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Experiences of Violence and Preventive Measures Among Nurses in Psychiatric and Non-Psychiatric Home Visit Nursing Services in Japan

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ABSTRACT

Home visit nurses (HVN) are crucial in psychiatric home visit nursing (PHVN) in Japan. However, little is known about violence toward HVNs in PHVN and non-PHVN settings. The current study aimed to clarify nurses' experiences of violence in these settings, their implementation of preventive measures, and related associations. Questionnaires were distributed to HVNs who provided PHVN and non-PHVN services. Sixty-nine (38%) of 184 participants had experienced at least one form of violence during the past 12 months, and 87 (47%) had experienced violence during their PHVN career. In non-PHVN settings, violence was experienced by 94 (51%) participants in the past 12 months and 119 (65%) participants during their career. Low use of preventive measures was found. The management of visiting schedules and confirmation of HVNs' locations during visits were negatively associated with exposure to violence in PHVN settings. It is important to promote measures to prevent high exposure to violence, emphasize the monitoring of visits, and have nursing agencies clarify HVNs' concerns in PHVN settings. [*Journal of Psychosocial Nursing and Mental Health Services*, 57(4), 40-48.]

Violence among health care workers is an important issue (Lancôt & Guay, 2014). The International Council of Nurses (2007) considers exposure to violence among nurses to be a serious problem and has defined *violence* as being destructive toward another person, and *workplace violence* as incidents during which staff are abused, threatened, or assaulted in circumstances related to their work. Recently, there has been a small but growing body of evidence of exposure to violence among home care workers. Rates of physical violence have been reported by 2.5% (Byon, Storr, Edwards, & Lipscomb, 2016), 4.6% (Galinsky et al., 2010), and 6.6% (Quinn et al., 2016) of home care workers during the past 12 months, with 44.6% having ex-

perienced violence during their career (Nakaishi et al., 2013). Similarly, non-physical violence in the form of verbal abuse or threat has been reported by 7.9% (Byon et al., 2016), 10% (Galinsky et al., 2010), and 18.8% (Quinn et al., 2016) of home care workers during the past 12 months, with 26.2% (Sherman et al., 2008) and 65.1% (Nakaishi et al., 2013) having experienced violence during their career. These previous studies show that home care workers face exposure to violence in home care settings. In fact, one handbook of workplace safety for staff in visiting health services has included occupational violence as a major problem (WorkSafe Victoria, 2006).

Since 1991, Japan has provided community-based medical services for individuals 65 and older by mobilizing home care workers, including home visit nurses (HVN). Through several revisions of the Health Insurance Law, home visit nursing services are available for all age groups (Sato, 1994). In addition, in the late 1990s, Japan restructured its psychiatric and mental health services; this restructure included earlier discharge from inpatient medical services and greater provision of community-based medical services for community-dwelling individuals with mental illness (Tsuchiya & Takei, 2004). Given these circumstances, HVNs are expected to play a crucial role in providing medical services to community-dwelling individuals with mental illness in the form of psychiatric home visit nursing (PHVN). More than 60% of the 9,000 HVN agencies throughout Japan provide PHVN services (Ministry of Health, Labour and Welfare, 2013). However, there has been no research into HVNs' experience of violence in PHVN and non-PHVN services (i.e., home visit nursing services for community-dwelling individuals without mental illness). Policies, strategies, and preventive measures against violence should be based on solid evidence of the characteristics of violence and adjusted based on differences in characteristics of violence between these service

settings. Therefore, it is important to clarify HVNs' experiences of violence in PHVN and non-PHVN settings separately to provide fundamental information for implementing appropriate policies, strategies, and preventive measures against violence.

The rapid expansion of services provided by HVNs in the past decade in Japan has resulted in several potential problems. One problem is exposure to violence among HVNs. The Japanese Nursing Association (2006) provided a guideline for countermeasures against violence in health, medical, and welfare institutions; however, this guideline provided minimal considerations for HVN settings. Although visits by multiple nurses were allowed as a measure against exposure to violence (Ministry of Health, Labour and Welfare, 2010), the creation of policies and strategies to manage workplace violence is the responsibility of each organization or its administrators, without evidence of violence exposure or specific guidelines for using preventive measures in PHVN and non-PHVN settings. Several previous studies investigated these violence prevention measures in home care work settings. Fry, O'Riordan, Turner, and Mills (2002) demonstrated measures by Australian community mental health workers to prevent or minimize the threat to their own safety. Interestingly, Fry et al. (2002) also expressed doubts about the effect of visits by multiple nurses in preventing violence. Further, McPhaul, Lipscomb, and Johnson (2010) examined workplace safety climate in home visit settings in the United States and reported a weak negative correlation between the score of workplace safety and experience of workplace violence. However, implementation of HVNs' preventive measures has not yet been investigated. The implementation of preventive measures should be promoted based on the current situation of workplace violence. In addition, the promotion of preventive measures should reflect the possibility of decreasing risk of exposure to violence in PHVN and non-

PHVN settings. It is important to investigate the current implementation of preventive measures and examine the associations between preventive measures and exposure to violence in PHVN and non-PHVN settings separately to provide fundamental information for developing and improving strategies that contribute to violence prevention.

AIMS

The aims of the current study were to clarify HVNs' exposure to violence in PHVN and non-PHVN settings, determine the state of implementation of preventive measures, and examine the associations between preventive measures and experiences of violence.

METHOD

Study Design and Sample

The current study used a cross-sectional design. All home visit nursing agencies in the Kinki area of Japan that were establishments providing home visit nursing services for community-dwelling individuals were contacted by researchers via telephone; 219 of 408 agencies agreed to participate in the current study and provided PHVN and non-PHVN services. The sample comprised HVNs affiliated with these 219 home visit nursing agencies who met inclusion and exclusion criteria.

Inclusion criteria were: HVNs who provided PHVN services for community-dwelling individuals with mental illness and non-PHVN services for individuals with physical illness or older adults, including those with dementia. The International Statistical Classification of Diseases and Related Health Problem (ICD) codes F1–F9 were used to classify the presence of mental illness; F0 was excluded. To be provided with PHVN services, it was necessary for patients to have been diagnosed with one of the ICD codes by a psychiatrist.

Exclusion criteria were: HVNs who provided only PHVN or non-PHVN services or who could not answer the questionnaire due to excessive burden

of residual psychological distress stemming from exposure to violence.

The proportion of HVNs who had experienced violence was estimated to be approximately 50% based on a previous study regarding violence exposure among home health care RNs (Canton et al., 2009). As such, using a large-sample normal approximation and a two-sided 95% confidence interval (CI) for a single proportion, which would extend the 0.05 from the observed proportion to an expected proportion of 0.50, the required sample size was calculated to be 385 (Machin, Campbell, & Walters, 2007).

Definition of Terms

To investigate HVNs' experiences of exposure to violence during home visits, *violence* was defined with reference to the International Council of Nurses (2007) as follows: incidents during visits in which HVNs are abused, threatened, assaulted, or subjected to other offensive behavior by patients who were provided PHVN or non-PHVN services. The five forms of violence were also defined in the current study with reference to the International Council of Nurses (2007) and preceding research (Fry et al., 2002), as follows:

- Physical assault (e.g., striking and punching).
- Verbal abuse (e.g., "I'll kill you.").
- Sexual harassment (e.g., touching the chest).
- Threatening behavior (e.g., swinging an object as if to strike another person).
- Damage to property (e.g., breaking an object).

These forms permit the clarification of violence in broad terms that occur during visits to community-dwelling individuals with and without mental illness.

Preventive measures were defined as the actions by HVNs as individuals and safe workplace environments provided by their affiliated agencies to decrease the risk of exposure to violence. This definition does not include actions by HVNs as individuals when

exposed to violence, such as negotiation, conflict resolution, or physical intervention.

Instrument

The survey content, layout, and format of the questionnaire and ethical aspects were revised repeatedly by researchers. The questionnaire included 54 items that asked about the following areas.

HVNs' Characteristics. This section asked for information about participants' characteristics, including gender, age, professional qualifications, total length of nursing experience, length of experience in PHVN services, length of experience in non-PHVN services, and length of experience in the field of psychiatric and mental health care excluding PHVN services.

HVNs' Work Characteristics. This section asked for information about participants' work characteristics, including type of employment and number of visits per month in PHVN and non-PHVN settings. Participants were also asked to identify all psychiatric diagnoses of patients they were currently visiting in PHVN service settings (i.e., *yes/no* responses to ICD codes F1–F9; multiple answers were possible).

HVNs' Exposure to Violence Throughout Their Career. This section asked for information about participants' exposure to each form of violence in PHVN settings throughout their career in PHVN services (*yes/no*), as well as in non-PHVN settings throughout their career in non-PHVN services (*yes/no*).

HVNs' Exposure to Violence Over the Past 12 Months. This section asked for information about participants' exposure to each form of violence in PHVN and non-PHVN settings during the past 12 months (*yes/no*); if affirmed, participants were asked about the frequency of each form of violence during the past 12 months in both settings.

Implementation of Preventive Measures Against Violence. This section

asked for the state of implementation of measures that were designed to prevent exposure to or decrease the risk of violence (implementing/not implementing). A guideline for countermeasures against violence in health, medical, and welfare institutions in Japan (Japanese Nursing Association, 2006) and a monograph written about violence and aggression in the workplace (Linsley, 2006) were explored to generate ideas for the measures. The ideas for such measures were extracted for the implementation in PHVN and non-PHVN settings. Excluding the duplication of extracted ideas, considering the consistency among ideas with the references of previous studies (Fry et al., 2004; McPhaul et al., 2010), 18 preventive measures were extracted. These 18 measures were classified in two categories: (a) measures to prevent violence by HVNs as individuals (eight items; **Figure A**, available in the online version of this article), and (b) measures to prevent violence by HVNs' nursing agencies (10 items; **Figure B**, available in the online version of this article).

Data Collection

The researcher (H.F.) sent the documentation to HVNs explaining the research and survey form via their agencies. HVNs were also provided with an envelope to return the completed survey forms to the researcher directly. Data for the current study were collected from August 2012 to January 2013.

Data Analysis

Descriptive statistics were performed regarding participants' demographic characteristics, work characteristics, experience with and frequency of exposure to each form of violence, and the implementation of preventive measures against violence.

Fisher's exact tests were performed to examine the differences in HVNs' exposure to violence experiences and frequencies between PHVN and non-PHVN settings. Fisher's exact tests were also conducted as a primary anal-

ysis to assess the relationships between preventive measures (implementing/not implementing) and HVNs' experiences of exposure to each form of violence during the past 12 months in PHVN and non-PHVN settings separately (exposure/non-exposure).

Binary logistic regression was performed to examine the association between preventive measures that had a significant relationship with exposure experiences in the primary analysis (independent variables: not implementing/implementing), and HVNs' experiences of exposure to each form of violence during the past 12 months in PHVN and non-PHVN settings separately (dependent variable: non-exposure/exposure; Model 1). Regarding the experience of exposure to any form of violence, two-level binary logistic regressions were performed, which included Model 1 and a model that was adjusted for one HVN demographic characteristic (length of experience in PHVN or non-PHVN services) and one HVN work characteristic (number of visits in PHVN or non-PHVN settings per month; Model 2). Multicollinearity was assessed using the variance inflation factor (VIF). A VIF >10 indicates severe multicollinearity (Glantz & Slinker, 1990). Statistical analyses were performed using SPSS 22.0J for Windows. Statistical significance was considered as $p < 0.05$.

Ethical Considerations

The ethics review board at the Graduate School of Health Sciences, Kobe University approved the current study. HVNs were informed of the purpose of the study, that their participation was voluntary, and that refusal to participate would cause no disadvantage. They were also informed that the study data would be used only in this research, that personal information would be protected, and that confidentiality of the data would be maintained. A researcher's telephone number and e-mail address were provided to HVNs if they wanted to obtain additional information. HVNs'

TABLE 1
PARTICIPANTS' DEMOGRAPHIC CHARACTERISTICS (N = 184)

Demographic Characteristic	Value
Gender (n, %)	
Female	176 (95.7)
Male	8 (4.3)
Age (years) (mean [SD] [range])	45.4 (9.3) (27 to 63)
License (n, %)	
RN	173 (94)
LPN	11 (6)
Clinical experience as a nurse (years) (mean [SD] [range])	19.4 (8) (1.7 to 42.9)
Experience in PHVN services (years) (mean [SD] [range])	4.7 (3.5) (0.2 to 15)
Experience in non-PHVN services (years) (mean [SD] [range])	6.9 (4.4) (0.2 to 15)
Experience in other psychiatric and mental health care departments excluding PHVN services (n, %)	
No	143 (77.7)
Yes	40 (21.7)
No response	1 (0.5)
Experience in other psychiatric and mental health care departments (years) (mean [SD] [range])	7 (7.1) (1 to 17.3)

Note. LPN = licensed practical nurse; PHVN = psychiatric home visit nursing.

understanding of the study's purpose and consent to participate were confirmed by their answers to questions on the survey form. In addition, to allow withdrawal of participation after returning the survey form, the survey form and documentation explaining the research were given the same identification number.

RESULTS

A total of 648 questionnaires were mailed to 219 agencies, and 186 questionnaires were returned. Two were blank or mostly incomplete, resulting in 184 questionnaires, with a response rate of 28.4%. Participants' demographic and work characteristics are presented in **Table 1** and **Table 2**, respectively.

Exposure to Violence During the Past 12 Months and Entire Career

The experiences of exposure to each form of violence are shown in

Table 3. In PHVN settings, verbal abuse was the most frequent form of violence during the past 12 months and entire career in PHVN services, followed by physical assault. Verbal and physical assault were also frequent forms of violence in non-PHVN settings. A significant difference was found in the experiences of exposure to sexual harassment during the past 12 months between PHVN and non-PHVN settings ($p = 0.022$).

Frequency of Exposure to Violence During the Past 12 Months

The exposure frequencies of each form of violence during the past 12 months are shown in **Table 4.** Approximately 50% of participants reported exposure frequency of one to two times for each form of violence in PHVN and non-PHVN settings. The frequency of ≥ 10 times was greatest for exposure to verbal abuse, which was higher than all other forms of vio-

TABLE 2

PARTICIPANTS' WORK CHARACTERISTICS (N = 184)

Work Characteristic	Value
Number of visits during psychiatric home visit nursing per month (mean [SD] [range])	19.2 (39.6) (1 to 104)
Number of visits during non-psychiatric home visit nursing per month (mean [SD] [range])	67 (66.2) (1 to 168)
Employment (n, %)	
Full-time	144 (78.3)
Part-time	38 (20.7)
No response	2 (1.1)
Psychiatric diagnosis of patients with mental illness currently visited by HVNs ^a (n, %)	
F1: Mental and behavioural disorders due to psychoactive substance use	26 (14.1)
F2: Schizophrenia, schizotypal and delusional disorders	139 (75.5)
F3: Mood (affective) disorders	105 (57.1)
F4: Neurotic, stress-related, and somatoform disorders	41 (22.3)
F5: Behavioural syndromes associated with physiological disturbances and physical factors	16 (8.7)
F6: Disorders of adult personality and behavior	27 (14.7)
F7: Mental retardation	46 (25)
F8: Disorders of psychological development	24 (13)
F9: Behavioural and emotional disorders with onset usually occurring in childhood and adolescence	5 (2.7)

Note. HVNs = home visit nurses.

^a According to International Statistical Classification of Diseases and Related Health Problems (codes F1 to F9 excluding F0). Multiple answers were allowed.

lence in both settings. No significant difference was found in the frequency of exposure to each form of violence between PHVN and non-PHVN settings.

Implementation Status of Preventive Measures Against Violence

Implementation of preventive measures against violence are shown in **Figure A** and **Figure B**. More than 80% of HVNs performed at least one preventive measure as individuals, and more than 70% of HVNs performed at least one preventive measure by their affiliated agencies. However, regarding each item of preventive measure, particularly measures by affiliated agen-

cies, implementation rates were low overall.

Associations Between Preventive Measures and Exposure to Violence During the Past 12 Months

Fisher's exact test was performed to examine relationships of exposure to each form of violence in PHVN settings with preventive measures (**Table A**, available in the online version of this article). Several significant associations were found between preventive measures and exposure to any form of violence, including verbal abuse, sexual harassment, and damage to property. No significant associations were found between preventive mea-

asures and exposure to physical assault or threatening behavior.

Binary logistic regression was performed for the experiences of exposure to violence in PHVN settings; however, this analysis did not include physical assault and threatening behavior because there were no significant associations with preventive measures, or damage to property because of the small number of HVNs who experienced this type of violence. A significant regression model was obtained (Model 2, $p = 0.001$), which revealed associations between exposure to any form of violence and "care adjustments to decrease the risk in case of patients posing a violence risk" (VIF = 1.108; $\beta = 0.90$, adjusted odds ratio [OR] = 2.4, 95% CI [1.1, 5.2]; $p = 0.011$) and "management of visiting schedules and confirmation of HVNs' locations during visits" (VIF = 1.178; $\beta = -0.95$, adjusted OR = 0.4, 95% CI [0.2, 0.9]; $p = 0.011$). A significant regression model was also obtained (Model 1, $p = 0.003$) showing associations between exposure to verbal abuse and "identifying the patient's home layout to help predict the risk of violence" (VIF = 1.020; $\beta = 0.96$, adjusted OR = 2.6, 95% CI [1.1, 6.1]; $p = 0.015$) and "providing education about violence and training for its prevention" (VIF = 1.020; $\beta = 1.94$, adjusted OR = 4.9, 95% CI [1.2, 20.2]; $p = 0.004$). Further, a significant regression model was obtained (Model 1, $p = 0.013$) indicating that there was an association between exposure to sexual harassment and "care adjustments to decrease the risk in case of patients posing a violence risk" (VIF = 1.069; $\beta = 1.61$, adjusted OR = 4.0, 95% CI [1.1, 14.7]; $p = 0.012$).

Fisher's exact test was also performed to examine relationships of exposure to each form of violence in non-PHVN settings with preventive measures (**Table B**, available in the online version of this article). Several significant relationships were found between preventive measures and exposure to any form of violence, including physical assault, verbal abuse,

TABLE 3

HOME VISIT NURSES' EXPOSURE TO VIOLENCE

Type of Violence	Exposure to Violence (n, %)			
	PHVN Settings		Non-PHVN Settings	
	Past 12 Months	Career ^a	Past 12 Months	Career ^b
Overall	69/181 (38.1)	87/184 (47.3)	94/184 (51.1)	119/184 (64.7)
Physical assault	31/184 (16.8)	44/184 (23.9)	55/178 (30.9)	74/177 (41.8)
Verbal abuse	40/176 (22.7)	53/178 (29.8)	65/180 (36.1)	81/181 (44.8)
Sexual harassment	18/182 (9.9)	27/183 (14.8)	34/182 (18.7)	60/181 (33.1)
Threatening behavior	16/182 (8.8)	27/184 (14.7)	25/183 (13.7)	43/183 (23.5)
Damage to property	9/182 (4.9)	17/182 (9.3)	9/180 (5.0)	20/180 (11.1)

Note. PHVN = psychiatric home visit nursing.

^a Participants' experiences during careers in PHVN services.

^b Participants' experiences during careers in non-PHVN services.

TABLE 4

FREQUENCY DISTRIBUTION OF EXPOSURE TO VIOLENCE DURING THE PAST 12 MONTHS

Type of Violence	Exposure to Violence in PHVN Settings (n, %)			
	1 to 2 Times	3 to 4 Times	5 to 9 Times	≥10 Times
Physical assault (n = 31)	21 (67.7)	2 (6.5)	5 (16.1)	3 (9.7)
Verbal abuse (n = 40)	17 (42.5)	8 (20)	5 (12.5)	10 (25)
Sexual harassment (n = 18)	10 (55.5)	2 (11.1)	3 (16.7)	3 (16.7)
Threatening behavior (n = 16)	9 (56.3)	4 (25)	1 (6.3)	2 (12.5)
Damage to property (n = 9)	6 (66.7)	2 (22.2)	0 (0)	1 (11.1)
Type of Violence	Exposure to Violence in Non-PHVN Settings (n, %)			
	1 to 2 Times	3 to 4 Times	5 to 9 Times	≥10 Times
Physical assault (n = 55)	27 (49.1)	12 (21.8)	7 (12.7)	9 (16.4)
Verbal abuse (n = 65)	31 (47.7)	14 (21.5)	7 (10.8)	13 (20)
Sexual harassment (n = 34)	17 (50)	8 (23.5)	4 (11.8)	5 (14.7)
Threatening behavior (n = 25)	10 (40)	9 (36)	2 (8)	4 (16)
Damage to property (n = 9)	5 (55.6)	2 (22.2)	1 (11.1)	1 (11.1)

Note. PHVN = psychiatric home visit nursing.

and damage to property. No significant relationships were found between preventive measures and sexual harassment or threatening behavior.

Binary logistic regression was also performed for exposure to violence in non-PHVN settings; however, sexual harassment and threatening behavior were not included because there were no

significant associations with preventive measures, nor was damage to property included because of the small number of HVNs who experienced this type of violence. A significant regression model was obtained (Model 2, $p < 0.001$) indicating an association between exposure to any form of violence and the number of visits in non-PHVN settings

per month (VIF = 1.006; $\beta = 0.01$, adjusted OR = 1.01, 95% CI [1.003, 1.02]; $p = 0.001$). A significant regression model ($p = 0.020$) also indicated that there was an association between exposure to physical assault and “avoiding a visit during a crisis of violence and escaping from violence” ($\beta = 0.80$, OR = 2.2, 95% CI [1.4, 4.4]; $p = 0.021$). No sig-

nificant regression model was obtained regarding exposure to verbal abuse.

DISCUSSION

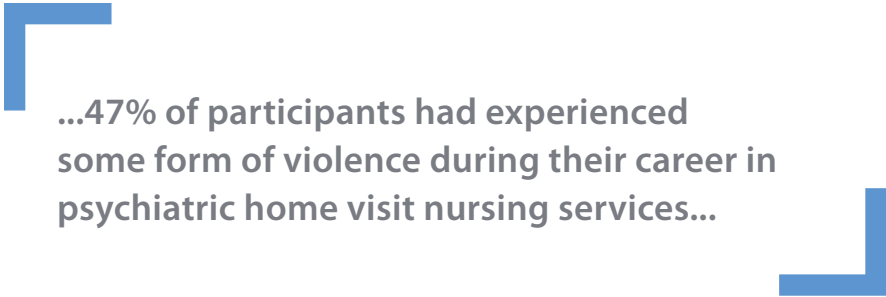
The strength of the current study is that it is the first to provide evidence of violence toward HVNs in Japan. Results showed that 64% of participants had experienced some form of violence during their career in non-PHVN services, and 51% had experi-

enced these similar characteristics of violence in both settings, especially frequent exposure to verbal abuse, and pay additional attention to exposure to sexual harassment in non-PHVN settings. However, considering the number of visits per month in PHVN settings was only one third of visits per month in non-PHVN settings, the opportunities to experience violence were remarkably higher in PHVN set-

violence arose. “Avoiding a visit during a crisis of violence and escaping from violence” when confronted with an immediate risk of violence were implemented by less than one half of participants. Based on these results, it is important to promote the implementation of HVNs’ individual measures when faced with increased risk of exposure to violence.

Similar to a previous study of home health visit settings (McPhaul et al., 2010), low implementation rates of the preventive measures by HVNs’ affiliated agencies were found in the current study. The most frequently implemented measure of “sharing information about the patient’s violence” was used by less than one half of participants. This low rate of organizational preventive measures might also have influenced the high rate of exposure to violence in both settings. A previous study (Fry et al., 2002) and guidelines against violence (National Collaborating Centre for Mental Health, 2015) state the importance of providing education and training and preparing manuals that include policies and procedures for coping with violence. In the current study, only 6% to 7.1% of participants reported obtaining “...education about violence and training for its prevention” and the “preparation of manuals to deal with violence.” Given the high rate of exposure to violence, these measures should be provided for all HVNs. Therefore, it is necessary to promote implementation of organizational preventive measures.

A significant negative association was found between exposure to any form of violence during the past 12 months in PHVN settings and the implementation of the “management of visiting schedules and confirmation of HVNs’ locations during visits.” Even when adjusting for participants’ demographic and work characteristics, this association was still observed. This preventive measure only indicated the possibility of contributing to a decrease in exposure to violence in PHVN settings. On the other hand,



...47% of participants had experienced some form of violence during their career in psychiatric home visit nursing services...

enced violence during the past 12 months in these settings. Compared with previous studies of exposure to violence among home care workers (Byon et al., 2016; Galinsky et al., 2010; Gershon et al., 2008; Nakaishi et al., 2013; Quinn et al., 2016; Sherman et al., 2008), HVNs in Japan have a higher rate of exposure. Further, the current results showed that 47% of participants had experienced some form of violence during their career in PHVN services and 38% had experienced violence during the past 12 months in these settings. This is a higher rate of exposure to violence compared with a previous study of psychiatric HVNs who provided medical services for community-dwelling individuals with mental illness (Fujimoto, Hirota, Kodama, Greiner, & Hashimoto, 2017).

The most frequent form of violence was verbal abuse in PHVN and non-PHVN settings. Exposure to other forms of violence, excluding sexual harassment, and frequency of exposure to each form of violence had no significant differences between settings. Therefore, HVNs should be aware of

these similar characteristics of violence in both settings, especially frequent exposure to verbal abuse, and pay additional attention to exposure to sexual harassment in non-PHVN settings. However, considering the number of visits per month in PHVN settings was only one third of visits per month in non-PHVN settings, the opportunities to experience violence were remarkably higher in PHVN set-

tings. Therefore, the development and improvement of policies, strategies, and measures to prevent violence in PHVN settings, as well as non-PHVN settings, is urgent. One finding of the current study was the low implementation rate of preventive measures that HVNs should implement as individuals. This low implementation rate might have influenced the high rates of exposure to violence in both settings. The measures of “collecting information about the patient’s condition before visiting from colleagues, other home health care workers, or patients themselves” and “preparation of tools to connect their affiliated agencies” were implemented most frequently by HVNs as individuals. However, the implementation rates of these measures were only approximately 60%. A handbook of workplace safety in visiting health services settings (WorkSafe Victoria, 2006) recommends a system for collecting data from staff prior to visits and the provision of mobile phones. Participants were poorly prepared in terms of resources and tools to protect themselves when a risk of

no significant association was found between violence exposure during the past 12 months in PHVN settings and the implementation of “report visit location and schedule to their agencies before visiting.” As WorkSafe Victoria (2006) states, it is important in PHVN settings for agencies to actively participate in monitoring visits and confirming HVNs’ situations and safety. Violence can occur when patients feel dissatisfied with services (Zampieron, Galeazzo, Turra, & Buja, 2010). By managing visiting schedules, it may be possible to ensure the sufficient provision of care and avoid patients’ dissatisfaction. Further, the management and confirmation by their affiliated organizations might affect HVNs’ attitude or preparations to cope with the risk of violence.

Interestingly, significant positive associations were found between violence exposure in PHVN settings and several preventive measures. However, the causal relationship is unclear because the current study used a cross-sectional design and implementation of these measures would be unlikely to increase violence exposure. Therefore, it could be inferred that several preventive measures were performed after exposure to violence in PHVN settings. Specifically, “identifying the patient’s home layout to help predict the risk of violence,” “care adjustments to decrease the risk in case of patients posing a violence risk,” and “providing education about violence and training for its prevention” could have been performed after exposure to violence to prevent re-exposure, reflecting insufficient implementation of preventive measures.

Given the high rate of exposure to violence and the low implementation rate of preventive measures, the use of preventive measures by HVNs as individuals and by their affiliated agencies should be promoted. In addition, a preventive measure that could contribute to a decrease in exposure to violence in PHVN settings was identified—management of visiting schedules and confirmation of HVNs’

locations during visits. Therefore, a strategy to prevent violence in PHVN settings is required. Specifically, in the strategy for PHVN settings, it is necessary to emphasize the implementation of the “management of visiting schedules and confirmation of the HVNs’ locations during visits.” On the other hand, different positive associations between experiences of exposure to violence and the implementation of preventive measures were found between PHVN and non-PHVN settings. This finding suggests that preventive measures implemented to handle risk of violence, including re-exposure, differ slightly in PHVN and non-PHVN settings. Regarding the strategy to prevent violence toward HVNs, further research is needed to explore factors that are common to both settings and what can be adjusted in each setting to construct a safe workplace environment.

LIMITATIONS

Limitations of the current study include the small number of participants and the possibility of a Type 2 error. Another limitation is the likelihood of a Type I error due to the multiple statistical tests used to examine the possible relationships. Furthermore, HVNs who had never been exposed to violence or who had excessive burden due to residual psychological distress stemming from violence exposure may have avoided participating in the study. Therefore, the chance of a non-response bias must be considered due to the low response rate. The rate of exposure to violence in the current study might have been inflated because participants who had been exposed to violence may have been more likely to participate in the study. The inability to accurately recall experiences with violence might also have led to recall bias, specifically, the level of exposure to and experiences with violence throughout one’s career, which could have affected findings. The reliability and validity of the instrument, especially the items investigating frequency of exposure to violence and implementation of pre-

ventive measures, were not examined. Moreover, as HVNs in the Kinki area of Japan were targeted, generalizability of the findings is limited because there may be regional differences in exposure to violence.

CLINICAL IMPLICATIONS

The current study provided information regarding violence toward HVNs in PHVN and non-PHVN settings, as well as the implementation of preventive measures and their associations with exposure to violence. The particular findings of the violence characteristics and the low implementation rate of preventive measures indicate the need to promote greater use of measures to ensure a safe workplace environment. Further, the identified preventive measure that could contribute to violence prevention, and the difference in the associations between preventive measures and exposure to violence in PHVN and non-PHVN settings, should be reflected in the development and improvement of strategies to manage violence.

CONCLUSION

Of HVNs who experienced exposure to violence during home health visits, 38% and 51% of participants experienced violence during the past 12 months and 47% and 65% experienced violence during their career as HVNs in PHVN settings and non-PHVN settings, respectively. Insufficient implementation of preventive measures against violence was found despite the high rate of exposure to violence. Based on these results, it is important to promote implementation of preventive measures by HVNs as individuals and by their affiliated agencies. Further, in strategies for PHVN settings, it will be important to emphasize the management of visiting schedules and confirmation of HVNs’ locations during visits by their affiliated organizations.

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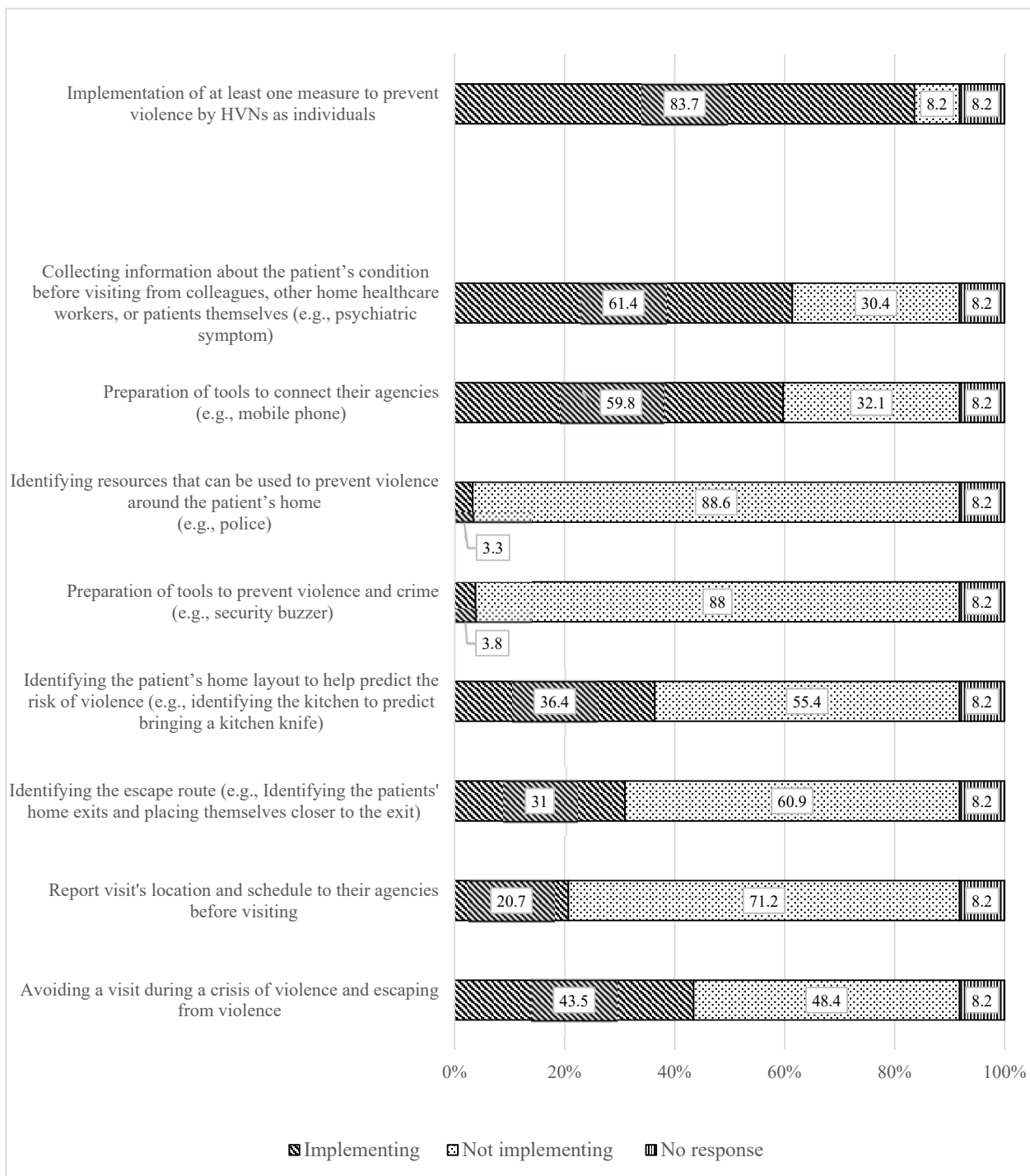


Figure A. Implementation status of measures to prevent violence by the HVNs as individuals.

Note. HVNs = home visit nurses.

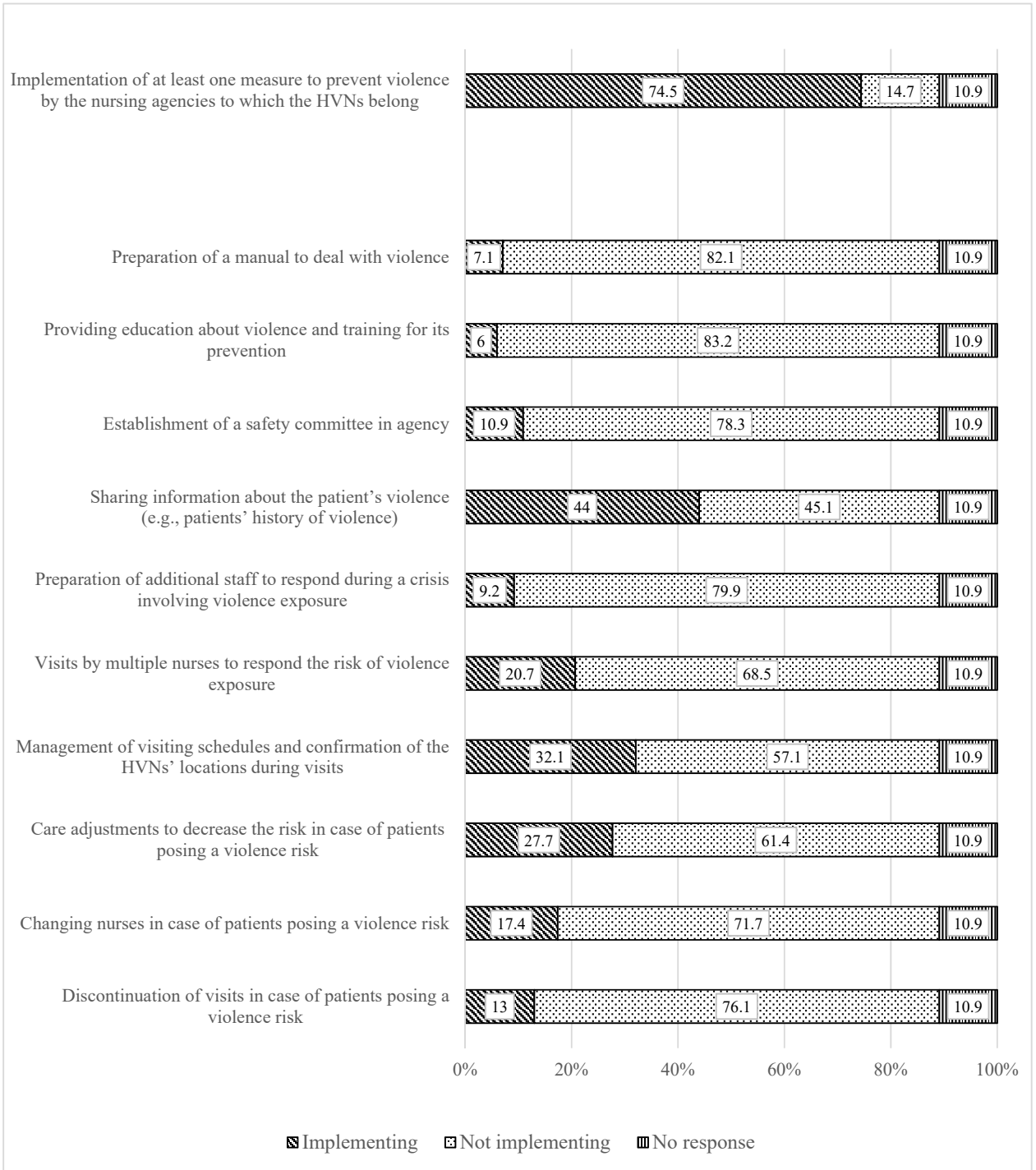


Figure B. Implementation status of measures to prevent violence by the nursing agencies to which the HVNs belong.

Note. HVNs = home visit nurses.

Table A

*The Association Between the Implementation of Measures and Exposure to Violence During
the Past 12 Months in Psychiatric Home-Visit Nursing Settings*

	Any form of violence	Physical assault	Verbal abuse	Sexual harassment	Threatening behavior	Damage to property
Measures to prevent violence by HVNs as individuals						
Collecting information about the patient's condition before visiting from colleagues, other home healthcare workers, or patients themselves (e.g., psychiatric symptom)	$p = 1.000$	$p = .660$	$p = .537$	$p = .258$	$p = 1.000$	$p = .719$
Preparation of tools to connect their affiliated agencies (e.g., mobile phone)	$p = .734$	$p = .379$	$p = 1.000$	$p = .154$	$p = .774$	$p = 1.000$
Identifying resources that can be used to prevent violence around the patient's home (e.g., police)	$p = 1.000$	$p = .245$	$p = 1.000$	$p = .092$	$p = 1.000$	$p = 1.000$
Preparation of tools to prevent violence (e.g., security buzzer)	$p = .185$	$p = .310$	$p = .058$	$p = .489$	$p = .465$	$p = .325$
Identifying the patient's home layout to help predict the risk of violence (e.g., identifying the kitchen to predict bringing a kitchen knife)	$p = .030^*$	$p = .832$	$p = .017^*$	$p = .029^*$	$p = .254$	$p = .157$
Identifying the escape route (e.g., Identifying the patients' home exits and placing themselves closer to the exit)	$p = .174$	$p = 1.000$	$p = .149$	$p = .265$	$p = .774$	$p = .162$
Report visit's location and schedule to their agencies before visiting	$p = .247$	$p = 1.000$	$p = .493$	$p = .524$	$p = 1.000$	$p = .686$
Avoiding a visit during a crisis of violence and escaping from violence	$p = .747$	$p = .835$	$p = .246$	$p = 1.000$	$p = .784$	$p = .312$

Measure to prevent violence by the nursing agencies to which the HVNs belong

Preparation of a manual to deal with violence	$p = .377$	$p = .436$	$p = .267$	$p = .601$	$p = .312$	$p = 1.000$
Providing education about violence and training for its prevention	$p = .097$	$p = .687$	$p = .005^*$	$p = .583$	$p = 1.000$	$p = 1.000$
Establishment of a safety committee in the agency	$p = 1.000$	$p = 1.000$	$p = .371$	$p = .364$	$p = .220$	$p = 1.000$
Sharing information about the patient's violence (e.g., patients' history of violence)	$p = .188$	$p = .523$	$p = .331$	$p = .766$	$p = .781$	$p = .325$
Preparation of additional staff to respond during a crisis involving violence exposure	$p = .790$	$p = .735$	$p = .752$	$p = .617$	$p = 1.000$	$p = 1.000$
Visits by multiple nurses to respond the risk of violence exposure	$p = 1.000$	$p = 1.000$	$p = .814$	$p = 1.000$	$p = 1.000$	$p = 1.000$
Management of visiting schedules and confirmation of the HVNs' locations during visits	$p = .010^*$	$p = .074$	$p = .840$	$p = .057$	$p = .261$	$p = 1.000$
Care adjustments to decrease the risk in case of patients posing a violence risk	$p = .013^*$	$p = .818$	$p = .055$	$p = .010^*$	$p = .767$	$p = .027^*$
Changing nurses in case of patients posing a violence risk	$p = .300$	$p = .174$	$p = .214$	$p = .062$	$p = .154$	$p = .688$
Discontinuation of home-visit services in case of patients posing a violence risk	$p = .489$	$p = .224$	$p = .584$	$p = .693$	$p = .439$	$p = .128$

Note. two-tailed Fisher's exact test. HVNs = home-visit nurses. $*p < .05$.

Table B

*The Association Between the Implementation of Measures and Exposure to Violence**During the Past 12 Months in Non-Psychiatric Home Visit Nursing Settings*

	Any form of violence	Physical assault	Verbal abuse	Sexual harassment	Threatening behavior	Damage to property
Measures to prevent violence by HVNs as individuals						
Collecting information about the patient's condition before visiting from colleagues, other home healthcare workers, or patients themselves (e.g., psychiatric symptom)	$p = 1.000$	$p = .471$	$p = .865$	$p = .837$	$p = .226$	$p = 1.000$
Preparation of tools to connect their affiliated agencies (e.g., mobile phone)	$p = .873$	$p = .727$	$p = .401$	$p = .841$	$p = .338$	$p = .264$
Identifying resources that can be used to prevent violence around the patient's home (e.g., police)	$p = .683$	$p = .370$	$p = 1.000$	$p = .598$	$p = .573$	$p = .027^*$
Preparation of tools to prevent violence (e.g., security buzzer)	$p = .267$	$p = .677$	$p = .423$	$p = .348$	$p = .596$	$p = 1.000$
Identifying the patient's home layout to help predict the risk of violence (e.g., identifying the kitchen to predict bringing a kitchen knife)	$p = 1.000$	$p = .730$	$p = .870$	$p = .241$	$p = .818$	$p = 1.000$
Identifying the escape route (e.g., Identifying the patients' home exits and placing themselves closer to the exit)	$p = .075$	$p = .592$	$p = .609$	$p = .538$	$p = .335$	$p = .444$
Report visit's location and schedule to their agencies before visiting	$p = .585$	$p = .421$	$p = .700$	$p = .644$	$p = .587$	$p = .384$
Avoiding a visit during a crisis of violence and escaping from violence	$p = .090$	$p = .027^*$	$p = .198$	$p = 1.000$	$p = .648$	$p = .482$

Measure to prevent violence by the nursing agencies to which the HVNs belong

Preparation of a manual to deal with violence	$p = .567$	$p = .738$	$p = .546$	$p = 1.000$	$p = .696$	$p = .154$
Providing education about violence and training for its prevention	$p = 1.000$	$p = .506$	$p = .749$	$p = .693$	$p = 1.000$	$p = .115$
Establishment of a safety committee in the agency	$p = .636$	$p = .794$	$p = .049^*$	$p = .128$	$p = .313$	$p = .082$
Sharing information about the patient's violence (e.g., patients' history of violence)	$p = .008^*$	$p = .059$	$p = .253$	$p = .117$	$p = .654$	$p = 1.000$
Preparation of additional staff to respond during a crisis involving violence exposure	$p = .308$	$p = .763$	$p = .598$	$p = .104$	$p = .264$	$p = .008^*$
Visits by multiple nurses to respond a risk of violence exposure	$p = .362$	$p = 1.000$	$p = .847$	$p = .817$	$p = .425$	$p = .033^*$
Management of visiting schedules and confirmation of the HVNs' locations during visits	$p = .871$	$p = .859$	$p = .397$	$p = .682$	$p = .353$	$p = 1.000$
Care adjustments to decrease the risk in case of patients posing a violence risk	$p = .011^*$	$p = .142$	$p = .078$	$p = .054$	$p = .808$	$p = .463$
Changing nurses in case of patients posing a violence risk	$p = .560$	$p = .393$	$p = .684$	$p = .804$	$p = .779$	$p = .075$
Discontinuation of home-visit services in case of patients posing a violence risk	$p = .827$	$p = .632$	$p = .164$	$p = 1.000$	$p = .750$	$p = .129$

Note. two-tailed Fisher's exact test. HVNs = home-visit nurses. $*p < .05$.