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The roles and competencies of welfare commissioners supporting children with developmental disorders and their families expected by Japan's public health nurses

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Abstract

Background: Public Health Nurses (PHNs) collaborate with community volunteer welfare commissioners to support children with developmental disorders and their families lead a life without isolation.

Objective: This study aims to clarify the roles and competencies that PHNs expect of welfare commissioners in supporting children with developmental disorders and their families.

Methods: An online survey was administered through Survey Monkey© to 220 PHNs working in Japanese municipalities using an independently developed questionnaire regarding the roles and competencies of welfare commissioners supporting children with developmental disorders and their families expected by PHNs. Exploratory Factor Analysis (EFA) was performed to simplify the data structure and enhance understanding. The reliability of the scale was confirmed using Cronbach's α. Differences due to PHN attributes (e.g., experience collaborating with welfare commissioners) were analyzed using Welch's *t*-test. This study was conducted between April and September 2021.

Results: The highest scoring items were, for the role, "a welfare commissioner's role is to pass on accurate information to their successor," and for competencies, "a necessary competency for a welfare commissioner is to protect the information about children with developmental disorders, and their families learned during one's work." The EFA results revealed a two-factor structure for role items: Factor 1, "Supporting children with developmental disorders and their families and preventing abuse," and Factor 2, "Connecting to social resources." Competency items were also found to have a two-factor structure: Factor 1, "Understanding the position of children with developmental disorders and their families and connecting with local residents," and Factor 2, "Understanding developmental disorders and supporting them based on assessment." A comparison of the attributes of PHNs showed no significant differences.

Conclusion: PHNs feel welfare commissioners should pass on the information and protect confidentiality when supporting children with developmental disorders and their families. Furthermore, PHNs expect welfare commissioners to connect children with developmental disorders and their families to the community, prevent abuse, and provide support based on assessment. PHNs had the same expectations regarding the roles and competencies of welfare commissioners regardless of their own attributes.

Keywords

welfare commissioner; role; competencies; children with developmental disorders; public health nurse; Japan

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Background

Population aging and declining birth rates (Statistical Bureau of Japan, 2020), urbanization, depopulation, and changing family structures have led to diverse values and lifestyles that have gradually weakened the foundation for mutual support in the community. Community functions in which community residents support one another have also declined, reducing the well-being of the residents (Yabutani & Yamada, 2021). During the transition to a nuclear family structure and deteriorating ties with one's neighbors and community, there

is inadequate support for raising children, and they have felt anxiety about child-rearing (Honda & Kita, 2022; Ministry of Health Labour and Welfare, n.d.a.). In Japan, the transition to a nuclear family, marriage, and child-rearing was believed to reflect individual freedom, causing people to experience anxiety and burden under Japanese people's inflexible attitude and a corporate culture that prioritizes work over family (Ministry of Health Labour and Welfare, 1997). This condition affects support for disabled children. In particular, parents of children with developmental disorders are reported to experience higher child-rearing stress (Giannotti et al., 2021; Gillespie-Smith et al., 2021), and they have a higher risk of abuse (McDonnell et al., 2019) than parents of children with typical development. The role of rescuing these children is increasingly important, but currently, the system is not fully functioning (Okuyama, 2006). It is vital to help households and reduce the stress of parenting for parents of children with developmental and other disabilities (Porter & Loveland, 2019). It is urgent to protect children with developmental disabilities who live in the community from abuse with the support of welfare commissioners.

Japan has a unique system for this purpose, centering on "welfare commissioners" delegated by the Minister of Health, Labour, and Welfare. A welfare commissioner is a community volunteer who promotes social welfare. Welfare commissioners serve a three-year term and do not receive their salaries. The selection criteria are threefold: an understanding of and passion for social welfare, nomination as someone with a thorough knowledge of the existing circumstances in the community, and delegation by the Minister of Health, Labour, and Welfare. As of March 31, 2018, 232,041 welfare commissioners were delegated and actively serving (Ministry of Health Labour and Welfare, n.d.b.). The activities of a welfare commissioner include loving the community, building relationships of mutual trust, and keeping an eye on the community based on their connections therein (Hayashida & Nakao, 2020). The role of a welfare commissioner is to always be there for the people in the community, to offer consultations, and to provide necessary assistance. Welfare commissioners are also tasked with consultation and support regarding child-rearing anxieties or concerns during pregnancy, with the goal of allowing the children in the community to grow carefree and in good health (Ministry of Health Labour and Welfare, n.d.b.).

Japan enacted the Act on Support for Persons with Developmental Disabilities in 2004. This law aims to detect developmental disorders early, provide support for development, and provide seamless assistance to people with developmental disorders. This leads to mutual respect for the personalities and individuality of all citizens without division based on disability status (Ministry of Health Labour and Welfare, n.d.c.).

Japan's public health nurses are responsible for supporting all community members, regardless of age or illness, to extend healthy life expectancy and reduce health disparities. Collaboration between public health nurses (PHNs) and welfare commissioners is essential for maintaining the health of community members and providing them with daily support. Furthermore, PHNs and welfare commissioners must work together to create a cooperative child-raising environment that affords neighbors and communities the opportunity to interact and increase community commitment (Arimoto & Tadaka, 2021). Thus, the current situation in Japan demands highly skilled welfare commissioners capable of providing the necessary support under various conditions.

Recent research has included studies on raising children with developmental disorders and the need for community support (Kang-Yi et al., 2018; Lim et al., 2016; Masi et al., 2021; McConnell et al., 2008; Ueda et al., 2021). In Japan, research on welfare commissioners has examined support methods that enable them to continue serving (Saito & Morita, 2020). About 5.6% of the activities of community welfare committee members involve consultation and support for persons (and children) with disabilities. Matters related to children accounted for 20%, and cases related to the elderly were by far the most common (Ministry of Health Labour and Welfare, n.d.d.). However, there has been no research on the relationship between welfare commissioners and disabled children. Moreover, there have been no studies on welfare commissioners from the perspective of PHNs or on how welfare commissioners think about their own roles or competencies. Therefore, it is critical to clarify the abilities that PHNs expect from welfare commissioners at this time to lead to improved support for children with disabilities by welfare commissioners.

This study aims to clarify the roles and competencies that PHNs expect of welfare commissioners in supporting children with developmental disorders and their families.

Methods

Study Design

This study employed a web-based cross-sectional research design. In this study, "roles" refers to the duties allocated to welfare commissioners that are expected by PHNs. "Competencies" are defined as the ability to execute the duties of a welfare commissioner as expected by PHNs.

Participants

The participants were 300 PHNs affiliated with 134 municipalities. Participants were chosen based on the following criteria: 1) a licensed PHN and currently employed as a PHN, 2) affiliated with a municipality in Japan, and 3) consent to participate in the online survey. Participants were excluded if they failed to satisfy these three criteria.

A statistical power analysis was conducted to estimate the sample size. In this study, the criterion set by Cohen (1988) was used, and the effect size was calculated using G*Power version 3.1.9.7 (Faul et al., 2007). For this study, the necessary sample size for an unpaired t-test was calculated to be n = 210, with an effect size of 0.5, α value of 0.05, and statistical power of 0.95. There were 220 subjects; therefore, the sample size for this study was considered appropriate. The level of statistical significance was set at $p < 0.05$.

Questionnaires

Participants' characteristics included the PHNs' gender, age, years of experience, experience working with children with developmental disorders and their families, the experience of collaborating with welfare commissioners in working with children with developmental disorders and their families, understanding the work of a welfare commissioner, and

understanding the necessity of collaboration with welfare commissioners.

To help developing the questionnaire questions for the survey to be conducted as a secondary study, interviews lasting 30–60 min were conducted based on the developed interview guide with nine PHNs participants who had been involved with welfare commissioners with experience in supporting children with developmental disorders and families. The interviews consisted of the following:

1) What do you want welfare commissioners to be like for children with developmental disorders and their families in your community?
2) What would be the participants' ideal welfare commissioners?
3) The participants' experience of engaging with welfare commissioners.
4) The role of the welfare commissioner in enabling children with developmental disorders and their families to live in the community.
5) Competencies required of welfare commissioners.
6) Participants' characteristics.

Interviewee participants were excluded from the survey respondents. The qualitative inductive analysis identified eight categories: system, environment, education, character /personality, role performance competency, community ties, perception of welfare commissioners, and initiative. The final version of the questionnaire was confirmed to have adequate content validity from the codes based on the categories (15 roles and 16 competency items). Responses were collected using a seven-point Likert scale.

Data Collection

This study was conducted using an online survey platform (Survey Monkey©) from April to September 2021. This study used a convenience sampling method to recruit participants. Our research group sent a letter or email, including a written explanation of the survey for participants and a URL to the survey tool (Survey Monkey©), to the supervisors of affiliated organizations that consented to participate in the study.

Data Analysis

Descriptive statistics were calculated to elucidate PHNs' age (in years old), years of experience as a registered PHN, experience working with children with developmental disorders and their families, the experience of collaborating with welfare commissioners to work with children with developmental disorders and their families, and understanding of the work of a welfare commissioner. The following steps were performed to analyze the data. First, the frequency (n) and percentage (%) were calculated to show the demographic characteristics of the study subjects. Subsequently, the mean, standard deviation (SD), and 95% confidence interval (CI) were calculated to assess floor and ceiling effects.

Content validity assessed individual questions on a test and asked experts whether each targeted the characteristics that the scale was designed to cover. Seven researchers systematically determined whether each item contributed appropriately and ensured no aspect was overlooked. To determine whether the data were suitable for exploratory factor analysis (EFA), Bartlett's sphericity tests were applied ($p < 0.0001$), and the sampling adequacy was measured with the Kaiser-Meyer-Olkin (KMO) index. Additionally, anti-image correlations and communalities were assessed for each item. Next, the construct validity of the scale was assessed with EFA using equamax rotation, and the maximum likelihood method was performed for the roles and competencies scales. Cronbach's alpha was calculated to evaluate the reliability of the scale. For between-group comparisons, Welch's t-test (t-test) was performed to compare PHNs with and without experience working with children with developmental disorders and their families regarding their experience of collaborating with welfare commissioners in working with children with developmental disorders and their families and whether they understand the work of a welfare commissioner. Data analysis was performed using SPSS statistical software version 27 (IBM Corp.) and R (version 3.6.2, R Foundation for Statistical Computing, Vienna, Austria).

Ethical Considerations

Ethical approval was obtained from the Ethics Review Committee of Tokushima University Hospital (Approval Number: 3604-1, December 21, 2020). Informed consent was obtained from all participants. Participation was voluntary, and the participants could quit until data collection was complete, with no penalty if they decided to quit.

Results

Characteristics of Public Health Nurses

Table 1 shows the participant characteristics. Questionnaire responses were requested from 300 PHNs working in the municipalities, and 220 responses with no missing data were used for analysis (valid response rate: 73.40%). Most participants were women (96.80%) with nine or fewer years of experience as registered PHNs (39.50%).

Table 1 Participants' characteristics

Items (*N* = 220)		*N*	*(%)*
Gender	Male	7	(3.20)
	Female	213	(96.80)
Age (years old)	29 or younger	49	(22.27)
	30–39	54	(24.55)
	40–49	57	(25.91)
	Over 50	60	(27.27)
Length of experience as a registered public health nurse (years)	9 or less	87	(39.50)
	10–19	42	(19.09)
	20–29	60	(27.27)
	30–39	31	(14.09)
Experience involving children with developmental disorders and their families	Yes	168	(76.36)
	No	52	(23.64)
Experience related to welfare commissioners and children with developmental disorders and their families	Yes	72	(32.73)
	No	148	(67.27)
Understanding the work of welfare commissioners	Yes	188	(85.50)
	No	32	(14.55)
Necessity of cooperation with the welfare commissioners	Yes	219	(99.00)
	No	1	(1.00)

In addition, most participants (76.36%) had experience working directly with children with developmental disorders and their families, whereas 32.73% had experienced

collaborating with welfare commissioners in working with such families. A total of 85.50% of the respondents understood the work of a welfare commissioner, and 99% stated that it is necessary to collaborate with welfare commissioners when supporting children with developmental disorders.

Factor Analysis of the Questionnaire Responses

Table 2 shows the mean, standard deviation, and 95% CI for the responses to the 31 items of the questionnaire. Among the items related to roles, QR11 (a welfare commissioner's role is to pass on accurate information to their successor) had the highest mean value (5.62 ± 0.95, 95% CI [5.50, 5.75]). For items related to competencies, QC11 (a necessary competency for a welfare commissioner is to protect the information about children with developmental disorders and their families learned during one's work) had the highest mean value (6.29 ± 0.97, 95% CI [6.16, 6.41]). However, a ceiling effect was observed for QC11; therefore, the item was excluded before EFA. QC13 (a necessary competency for a welfare commissioner is to be able to teach the families of children with developmental disorders how to interact with a child with a developmental disorder) had the lowest mean value (3.12 ± 1.28, 95% CI [2.95, 3.29]). Floor effects were not observed.

Table 2 Questionnaire answer results

Question number and items (*N* = 220)		Mean	SD	95% CI	
				LL	UL
Welfare commissioner's role					
QR1	A welfare commissioner's role is to watch over children with developmental disorders and their families.	4.52	1.04	4.38	4.66
QR2	A welfare commissioner's role is to acquire the necessary knowledge and skills to support children with developmental disorders and their families.	3.86	1.13	3.71	4.01
QR3	A welfare commissioner's role is to educate the local residents under their jurisdiction to support children with developmental disorders and their families.	4.16	1.17	4.00	4.31
QR4	A welfare commissioner's role is to stand and respond to the position of children with developmental disorders and their families.	4.48	1.18	4.32	4.63
QR5	A welfare commissioner's role is to introduce child-rearing salons and places of interaction in the area under their jurisdiction to children with developmental disorders and their families.	4.53	1.03	4.40	4.67
QR6	A welfare commissioner's role is to guide local government consultation counters (welfare counters at city and town/village offices) and services toward children with developmental disorders and their families.	4.90	1.08	4.75	5.04
QR7	A welfare commissioner's role is to provide mental support for children with developmental disorders and their families.	4.06	1.14	3.91	4.21
QR8	A welfare commissioner's role is to continue to be involved with children with developmental disorders and their families.	4.13	1.11	3.98	4.27
QR9	A welfare commissioner's role is to find children with developmental disorders and their families in need of assistance in their area of jurisdiction.	4.02	1.22	3.86	4.18
QR10	A welfare commissioner's role is to create a system that can support children with developmental disorders and their families in the area under their jurisdiction.	3.77	1.23	3.61	3.93
QR11	A welfare commissioner's role is to pass on accurate information to their successor	5.62	0.95	5.50	5.75
QR12	A welfare commissioner's role is to connect children with developmental disorders and their families to specialized institutions when necessary.	4.28	1.45	4.08	4.47
QR13	A welfare commissioner's role is to cooperate with public health nurses belonging to the administration (including accompanying visits and consultations).	4.88	1.11	4.73	5.03
QR14	A welfare commissioner's role is to detect the abuse of children with developmental disorders at an early stage.	4.95	1.07	4.81	5.10
QR15	A welfare commissioner's role is to prevent the abuse of children with developmental disorders and their families.	4.45	1.10	4.30	4.59
Welfare commissioner's competence					
QC1	A necessary competency for a welfare commissioner is to understand the characteristics of developmental disorders.	4.62	1.08	4.48	4.76
QC2	A necessary competency for a welfare commissioner is to be able to sympathize with the problems of children with developmental disorders and their families.	5.15	0.92	5.02	5.27
QC3	A necessary competency for a welfare commissioner is to be able to listen to the stories of children with developmental disorders and their families.	5.33	0.96	5.20	5.46
QC4	A necessary competency for a welfare commissioner is to understand the needs of children with developmental disorders and their families.	4.88	0.91	4.76	5.00
QC5	A necessary competency for a welfare commissioner is to be able to notice the problems of children with developmental disorders and their families.	4.66	1.05	4.52	4.80
QC6	A necessary competency for a welfare commissioner is to be able to assess the problems of children with developmental disorders and their families.	3.81	1.14	3.66	3.96
QC7	A necessary competency for a welfare commissioner is to be able to provide information on developmental support services to children with developmental disorders and their families.	4.40	1.08	4.25	4.54
QC8	A necessary competency for a welfare commissioner is to be able to notice changes in children with developmental disorders and their families.	4.99	0.95	4.86	5.11
QC9	A necessary competency for a welfare commissioner is to connect children with developmental disorders and their families to local residents.	4.67	1.05	4.53	4.81

Table 2 (Cont.)

QC10	A necessary competency for a welfare commissioner is to build a relationship of trust with children with developmental disorders and their families.	5.12	0.97	4.99	5.25
QC11	A necessary competency for a welfare commissioner is to protect the information about children with developmental disorders and their families learned during one's work	6.29	0.97	6.16	6.41
QC12	A necessary competency for a welfare commissioner is to understand how to support children with developmental disorders.	4.71	1.08	4.57	4.85
QC13	A necessary competency for a welfare commissioner is to be able to teach the families of children with developmental disorders how to interact with a child with a developmental disorder	3.12	1.28	2.95	3.29
QC14	A necessary competency for a welfare commissioner is to understand the type and content of abuse of children with developmental disorders and their families.	4.58	1.18	4.42	4.73
QC15	A necessary competency for a welfare commissioner is to be able to contact a public health nurse immediately if there is a suspicion of the abuse of a child with a developmental disorder.	5.73	1.05	5.59	5.87
QC16	A necessary competency for a welfare commissioner is to be able to support the families of abusive children with developmental disorders.	4.11	1.11	3.97	4.26

SD: standard deviation; CI: confidence interval; QR: questions related to a welfare commissioner's roles; QC: questions related to a welfare commissioner's competencies. Likert scale measurements (7 levels), level of agreement: 1 = *Strongly disagree,* 2 = *Disagree,* 3 = *Somewhat disagree,* 4 = *Neither agree nor disagree,* 5 = *Somewhat agree,* 6 = *Agree,* 7 = *Strongly agree*

Table 3 shows the results of the EFA for PHNs' expectations of the roles of welfare commissioners. For role items, the KMO was 0.86, Bartlett's test was 918.35 ($p < 0.0001$), and the anti-image correlation ranged from 0.79 to 0.92. The item communalities ranged from 0.32 to 0.63, with a mean communality of 0.50. In the equamax rotation with the maximum likelihood method, two eigenvalues were greater than 1. As a result of the EFA of the 15 items related to a welfare commissioner's role, five items were eliminated due to low factor loadings (QR1, QR4, QR9, QR11, and QR13), revealing a two-factor and 10-item structure.

Factor 1 of the roles of a welfare commissioner comprised seven items and was named "supporting children with developmental disorders and their families and preventing abuse" (RF1). Factor 2 included three items and was named "connecting to social resources" (RF2). Cronbach's α coefficient was 0.87 for the overall scale, 0.86 for RF1, and 0.74 for RF2.

Table 3 Exploratory factor analysis of the role of welfare commissioners expected by PHNs: Role questionnaire items

Question number and Items (*N* = 220)		**Factor loadings**	
Role dimension (Total items' Cronbach' s alpha = 0.87)		**F1**	**F2**
Factor 1: Supporting children with developmental disorders and their families and preventing abuse (Cronbach's alpha = 0.86)			
QR7	A welfare commissioner's role is to provide mental support for children with developmental disorders and their families.	**0.73**	0.23
QR2	A welfare commissioner's role is to acquire the necessary knowledge and skills to support children with developmental disorders and their families.	**0.71**	0.26
QR10	A welfare commissioner's role is to create a system that can support children with developmental disorders and their families in the area under their jurisdiction.	**0.70**	0.21
QR8	A welfare commissioner's role is to continue to be involved with children with developmental disorders and their families.	**0.70**	0.19
QR15	A welfare commissioner's role is to prevent the abuse of children with developmental disorders and their families.	**0.53**	0.36
QR3	A welfare commissioner's role is to educate the local residents under their jurisdiction to support children with developmental disorders and their families.	**0.53**	0.38
QR14	A welfare commissioner's role is to detect the abuse of children with developmental disorders at an early stage.	**0.45**	0.34
Factor 2: Connecting to social resources (Cronbach's alpha = 0.74)			
QR5	A welfare commissioner's role is to introduce child-rearing salons and places of interaction in the area under their jurisdiction to children with developmental disorders and their families.	0.23	**0.76**
QR6	A welfare commissioner's role is to guide local government consultation counters (welfare counters at city and town/village offices) and services toward children with developmental disorders and their families.	0.18	**0.71**
QR12	A welfare commissioner's role is to connect children with developmental disorders and their families to specialized institutions when necessary.	0.33	**0.55**
Rotation sums of squared loading			
Fixed value		4.74	1.19
Proportion ratio (%)		30.10	19.70
Cumulative contribution ratio (%)		30.10	49.80

Note. N = 220. The extraction method was the maximum likelihood method with an equamax orthomax rotation. Factor loadings above 0.40 are in bold. The measure used from the questionnaire "The roles and competencies of welfare commissioners supporting children with developmental disorders and their families expected by PHNs: Role dimension." F1 = Factor 1, F2 = Factor 2.

Table 4 shows the results of the EFA for nurses' expectations regarding the competencies of welfare commissioners. For competency items, the KMO was 0.86, Bartlett's test was 1021.13 ($p < 0.0001$), and the anti-image correlation ranged from 0.78 to 0.91. Item communalities ranged from 0.36 to 0.81, with a mean communality of 0.53. In the equamax

rotation with the maximum likelihood method, two eigenvalues are greater than 1. As a result of the EFA of the 15 items related to a welfare commissioner's competencies, five items were eliminated because of low factor loadings (QC4, QC12, QC13, QC14, and QC15), revealing a two-factor, ten-item structure. Factor 1 of the competencies of a welfare commissioner comprised six items and was named "understanding the perspective of children with developmental disorders and their families and connecting them with community members" (CF1). Factor 2 comprised four items and was named "understanding developmental disorders and providing support based on assessment" (CF2). Cronbach's α coefficient was 0.88 for the overall scale, 0.85 for CF1, and 0.81 for CF2.

Effect of Differences in PHNs' Characteristics on Questionnaire Results

Table 5 compares the mean scores for each factor of the roles and competencies of welfare commissioners in supporting children with developmental disorders and their families expected by PHNs between PHNs with and without experience collaborating with welfare commissioners in working with children with developmental disorders and their families, experience working with children with developmental disorders and their families, and understanding the work of a welfare commissioner. There were no significant differences in the mean scores for each factor.

Table 4 Exploratory factor analysis of the competencies of welfare commissioners expected by PHNs: Competency questionnaire items

Question number and Items (N = 220)		Factor loadings	
Competence dimension (Total items Cronbach's alpha = 0.88)		**F1**	**F2**
Factor 1: Understanding the perspective of children with developmental disorders and their families and connecting them with community members (Cronbach's alpha = 0.85)			
QC3	A necessary competency for a welfare commissioner is to be able to notice the problems of children with developmental disorders and their families.	**0.89**	0.14
QC2	A necessary competency for a welfare commissioner is to understand the needs of children with developmental disorders and their families.	**0.78**	0.29
QC10	A necessary competency for a welfare commissioner is to build a relationship of trust with children with developmental disorders and their families.	**0.69**	0.24
QC8	A necessary competency for a welfare commissioner is to be able to notice changes in children with developmental disorders and their families.	**0.51**	0.31
QC1	A necessary competency for a welfare commissioner is to understand the characteristics of developmental disorders.	**0.49**	0.35
QC9	A necessary competency for a welfare commissioner is to connect children with developmental disorders and their families to local residents.	**0.48**	0.37
Factor 2: Understanding developmental disorders and providing support based on assessment (Cronbach's alpha = 0.81)			
QC6	A necessary competency for a welfare commissioner is to be able to assess the problems of children with developmental disorders and their families.	0.15	**0.88**
QC5	A necessary competency for a welfare commissioner is to be able to notice the problems of children with developmental disorders and their families.	0.36	**0.64**
QC16	A necessary competency for a welfare commissioner is to be able to support the families of abusive children with developmental disorders.	0.23	**0.62**
QC7	A necessary competency for a welfare commissioner is to be able to provide information on developmental support services to children with developmental disorders and their families.	0.32	**0.59**
Rotation sums of squared loading			
Fixed value		4.88	1.27
Proportion ratio (%)		29.10	24.40
Cumulative contribution ratio (%)		29.10	53.40

Note. N = 220. The extraction method was the maximum likelihood method with an equamax orthomax rotation. Factor loadings above 0.40 are in bold. The measure used from the questionnaire "The roles and competencies of welfare commissioners supporting children with developmental disorders and their families expected by PHNs: Competence dimension." F1 = Factor 1, F2 = Factor 2.

Discussion

The results showed that 85.5% of the participants understood the work of the welfare commissioner. Regarding experience, 76.36% had direct experience working with children with developmental disorders and their families, and 32.7% had experience collaborating with welfare commissioners in working with such families. Further, 99% of the participants responded that collaboration with welfare commissioners was necessary in response to the item "necessity of collaboration with welfare commissioners." Thus, most PHNs who participated in this study felt that providing support to children with developmental disorders and their families in collaboration with welfare commissioners was essential. The results of this study were similar to those found by Moen et al. (2014), who found that public health nurses' support for parents and all families with children having disorders is crucial and that multidisciplinary collaboration at different levels is a significant part of it.

However, in practice, our study found that such support was most often provided without a collaborative partner from welfare commissioners. The barriers impeding this collaboration are unclear. One potential barrier to PHNs and welfare commissioners working together is that the communication system between the two is inadequate. Alternatively, collaboration may be insufficient because PHNs are concerned about placing the burden of their work on the welfare commissioners' shoulders. Going forward, it will be necessary to clarify these factors to promote collaboration between PHNs and welfare commissioners.

Table 5 Comparison of public health nurses' involvement with and understanding of welfare commissioners

Experience involving children with developmental disorders and their families	**Yes (*n* = 168)**		**No (*n* = 52)**		***t***	***p***
	Mean	**SD**	**Mean**	**SD**		
RF Total score	42.95	8.23	43.52	6.86	−0.50	0.62
RF1 Supporting children with developmental disorders and their families and preventing abuse	4.20	0.87	4.20	0.75	−0.04	0.97
RF2 Connecting to social resources	4.53	1.03	4.71	0.78	−1.34	0.18
CF Total score	46.83	7.45	46.90	6.30	−0.07	0.95
CF1 Understanding the position of children with developmental disorders and their families and connecting with local residents	5.00	0.77	4.91	0.66	0.78	0.44
CF2 Understanding developmental disorders and supporting children with developmental disorders based on assessment	4.21	0.91	4.36	0.76	−1.16	0.25
Experience related to welfare commissioners and children with developmental disorders and their families	**Yes (*n* = 72)**		**No (*n* = 148)**		***t***	***p***
	Mean	**SD**	**Mean**	**SD**		
RF Total score	43.40	9.04	42.93	7.34	0.39	0.70
RF1 Supporting children with developmental disorders and their families and preventing abuse	4.25	0.93	4.17	0.80	0.58	0.57
RF2 Connecting to social resources	4.56	1.17	4.57	0.87	−0.08	0.94
CF Total score	47.42	7.78	46.57	6.88	0.78	0.44
CF1 Understanding the position of children with developmental disorders and their families and connecting them with local residents	5.02	0.79	4.96	0.73	0.60	0.55
CF2 Understanding developmental disorders and supporting children with developmental disorders based on assessment	4.32	0.95	4.21	0.84	0.85	0.40
Understanding of welfare commissioners' work	**Yes (*n* = 188)**		**No (*n* = 32)**		***t***	***p***
	Mean	**SD**	**Mean**	**SD**		
RF Total score	42.98	8.31	43.66	5.01	−0.63	0.53
RF1 Supporting children with developmental disorders and their families and preventing abuse	4.19	0.88	4.24	0.52	−0.46	0.65
RF2 Connecting to social resources	4.55	1.01	4.66	0.72	−0.70	0.48
CF Total score	46.72	7.16	47.63	7.35	−0.65	0.52
CF1 Understanding the position of children with developmental disorders and their families and connecting them with local residents	4.96	0.74	5.08	0.77	−0.80	0.43
CF2 Understanding developmental disorders and supporting children with developmental disorders based on assessment	4.24	0.88	4.29	0.88	−0.31	0.76

Welch's *t*-test results; Abbreviations: SD = Standard Deviation
RF1 = Role Factor 1, RF2 = Role Factor 2, CF1 = Competence Factor 1, CF2 = Competence Factor 2

The results of this survey revealed that PHNs have a shared set of values and the same expectations regarding welfare commissioners' roles and competencies regardless of their own attributes. Recently, the progression of population aging and declining birth rates (Statistical Bureau of Japan, 2020), changes in family structure, and diversification of values and lifestyles have led to a gradual weakening of the foundation for mutual support in the community. Notably, a decrease in community members' capacity to mutually support one another has been observed (Ministry of Education Culture Sports Science and Technology Japan, n.d.). This situation will probably require welfare commissioners to provide more one-on-one interactions and a more advanced level of support. Because welfare commissioners are selected from among the community residents, in most cases, they are unlikely to fulfill their duties based on expert knowledge. Despite this, the expectations of PHNs for welfare commissioners revealed in this study suggest that they are expected to have highly specialized competencies. A survey of civil-service commissioners in Tokyo, Japan (Sugihara, 2018) found that "support from formal and professional organizations had indirect effects on the willingness to continue working was mediated by an increase in psychosocial rewards and decrease in role ambiguity." Therefore, there is a need for public health nurses to understand the activities and burdens of community welfare volunteers and to build bridges to improve the system.

Welfare commissioners' work to support children with developmental disorders and their parents and to improve support in the community is thought to prevent isolation and abuse in the communities of these children and their families (Adachi et al., 2019; DePanfilis, 2006). If welfare commissioners are expected to have such expertise, it is essential to hold training sessions to teach them specialized knowledge from the field of social welfare and to share information on difficult cases while ensuring that their training does not become burdensome. Moreover, hosting such highly specialized training sessions would help welfare commissioners understand the characteristics of developmental disorders and conduct public awareness campaigns related to developmental disorders for community members.

While the welfare commissioner system is unique to Japan, a similar initiative to prevent child abuse by strengthening communities by improving communication with neighbors and volunteer activities is underway in the state of South Carolina in the southeastern United States (Haski-Leventhal et al., 2008). This type of daily communication with community residents is essential for welfare commissioners. It is also likely to lead to early detection and prevention of abuse (McDonnell et al., 2019).

In the future, PHNs and welfare commissioners are expected to lead the way in establishing a system to monitor children with developmental disorders and their families

(Giannotti et al., 2021). In doing so, it is possible to achieve a community-based symbiotic society in which people can help one another in cooperation with public services (Shikako-Thomas & Shevell, 2018). For this purpose, it is necessary for the governing authorities and relevant organizations to collaborate to improve the welfare commissioner system. Furthermore, to encourage welfare commissioners to provide ongoing support, it is crucial to consider the legislative and environmental improvements intended to increase motivation and enthusiasm among welfare commissioners. There is a need to foster communities in which all members can play a role, support one another, and participate in their own ways by increasing local residents' capacity to support each other mutually.

Limitations and Recommendations for Future Research

Concerning future research topics, it is necessary to clarify the status of welfare commissioners' thoughts on their own roles and competencies in supporting children with developmental disorders and their families. Based on these results, it is important to develop an educational program for welfare commissioners that will allow them to persist in ongoing support efforts for community members. Also, it is essential to support welfare commissioners in a way that helps them fulfill their role as members of a team that supports their community. Finally, it is necessary to validate these results using further surveys.

Conclusion

This study clarified the roles and competencies that PHNs expect welfare commissioners to support children with developmental disorders and their families. It was found that the roles comprise: 1) supporting children with developmental disorders and their families and preventing abuse and 2) connecting to social resources. Additionally, the competencies include 1) understanding the position of children with developmental disorders and their families and connecting them with local residents and 2) understanding developmental disorders and supporting children with developmental disorders based on assessment.

Among these roles and competencies, PHNs emphasize the importance of connecting children with developmental disorders and their families to the community, preventing abuse, and providing support based on assessments. Moreover, PHNs felt that passing on information to other welfare commissioners and protecting individuals' confidentiality were important considerations when providing support. There were no differences in PHNs' expectations regarding the roles and competencies of welfare commissioners based on their own characteristics.

Declaration of Conflicting Interest

The authors declare that there is no conflict of interest.

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Authors' Contributions

All authors contributed to the conception of this study, drafting and revising the work critically, approved the final version, and agreed to be accountable for all aspects of the work.

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Data Availability

The datasets generated during and/or analyzed during the current study are not publicly available due to ethical restrictions but are available from the corresponding author upon reasonable request.

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