 24-28] conducted in Japan on PHNs. During the process of creating the questionnaire, the content was examined by expert researchers, including those in the field of pediatric nursing and public health nursing, and PHNs involved in prevention of child abuse. A pilot study was administered to 10 PHNs, and the questionnaire was revised based on the results. Responses to items on the questionnaire pertaining to the difficulties experienced by PHNs were based on a 4-point scale, from 1("Did not experience any difficulty") to 4("Experienced difficulty").

DATA ANALYSIS

Data collected using the survey questionnaire were analyzed through exploratory factor analysis. Descriptive statistics was used to analyze the characteristics of the participants. To ascertain the factor structure for the difficulties experienced by PHNs, an exploratory factor analysis was conducted with the principal factor method and Promax rotation. Items with ≥ 0.4 factor loading on one factor were selected.

RELIABILITY AND VALIDITY

The questionnaire was examined for internal consistency and reliability using Cronbach's alpha coefficient. The relationship between the total score of items attributed to each factor and the data on the characteristics of the participants, including affiliated organization, years of experience as a PHN, current position, municipality population where the respondent worked, number of PHNs in the affiliated organization, training experience in child abuse, and the number of child abuse cases, were analyzed using the Mann-Whitney U test and the Kruskal-Wallis test. Items with a significant difference in the Kruskal-Wallis test were analyzed through the multiple comparisons Bonferroni method. Used in the data analysis was the SPSS version 25 (IBM Corporation, Armonk, NY, USA) and the level of significance was set at 0.05 level of significance.

ETHICAL CONSIDERATIONS

This study was conducted with the approval of the Clinical Research Ethics Review Board of the Tokushima University Hospital (approval number : 2976). All participants were provided the explanation form to participate in the study. The form clearly explained the aim and method of the study, the voluntary nature of participation in the study, the absence of disadvantages to the subject if they chose not to participate, the guarantee of anonymity, and information regarding management of the data.

RESULTS

The questionnaire was distributed to 447 PHNs who were affiliated in 144 facilities that agreed to participate. Responses were received from 337 nurses (response rate: 75.4%) and 250 of these participants had experienced consultations with child abuse cases, and correctly responded to the questionnaire items. These responses were then analyzed and interpreted. Remaining responses from 87 nurses were not included in the analysis because they had not experienced consultations with child abuse cases, or had not correctly responded to the questionnaire items.

Table 1. Characteristics of participants

	n	%
Age (years)		
22—29	52	20.8
30—39	66	26.4
40—49	76	30.4
≧50	56	22.4
Affiliated organization		
Municipalities (Health centers)	158	63.2
Municipalities (Non health centers)	48	19.2
Public health centers	39	15.6
Other	4	1.6
Non-response	1	0.4
Experience as a public health nurse		
1-5 years	54	21.6
6-10 years	45	18.0
11-20 years	58	23.2
≧21years	92	36.8
Non-response	1	0.4
Position		
Staff level	161	64.4
Manager level or higher	75	30.0
Other	12	4.8
Non-response	2	0.8
Municipality population		
<10,000	45	18.0
10,000-50,000	83	33.2
50,000-200,000	82	32.8
≧200,000	38	15.2
Non-response	2	0.8
Number of PHNs in the affiliated organization		
<10	107	42.8
10-20	93	37.2
20-30	34	13.6
≧30	14	5.6
Non-response	2	0.8
Training experience in child abuse		
Experienced		
More than once a year in the past 5 years	94	37.6
More than once in the past 5 years	103	41.2
No experience in the past 5 years	26	10.4
Non-response about frequency	3	1.2
No training experience	24	9.6
Number of child abuse cases involved		
<10 cases	143	57.2
10-30 cases	61	24.4
30-50 cases	19	7.6
≧50 cases	26	10.4
Non-response	1	0.4

CHARACTERISTICS OF THE PARTICIPANTS

The characteristics of the participants are shown in Table 1. All respondents were women, and the mean age of 40.1±9.9 years. The mean employment or work experience of PHNs in months was 188.3±124.2 months. More than 90% of the respondents had received training on abuse, while 94 nurses (37.6%) had attended training at least once a year in the past five years.

FACTOR STRUCTURE OF THE DIFFICULTIES EXPERIENCED BY NURSES

Before conducting the factor analysis, the ceiling effect, floor effect, and IT correlation for the 50 difficulty items were acknowledged. There were no items that had a floor effect, but there were two items with a ceiling effect. As for the IT correlation, there were three items wherein the Pearson's correlation coefficient was $r < 0.3$. Six factors and 38 items were extracted as a result of the factor analysis of the 45 items, excluding the aforementioned five items, using the principal factor method and Promax rotation, based on the conditions that the items had an eigenvalue of ≥1.0, a factor loading of ≥0.4, did not have a loading of ≥0.4 on other factors, and each factor comprised of ≥3 items (Table 2). The results of Kaiser-Meyer-Olkin was 0.937, Bartlett's test of sphericity test showed statistical significance ($p < 0.001$), and therefore the validity of applying the data to factor analysis was established.

The six factors were as follows: "support for parents and families facing problems" (factor 1), "process of assessing the problem and linking to support" (factor 2), "cooperation with relevant organizations" (factor 3), "ability as a PHN to provide support" (factor 4), "collaboration within the workplace" (factor 5) and "support for abused children" (factor 6). The Cronbach's α coefficient for each factor was 0.788-0.931.

The mean score per item for each factor in all participants was as follows: support for parents and families facing problems −3.21±0.55; process of assessing the problem and linking to support −2.82±0.59; cooperation with relevant organizations −2.65±0.65; ability as a PHN to provide support −3.00±0.65; collaboration within the workplace −2.29±0.67; and support for abused children −3.14±0.61. "Support for parents and families facing problems" scored the highest, followed by "support for the abused child," "ability as a PHN to provide support." However, focusing on the number of years of experience, the 1-5 year group and 6-10 year group showed different results from the overall result (Figure 1). That is, the 1-5 year group scored highest on "ability as a PHN to provide support," followed by "support for parents and families facing problems," while the other three groups scored highest on "support for parents and families facing problems."

RELATIONSHIP BETWEEN PUBLIC HEALTH NURSES' CHARACTERISTICS AND DIFFICULTIES THEY EXPERIENCED IN MANAGING CHILD ABUSE CASES

The results of the analysis of the relationship between each difficulty factor and the characteristics of PHNs are shown in Table 3. Of the six factors, significant differences were found in the total score of items, depending on the years of experience as a PHN, the work position, whether they had received training on abuse, and the number of child abuse cases encountered by the nurses. In five factors, "support for parents and families facing problems," "process of assessing the problem and linking to support," "cooperation with relevant organizations," "ability as a PHN to provide support," and "support for abused children." "Process of assessing the problem and linking to support" and "ability as a PHN to provide support," in particular, had significant differences between multiple groups in the number of years of experience, whether training on abuse had been received, and the number of child abuse cases encountered by the nurses.

With regard to the number of years of experience, the 1-5 year group had significantly higher scores for "support for parents and families facing problems," "process of assessing the problem and linking to support," "cooperation with relevant organizations," "ability as a PHN to provide support," and "support for abused

Table 2. Factor structure of the difficulties experienced by public health nurses

	Factor/item	Factor loading					
		Factor1	Factor2	Factor3	Factor4	Factor5	Factor6
Factor1: Support for parents and families facing problems(α＝0.931)							
46	Support for parents to improve child-rearing behavior	**0.942**	-0.141	-0.003	-0.060	0.064	-0.003
47	Support for parents to deepen their understanding of children	**0.865**	-0.075	0.079	-0.027	-0.010	-0.063
45	Adjust the family relationship for parents not receiving support from other family members	**0.816**	-0.003	0.068	0.102	-0.036	-0.095
48	Obtain consent from the parent to provide the necessary support to the child(ren)	**0.779**	-0.025	0.014	-0.152	0.064	0.090
49	Exhausted from not obtaining responses even after attempting to engage with parents	**0.685**	0.075	-0.085	-0.089	0.121	-0.032
44	Support for families facing many problems, including family discord and financial problems	**0.644**	-0.033	0.116	0.218	-0.026	-0.018
40	Means of recommending that the parents themselves visit a medical institution when such action is deemed necessary	**0.615**	0.114	0.024	0.038	-0.091	-0.020
39	Means of dealing with parents with mental health problems	**0.571**	0.333	-0.044	-0.021	-0.067	-0.077
41	Means of dealing with parents who are victims of abuse	**0.500**	0.154	-0.063	0.124	-0.017	0.090
43	Understanding the psychology of parents who abuse their child(ren)	**0.447**	0.131	-0.033	0.156	0.038	0.066
42	Means of becoming involved with parents who abuse their child(ren)	**0.407**	0.052	-0.114	0.292	-0.054	0.248
Factor2: Process of assessing the problem and linking to support(α＝0.931)							
7	Determining the necessity of support for abuse cases	-0.136	**0.937**	-0.039	0.106	-0.033	-0.087
8	Determining the urgency of support for abuse cases	-0.020	**0.789**	-0.019	0.109	0.029	-0.081
29	Analyzing the collected information	-0.047	**0.722**	0.036	0.015	0.089	0.064
28	Determining the required information	-0.038	**0.698**	0.104	-0.024	-0.005	0.114
6	Determining whether or not a situation is abuse	0.052	**0.646**	-0.055	0.178	0.026	-0.071
31	Meeting directly with the child(ren) during home visits to ascertain the current situation	0.144	**0.632**	-0.005	-0.325	0.042	0.249
30	Means of linking a case to support when a child that is a cause for concern is discovered	0.033	**0.629**	0.147	-0.169	-0.047	0.208
11	Handling emergency situations	0.120	**0.603**	-0.085	0.156	-0.004	-0.038
35	Means of linking a case to support when a parent that is a cause for concern is discovered	0.266	**0.600**	0.037	-0.102	-0.022	-0.052
12	Determining the extent of intervention that should be provided as a public health nurse when providing support for abuse cases	0.212	**0.547**	-0.046	0.182	-0.011	-0.104
36	Means of managing the first encounter when providing support to parents	0.234	**0.516**	-0.036	0.057	-0.060	-0.013
Factor3: Cooperation with related organizations(α＝0.910)							
22	Gaining the cooperation of related organizations during collaboration	-0.083	-0.086	**0.941**	0.023	0.007	0.028
21	Understanding how to promote collaboration with related organizations	-0.169	0.076	**0.858**	0.142	0.010	-0.083
24	Sharing information with related organizations	0.084	0.076	**0.780**	-0.075	-0.029	0.003
23	Coordinating to collaborate with multiple related organizations	0.093	0.088	**0.772**	0.024	-0.073	-0.019
26	Having a shared understanding of abuse among related organizations	0.174	-0.145	**0.700**	-0.061	0.080	0.048
Factor4: Ability as a public health nurse to provide support(α＝0.883)							
2	Insufficient knowledge regarding support for abuse cases	-0.024	0.076	0.002	**0.845**	-0.009	-0.026
3	Lack of skill in providing support for abuse cases	0.056	-0.013	0.039	**0.796**	0.027	0.086
4	Lack of experience being involved in abuse cases	0.000	0.077	0.033	**0.618**	-0.070	0.160
1	Awareness that abuse cases are difficult to manage	0.093	0.071	0.018	**0.550**	0.061	0.047
Factor5: Collaboration within the department(α＝0.788)							
19	Cases are discussed among staff in your department, but there is no consensus of opinion	0.056	-0.050	-0.053	0.035	**0.862**	-0.030
18	There are insufficient opportunities to discuss cases among staff in your department	0.012	-0.034	0.002	0.024	**0.782**	-0.038
14	There is no system for consultation set up in the workplace	0.010	0.068	0.042	-0.133	**0.547**	0.115
20	Determining the necessity for collaboration with related organizations	-0.056	0.245	0.149	0.173	**0.458**	-0.029
Factor6: Support for the abused child(α＝0.821)							
33	Providing ongoing support for abused child(ren)	-0.039	0.022	0.024	0.033	0.017	**0.832**
32	Means of becoming involved with abused child(ren)	-0.055	0.035	-0.035	0.143	0.006	**0.823**
34	Managing cases once the abused child who needed support becomes an adult	0.203	-0.072	-0.013	0.107	-0.017	**0.457**
	variance explained	12.243	13.224	6.888	10.237	3.519	8.410

Note. α= Cronbach's α coefficient

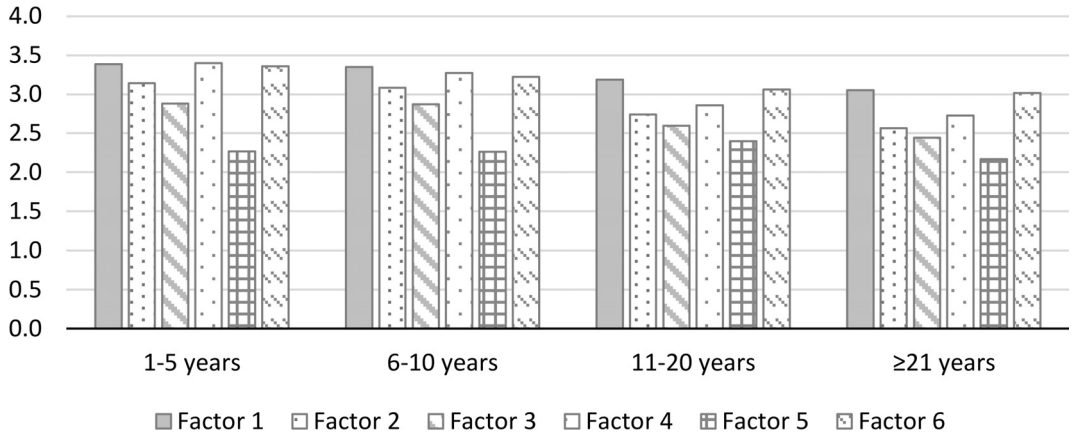

Figure 1. Mean score per item for each factor in the years of experience as a PHN

Table 3. The relationship between the total score of items attributed to each factor and the characteristics of public health nurses

		n	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
Experience as a PHN	1-5 years	54	37.0 (33.0-42.0)	35.0 (30.0-38.25)	15.0 (11.0-16.0)	13.5 (12.0-15.0)	9.0 (8.0-11.25)	10.0 (9.0-12.0)
	6-10 years	45	37.0 (34.0-40.50)	33.0 (31.0-38.0)	14.0 (12.5-16.5)	13.0 (12.0-15.0)	9.0 (8.0-10.5)	10.0 (8.5-11.5)
	11-20 years	58	36.0 (32.75-39.0)	30.5 (26.0-35.25)	13.0 (10.0-15.0)	12.0 (10.0-13.0)	9.0 (8.0-11.0)	9.0 (9.0-11.0)
	≧21years	92	33.0 (28.0-39.75)	28.0 (24.0-33.0)	12.0 (10.0-15.0)	11.0 (8.25-12.0)	9.0 (7.0-10.0)	9.0 (7.25-10.0)
Affiliated organization	Municipalitie (Health centers)	158	36.0 (33.0-40.0)	31.5 (27.0-36.0)	13.5 (11.0-15.0)	12.0 (11.0-14.0)	9.0 (8.0-11.0)	9.0 (8.0-11.0)
	Municipalities (Non health centers)	48	35.0 (32.0-39.75)	32.0 (25.0-35.0)	13.0 (10.0-15.0)	12.0 (10.0-13.0)	8.0 (7.0-10.0)	9.0 (9.0-11.0)
	Public health centers	39	37.0 (31.0-42.0)	31.0 (26.0-36.0)	13.0 (11.0-15.0)	12.0 (10.0-15.0)	9.0 (8.0-10.0)	9.0 (9.0-12.0)
Position	Staff level	161	36.0 (33.0-40.0)	32.0 (28.0-37.0)	14.0 (11.0-15.5)	12.0 (11.0-15.0)	9.0 (8.0-11.0)	9.0 (9.0-11.0)
	Manager level or higher	75	35.0 (28.0-40.0)	28.0 (24.0-33.0)	12.0 (10.0-15.0)	12.0 (8.0-12.0)	8.0 (7.0-11.0)	9.0 (8.0-10.0)
Municipality population	＜10,000	45	36.0 (33.0-41.0)	32.0 (26.0-35.5)	13.0 (10.0-15.0)	12.0 (11.0-12.0)	9.0 (7.0-11.0)	9.0 (8.0-10.0)
	10,000-50,000	83	36.0 (32.0-40.0)	32.0 (27.0-37.0)	13.0 (11.0-15.0)	12.0 (11.0-14.0)	9.0 (8.0-11.0)	9.0 (9.0-11.0)
	50,000-200,000	82	35.0 (32.0-39.0)	32.0 (26.0-35.0)	13.0 (11.0-15.0)	12.0 (10.0-13.25)	9.0 (8.0-10.0)	9.0 (8.75-11.0)
	≧200,000	38	37.0 (31.0-40.0)	31.0 (26.0-36.0)	15.0 (12.0-16.25)	12.0 (9.75-14.25)	9.0 (8.0-11.25)	9.0 (8.0-11.0)
Number of PHNs in the affiliated organization	＜10	107	36.0 (33.0-41.0)	32.0 (26.0-37.0)	13.0 (11.0-15.0)	12.0 (11.0-14.0)	9.0 (8.0-11.0)	9.0 (9.0-11.0)
	10-20	93	36.0 (31.0-39.0)	32.0 (26.0-35.0)	13.0 (10.0-15.0)	12.0 (10.5-14.0)	9.0 (8.0-11.0)	9.0 (8.0-11.0)
	20-30	34	35.0 (31.75-39.5)	31.0 (26.0-37.25)	15.0 (12.75-16.0)	12.0 (10.0-14.0)	8.5 (8.0-11.0)	9.0 (8.0-11.0)
	≧30	14	34.5 (31.75-39.6)	30.5 (23.75-35.25)	13.5 (11.5-15.75)	12.0 (10.75-14.25)	8.0 (6.0-11.25)	9.0 (8.75-11.0)
Training experience in child abuse	More than once a year in the past 5 years	94	35.0 (31.75-39.7)	30.0 (26.0-34.0)	13.0 (10.0-15.0)	12.0 (10.0-13.0)	8.0 (7.0-10.0)	9.0 (8.0-10.0)
	More than once in the past 5 years	103	37.0 (31.75-39.8)	31.0 (26.0-37.0)	13.0 (11.0-16.0)	12.0 (10.0-14.0)	9.0 (8.0-11.0)	9.0 (9.0-11.0)
	No experience in the past 5 years	26	34.0 (31.75-39.9)	31.5 (24.75-35.0)	12.0 (10.0-14.25)	12.0 (10.75-12.0)	9.0 (8.0-12.0)	9.0 (8.0-10.0)
	No training experience	24	38.0 (31.75-39.10)	35.5 (34.0-41.0)	15.0 (11.5-16.0)	14.0 (12.0-15.75)	9.5 (8.0-11.0)	11.0 (9.0-12.0)
Number of child abuse cases involved	＜10 cases	143	37.0 (31.75-39.11)	33.0 (29.0-38.0)	13.0 (11.0-15.0)	12.0 (12.0-15.0)	8.0 (8.0-11.0)	9.0 (9.0-11.0)
	10-30 cases	61	36.0 (31.75-39.12)	31.0 (26.0-35.0)	14.0 (11.5-15.0)	12.0 (10.0-13.0)	9.0 (8.0-11.0)	9.0 (9.0-11.0)
	30-50 cases	19	35.0 (31.75-39.13)	30.0 (25.0-32.0)	12.0 (10.0-15.0)	11.0 (10.0-12.0)	8.0 (6.0-9.0)	9.0 (7.0-10.0)
	≧50 cases	26	31.0 (31.75-39.14)	27.0 (22.5-30.0)	12.5 (10.0-13.25)	8.0 (7.75-12.0)	8.0 (7.75-10.0)	8.0 (6.75-10.0)

Note. Values are presented as the median and 25-75percentile of the total score of items attributed to each factor.
* : p<0.05, ** : p<0.01, *** : p<0.001 multiple comparison (Bonferroni method)

children" than the ≥21-year group. There were also significant differences in "process of assessing the problem and linking to support" and "ability as a PHN to provide support" between the 6-10 year group and the 11-20 year group. With regard to work position, there was a significant difference in "process of assessing the problem and linking to support," "cooperation with relevant organizations," and "ability as a PHN to provide support," and the staff scored higher than nurses at the level of manager or higher. In terms of receiving training, there were significant differences in multiple factors between the group with no training experience

and the three groups with training experience ; the group with no training experience scored higher. In terms of the number of cases, there were significant differences in multiple factors between the group with experience of <10 cases and the three groups with experience of ≥ 10 cases, with the group with experience of <10 cases scoring higher.

DISCUSSION

This study identified six factors on the difficulty experienced by PHNs were involved in prevention of child abuse. These six factors reflect the process of support provided by the PHNs who were continuously involved in the case by appropriately assessing the child and family situation and providing prompt support for them while coordinating with the involved organizations. With regard to "process of assessing the problem and linking to support," a study[8] reported that nurses are aware of their obligations to report abuse, but have trouble accurately judging the situation ; thus, it is thought that most professionals involved in prevention of child abuse experience this difficulty. PHNs in particular are in a position to assess the situation promptly because of their ongoing involvement with the child, parents, and family starting at the notification of pregnancy through infant medical checkups. Therefore, they play an important role in determining the necessity and urgency of the support and taking action by considering which relevant organizations should be contacted, processes that often involve difficulties.

Of the six factors, "support for parents and families facing problems" had the highest mean score per single factor item, demonstrating the high level of difficulty experienced by PHNs in this area. In reality, it is not a simple task to provide actual support to parents and families facing various problems. Risk factors for child abuse include the parents having a history of abuse[29] and mental health problems, drug use, separation and divorce, and financial problems[30]. Therefore, PHNs must provide support and work to improve the child-rearing abilities of not only the mother but also the father and other family members.

However, while it is important for PHNs to build consultative relationships with parents with mental illness, it is also difficult[31]. Moreover, some parents and families are negative toward or refuse the involvement of PHNs in this way. In these types of situations, PHNs need a broad range of knowledge, communication skills, and the ability to adjust to different family dynamics in order to build a trusting relationship with the parents and family. PHNs also encounter difficulties communicating with parents when involved in child abuse cases and require communication skills training specific to abuse situations[32].

The factor item that had the second highest mean score was "support for abused children." The role of PHNs involved in prevention of child abuse tends to be focused on support for parents. However, of the cases that received consultation on abuse from the Child Consultation Center in Japan, approximately 20% were either temporary child protection cases or facility admission cases[33], and often the child kept living at home. Considering the current situation, PHNs involved with both the children and parents through health checkups and home visits fulfill an important role in monitoring the growth and development of children while supporting abused children. Although the effect of abuse has long-term implications for children's physical[34] and mental well-being[34, 35], the opportunity for PHNs to be involved with abused children gradually decreased after the period of infancy in ordinary maternal and child health systems. Under these conditions, PHNs encountered many difficulties in providing consistent support to abused children.

This study found that characteristics of PHNs were related to their experience of work-related difficulties. The difficulties experienced were found to be related to the PHNs' number of years of experience, work position, whether training on abuse had been received, and the number of child abuse cases encountered. In terms of the PHNs' number of years of experience, there was significant difference in "support for parents and families facing problems," "process of assessing the problem and linking to support," "cooperation with relevant organizations," "ability as a PHN to provide support," and "suppo-

rt for abused children" between nurses with 1-5 years of experience and 11-20 years or ≥21 years of experience, indicating that nurses with 1-5 years of experience are more likely to experience difficulty. The ability of PHNs to execute professional duties increases with experience[18-20]. Furthermore, novice PHNs believe they lack sufficient ability to provide guidance on maternal and child health, due to their own lack of experience in childbirth and child-rearing, which then becomes a barrier to communicating with mothers[36]. Therefore, PHNs with fewer years of experience are thought to encounter many difficulties in providing support for child abuse cases, which often entails interaction with mothers and children from the time of pregnancy through child-rearing. Further, nurses who had received no training on abuse and had experience with fewer than 10 cases had more difficulties than nurses with more training and more years of experience. PHNs have different levels of confidence in preventing child abuse, depending on their training and number of years providing support[37].

PHNs with training in child maltreatment reported better responses regarding identifying and intervening in child maltreatment compared to those who had not participated in such training[38]. According to Lee and Chou[39], nurses' self-efficacy in reporting cases of child abuse and neglect improved through participating in training programs based on a sequence of case studies. Therefore, PHNs' confidence grows through training and by handling more cases, which may affect their experience of difficulties.

The results of this study demonstrate the variety of difficulties faced by PHNs in the process of handling child abuse cases. These nurses experienced the most difficulty when providing direct support to the affected party (i.e., when providing "support for parents and families facing problems" and "support for the abused child"). There were significant differences in the level of difficulty faced for "process of assessing the problem and linking to support" and "ability as a PHN to provide support," between multiple groups depending on the characteristics of the PHN, including their number of years of experience, training experience, and the number of cases encountered; hence, the likelihood of these difficulties occurring may depend on the characteristics of the PHN. In fact, concerning the mean score per item for each factor among nurses with 1-5 years of experience, "ability as a PHN to provide support" scored highest.

Provision of care by PHNs to families found to abuse and/or neglect their children improves the family function of such families[40], and the role played by these nurses in providing support for child abuse cases is expected to grow significantly in the future. This suggests the necessity of focusing on the priority difficulties for each PHN, and of understanding the nature of the difficulties experienced related to the PHNs' number of years of experience, work position, training experience, and the number of cases encountered, to provide effective support to PHNs in these circumstances.

LIMITATIONS OF THE STUDY

This study had a few limitations. Although the survey targeted PHNs working in public health centers and municipalities nationwide, only 144 facilities agreed to participate in the survey; hence, there are limitations regarding the generalizability of the findings. The results of this study showed a difference in the difficulties experienced by PHNs based on their number of years of experience, work position, training experience, and the number of cases encountered, but it is not fully clear how the difficulties experienced changed with more years of experience and more cases encountered; therefore, this is a topic for future investigation with more participants.

CONCLUSION

This study revealed six factors regarding the difficulty encountered by PHNs who were involved in prevention of child abuse. The six factors reflected the process in which PHNs provided support for children and their families while coordinating with relevant organizations. Although PHNs encountered various difficulties, not all experienced these difficulties in the

same way. The difficulties that were experienced were associated with personal characteristics of the PHNs such as their *number of years of experience*, their *current work position*, whether *training on abuse had been received* or *not*, and the *number of child abuse cases encountered*. The findings of the study suggested that it is necessary to understand the nature of the difficulties experienced by PHNs as these relate to their personal characteristics, and focus on the difficulties to be prioritized for each PHN in order to provide effective supports for the PHNs in their practice of nursing as a whole.

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CONFLICT OF INTEREST

None of the authors have any conflict of interest to declare.

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