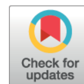

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Effects of Indirect Experience of Client Violence on Social Workers' Posttraumatic Stress Disorder

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Objective This study aims to empirically determine if indirect exposure to client violence has significant negative effects on social workers' posttraumatic stress disorder (PTSD) the same way direct victimization does.

Methods Using a sample of 1,359 social workers drawn from the data collected by the Seoul Association of Social Workers, this study employs descriptive statistics to examine the prevalence of indirect experiences with client violence, and utilizes a series of hierarchical regression analyses to demonstrate the potential impact of indirect exposure to client violence on PTSD. To assess the severity of PTSD symptoms in participants, the Korean version of the Impact of Events Scale-Revised (IES-R-K) was employed.

Results A descriptive analysis shows that 12.4% of the sample indirectly experienced client violence by witnessing it or hearing about a violent incident, whereas 6.0% were directly victimized. Hierarchical regression analyses indicate that direct experience (B=4.548, $p<0.05$) and indirect experience (B=7.297, $p<0.001$) of client violence have a significant association with the scores on IES-R-K. An investigation of the interaction terms between experiences of client violence and violence-prevention training illustrates that such training significantly moderates the influence on the scores on IES-R-K from indirect exposure to client violence (B=-8.639, $p<0.01$).

Conclusion Social workers who are indirectly exposed to client violence experience PTSD symptoms comparable to their colleagues who were directly victimized. Further, violence-prevention training has greater ameliorative effects with regard to indirect experience of client violence than for direct victimization.

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Keywords Social workers; Workplace violence; Victimization; Posttraumatic stress disorders.

INTRODUCTION

Social workers come into daily contact with clients who tend to have desperate, unmet needs, and various frustrating problems, such as mental illness, alcohol and substance use disorder, and chronic physical illness. They often have to deny their clients access to certain services or resources due to lack of eligibility, and sometimes even control the lives of their clients.[1,2] The nature of the profession places social workers at higher risk of encountering client violence than any other profession, to the extent that routine occurrence of workplace violence appears normal.[3] Social workers in the United States, for example, are reported to have experienced a rate of workplace violence six times higher than other employees.[4]

Corresponding to such a high prevalence, a volume of research has continually examined various aspects of client violence against social workers. Beginning with early sporadic reports that focused mainly on incidence rates of violence, recent studies have delved into potentially harmful consequences and the underlying causes of client violence directed at social workers.[5,6] Experiences of client violence in the workplace not only bring about physical injuries but reportedly have a host of negative somatic and psychological consequences for those who are victimized, such as headaches, nausea, sleep disorders, feelings of anger and helplessness, depression, and even suicidal thoughts.[7-15] For example, a study of UK social workers in children's home presented significantly higher levels of emotional exhaustion and depersonalization among social workers who

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experienced physical assault from their clients than those who did not experience such an episode.[15] In addition, they have been demonstrated to have various harmful impacts on organizational outcomes, including lower job satisfaction, commitment, and productivity, plus increased intentions to leave the profession, and deterioration in their quality of service.[7-9,15]

Despite such a body of literature on client violence toward social workers, the true magnitude of the problem might remain underestimated if only individuals directly affected as victims of violent events are considered.[16] Based on studies of disasters and other traumatic events, the influences could go beyond victims who are damaged directly by a violent encounter.[17] Indirect victims or individuals who are indirectly victimized by witnessing or hearing about the event could also exhibit many adverse outcomes similar to those shown by the primary victims.[17,18] Although analogous results have been reported in studies on workplace violence,[18-20] only a handful of research has addressed the indirect experience of client violence in the helping professions.[10,17,21,22] A study on workplace violence against health care workers showed that there were no significant differences in the levels of stress from an episode of physical threat or assault between those who directly experienced it and their contemporaries who witnessed it.[21] Despite the usefulness of these studies, they have some critical limitations in explicitly identifying the consequences of indirect exposure to client violence such as the following: presenting only theoretical explanations,[10] relying solely upon descriptive statistics,[21] unclearly defining the term indirect experience,[22] or being unable to show the independent effect of indirect exposure to client violence, which was introduced only as a component of a latent variable.[17]

Meanwhile, posttraumatic stress disorder (PTSD) has been documented as highly correlated with various mental health problems, such as anxiety, depression, substance use disorder, and suicidal ideation/attempts.[23,24] Although PTSD was previously considered to be mainly caused by life-threatening, traumatic incidents like wars or disasters, many recent studies have identified that it could occur as a reaction to critical work-related incidents, such as workplace violence.[25-28] In fact, Andersen and his colleagues found work-related threats and violence to significantly increase the incidence of PTSD of employees in the social services both in the short and long term.[25] Despite its clinical significance, however, studies investigating the influence of client violence on social workers' PTSD remain scarce, especially in the Korean society.[24,29]

To fill this crucial void and thus arrive at a better understanding of the actual magnitude of the problem of client violence, this study attempts to empirically demonstrate the potentially harmful impacts of indirect experience with client violence on social workers' PTSD. Building upon the results of previous studies, this study hypothesizes that indirect exposure to client violence would have significant negative consequences on PTSD, just like direct exposure.

METHODS

Study participants

This study utilizes data from "the investigation of work-related risks encountered by social workers in the Seoul area" collected by the Seoul Association of Social Workers (SASW). The data were gathered from November to December 2017 via face-to-face and online surveys regarding various types of work-related risks for social workers, the types of responses to the risks, behavioral and psychological consequences of those risks, etc. The face-to-face surveys were conducted with social workers who attended SASW's occupational refresher training programs. During the programs, a questionnaire was distributed to participants who showed a voluntary interest in taking the survey. At the same time, an online survey was offered to SASW members by posting the questionnaire on the SASW website, its Facebook page, and its webzine. A final total of 1,476 social workers participated: 993 via the face-to-face survey and 483 via the online survey. All participants were fully advised of the purpose of the survey, the voluntary nature of their participation, and their participant rights upon completion of an informed consent form. The survey protocol was approved by the SASW Ethics Committee (SASW-HR-2017-001). Considering the potentially distressing memories and emotions the survey might bring about, a list of available sources of support was also presented to all participants.

Among the 1,476 participants, this study statistically analyzed 1,359 cases, excluding 117 that had implausible or missing data for some variables of significance.

Measurement

PTSD

To assess the severity of PTSD symptoms in participants, this study employed the Korean version of the Impact of Events Scale-Revised (IES-R-K) as translated from the IES-R by Eun et al.[30] The IES-R is an advancement of Horowitz et al.'s[31] original scale, which is the IES designed to measure responses to a distressing life event (e.g., a violent act in the workplace) with two subscales: Intrusion and Avoidance.[32] The revision by Weiss and Marmar[33] additionally includes a third subscale assessing hyperarousal symptoms, leading to the current three-factor structure with 22 items: eight for the Intrusion subscale (e.g., "I thought about it when I didn't mean to"), eight for Avoidance (e.g., "I stayed away from reminders of it"), and six for Hyperarousal (e.g., "I was jumpy and easily startled"). Respondents were asked to rate how distressing each item had been for them

during the past week by using a five-point Likert scale: from 0 (not at all) to 4 (extremely distressing).

The IES-R is one of the most extensively used self-reporting measures of posttraumatic stress symptoms, and has demonstrated high levels of internal consistency (the range of Cronbach's alpha for the subscales: 0.79–0.94) and test-retest reliability (0.89–0.94).[33,34] With its application to Korean society, its reliability and validity were also confirmed by Eun et al.[30] The Cronbach's alpha for the IES-R in this study was determined to be 0.91. According to a suggestion by Weiss and Marmar,[33] the present study used the mean for the total IES-R or subscales rather than the raw sums in its analyses. For descriptive purposes, it also categorized the levels of PTSD in the participants based on cut-off scores on the IES-R: No PTSD (0–17), Partial PTSD (18–24), and Full PTSD (25 or higher).[24,30]

Direct and indirect experience of client violence

To measure direct experiences of client violence against social workers, the study examined whether the participants had experienced any physical violence from their clients in the preceding 12 months. The term physical violence encompassed minor physical violence (e.g., shoving, scratching, biting) to potentially fatal violence (e.g., throwing an object that could hurt, wielding a knife or other weapon-like object). The term indirect experience of client violence referred to witnessing or hearing about an incident of physical violence perpetrated by a client toward a co-worker.

This measure of participants' experiences with client violence merits further detailed explanation. First, it only dealt with physical violence, excluding other types of workplace violence against social workers, such as a verbal threat of assault, verbal abuse, and property damage. The reason for the exclusive focus on physical violence in this study was to make it more effective in comparing the consequences of direct versus indirect violence. Based on previous research, there is a lot of overlap between physical violence and other types of client violence from various aspects. For example, risk factors for actual physical violence and threats of assault reported them to be no different.[35,36] Moreover, threats of violence as well as verbal abuse could have detrimental effects on the mental health of the victimized, similar to the effects of physical aggression.[32,35] Thus, the study intended to control for potentially mixed effects of various types of client violence by considering only physical violence, which is more suitable for distinguishing between direct and indirect experience of workplace violence.

Second, this study employed a dichotomous categorization of participants' experiences of client violence (1: have experienced; 0: have never experienced), which does not consider the frequency of violent incidents. Although the data for this study included information regarding the frequency of occurrence, it was, as Macdonald and Sirotich[37] pointed out, almost impossible to acquire reliable incidence data about exposure to violence. Thus, the present study determined to use the Yes-No division for participants' experience of violence, which would be less susceptible to instability in a respondents' recall than scales simultaneously assessing both the occurrence and the frequency of violent incidents.[37]

Control variables

The control variables introduced in this study can be categorized into two: individual-level and organization-level. Individual-level factors include age, gender, education, and occupational status. Among them, education was considered a dichotomous variable with two levels: university or less, and graduate school or higher. Occupational status was also divided into two categories: middle manager or higher, and frontline worker. As organization-level factors, this study incorporated the following four items: agency type, violence-prevention training, a risk-management committee, and work environment with excessive workloads. Agency type was dichotomized into residential facility or outpatient facility according to whether clients resided in the facility to receive care or services (1) or not (0). Access to violence-prevention training was coded as a binary variable indicating whether the respondent's agency provided it (1) or not (0). Likewise, the existence of a risk-management committee was a dichotomous variable indicating whether the agency had been operating a risk-management committee against client violence (1) or not (0). Finally, the work environment dichotomy depended on whether the respondent regarded the workplace as distressing with an excessive workload (1) or not (0). Among the organization-level factors, violence-prevention training is of special interest in this study, because such training has been reported to have significant effects on a social worker's capacity to deal with client violence, thereby reducing its impact on their mental health or PTSD.[29] Thus, this study additionally examined whether violence-prevention training would buffer the effect of social workers' experiences with client violence on PTSD.

Statistical analysis

This study investigates whether indirect experiences of client violence would have the same significant impacts on social workers' PTSD as direct victimization from client aggression does. We controlled for some allegedly important personal and organizational characteristics. Thus, the mean score of the IES-R-K was hierarchically regressed on individual-level factors, organization-level factors, and types of experience with client violence. Further, the study examines whether and how violence-prevention training could moderate the influence of experiences with client violence on social workers' PTSD. Thus,

it introduced interaction terms between the two variables into the final regression model. All data analyses were carried out using SPSS ver. 19.0 (IBM Corp., Armonk, NY, USA).

RESULTS

Characteristics of the study participants

The sociodemographic characteristics of the respondents are presented in Table 1. With regard to individual-level traits, the majority of the study sample was female (67.1%) with a university education or less (83.4%). Concerning occupational status, more than two-thirds of the respondents (68.5%) worked as frontline workers. The mean age of the study sample was 34.1 (standard deviation [SD]=8.80).

When it comes to organization-level features, about one in every five respondents (21.7%) worked in a residential facility where clients stayed for specific institutionalized care. Slightly less than two-thirds of the sample (63.4%) indicated that their agency had been providing violence-prevention training, while only one-quarter (25.4%) reported that their workplace had a risk-management committee for the incidence of client violence toward its employees. Finally, 24.7% of participants considered their workplace to be distressing due to an excessive workload.

Table 1. Socio-demographic characteristics of the sample (N=1,359)

Variables	Frequency
Gender	
Male	447 (32.9)
Female	912 (67.1)
Education attained	
University or lower	1,133 (83.4)
Graduate school or higher	226 (16.6)
Occupational status	
Middle-manager or higher	428 (31.5)
Frontline worker	931 (68.5)
Age, year	34.1±8.80
Agency type	
Outpatient facility	1,064 (78.3)
Residential facility	295 (21.7)
Violence-prevention training	
Provided	862 (63.4)
Not provided	497 (36.6)
Risk-management committee	
Exists	345 (25.4)
Does not exist	1,014 (74.6)
Workplace with excessive workloads	
Yes	335 (24.7)
No	1,024 (75.3)

Data are presented as N (%) or mean±standard deviation

Experiences of client violence

The participants' experiences of client violence during the prior 12 months are summarized in Table 2. According to the results, 6.0% of the sample had been directly exposed to violence from clients, while 12.4% reported being victimized by hearing about or witnessing the infliction of physical violence on a co-worker. Approximately 16.7% of the respondents said they had encountered both direct and indirect client violence, whereas almost two-thirds of the sample (64.9%) reportedly had reportedly not experienced any type of client violence in the preceding year.

Severity of PTSD

Table 3 indicates the overall severity of PTSD among study participants as measured by the IES-R-K. The mean IES-R-K score for the sample was 0.59 (SD=0.51), which is comparable to the research results of Walsh and Clarke[32] on posttraumatic stress symptoms in health workers in the UK (mean=0.41, SD=0.55). The analyses of the subscales of the IES-R-K showed that respondents in the study tended to suffer more from intrusion symptoms. Such a relatively higher incidence of intrusive manifestation is in accordance with other studies. In an analysis of the influence of patient violence on nurses' PTSD,

Table 2. Experiences of client violence (N=1,359)

Experiences of client violence	Frequency (%)
Direct experience only	82 (6.0)
Indirect experience only	168 (12.4)
Both direct and indirect experiences	227 (16.7)
No such experience	882 (64.9)

Table 3. Summary scores from the IES-R-K and on the prevalence of PTSD (N=1,359)

IES-R-K subscale	Mean item scores	SD
Avoidance	0.58	0.54
Intrusion	0.68	0.57
Hyperarousal	0.50	0.53
Total	0.59	0.51
PTSD grouping*	Frequency (%)	
Normal	925 (68.1)	
Partial-PTSD	229 (16.9)	
Full-PTSD	205 (15.1)	

*cut-off scores on the IES-R-K for grouping the level of PTSD: no PTSD (0–17), partial PTSD (18–24), and full PTSD (25 or higher).[24,30] IES-R-K, Korean version of the Impact of Events Scale-Revised; PTSD, posttraumatic stress disorder

for example, Gates et al.[9] suggested that a higher frequency of intrusion symptoms would result from the fact that victimized nurses had to return to the place where the event had occurred.

For descriptive purposes, this study also examined levels of PTSD in participants based upon cut-off scores on the IES-R-K. According to Eun et al.,[30] IES-R-K results can be separated into three categories based on total score: normal (0−17), partial PTSD (18−24), and full PTSD (25 or higher). As seen in the lower part of Table 3, 16.9% of the sample from this study were found to have PTSD levels of clinical concern, while 15.1% were analyzed as suffering from levels of PTSD high enough for a probable diagnosis of PTSD. In contrast, the bulk of the sample (68.1%) belonged to the normal group.

Differences in the severity of PTSD

This study investigated whether there would be differences in the severity of PTSD based on participants' individual- and organization-level characteristics as well as from experience with client violence (Table 4). Among the individual-level traits, gender was solely proven to be a statistically significant variable concerning the severity of PTSD as measured with the IES-R-K. Female social workers were more likely to have higher IES-R-K scores than their male counterparts (t=-2.219, p=0.027). In contrast, a couple of organization-level variables were found to be significantly associated with PTSD. According to the results in Table 4, a participant working in a residential facility (t=1.933, p=0.048), without violence-prevention training (t=-3.282, p=0.001), and in a work environment with an excessive workload (t=8.898, p<0.001) tended to have higher scores on the IES-R-K.

With regard to the type of client-violence experience, the results in Table 4 demonstrate statistically significant differences in PTSD severity for participants across the type of experience with client violence ($F_{(2, 1356)}$=32.461, p<0.001). Moreover, a post-hoc Scheffe test revealed that social workers with indirect experiences of client violence, and those with both direct and indirect experiences, showed significantly higher scores on the IES-R-K than their contemporaries without any experience of client violence.

Table 4. Differences in level of PTSD by sociodemographic characteristics (N=1,359)

Variables	Mean score from the IES-R-K	Statistics (F/t, p value)
Age		
Under 40	0.60 (0.48)	t=-1.693
40 or older	0.55 (0.52)	p=0.091
Gender		
Male	0.55 (0.51)	t=-2.219
Female	0.61 (0.51)	p=0.027
Educational attainment		
University or lower	0.60 (0.51)	t=-1.021
Graduate school or higher	0.56 (0.51)	p=0.307
Occupational status		
Middle-manager or higher	0.58 (0.51)	t=0.631
Frontline worker	0.60 (0.52)	p=0.528
Agency type		
Outpatient facility	0.58 (0.52)	t=1.933
Residential facility	0.64 (0.50)	p=0.048
Violence-prevention training		
Provided	0.56 (0.49)	t=-3.282
Not provided	0.65 (0.55)	p=0.001
Risk-management committee		
Exists	0.56 (0.49)	t=-1.558
Does not exist	0.60 (0.52)	p=0.119
Workplace with excessive workloads		
Yes	0.82 (0.56)	t=8.898
No	0.52 (0.47)	p<0.001
Experiences of client violence		
Direct experience only[a)]	0.64 (0.51)	$F_{(2, 1356)}$=32.461
Indirect experience only[b)]	0.77 (0.58)	p<0.001
Both experiences[c)]	0.81 (0.59)	(b≠d, c≠d)
No such experience[d)]	0.50 (0.44)	

PTSD, posttraumatic stress disorder; IES-R-K, Korean version of the Impact of Events Scale-Revised

Hierarchical regression of PTSD

This study hierarchically performed a four-stage multiple regression analysis with the mean IES-R-K scores as the dependent variable. As indicated in Table 5, the first model with only individual-level characteristics of the participants was found to not significantly differ from the null model ($F_{(4,1354)}$=1.607, p=0.170), explaining a very limited part of the total variance in the dependent variable (R^2=0.005). Among the individual-level variables entered in Model 1, gender was the only variable proven to be statistically significant (B=2.228, p<0.05).

The second model introduced organization-level variables into the base model, including type of agency, access to violence-prevention training, the presence of a risk-management committee, and a workplace perceived to have an excessive workload. The addition of the organizational-level traits substantially improved the overall model fit ($F_{(8,1350)}$=20.292, p<0.001) and the accounted for variance in the dependent variable (R^2=0.063). Moreover, the results of Model 2 showed that all organization-level variables except the existence of a risk-management committee were significantly associated with PTSD levels in the participants, as gauged by the IES-R-K.

To investigate whether there would be significant differences

Table 5. Hierarchical regression analysis of mean scores from the EIS-R-K

	Model 1 B (s.e.)	Model 2 B (s.e.)	Model 3 B (s.e.)	Model 4 B (s.e.)
Constant	29.484 (2.899)***	29.060 (2.976)***	26.608 (2.934)***	24.949 (2.981)***
Age	-0.061 (0.066)	-0.080 (0.067)	-0.088 (0.066)	-0.086 (0.065)
Gender				
Female	2.228 (1.096)*	1.587 (1.071)	1.870 (1.052)	1.998 (1.051)
Education				
Graduate school or higher	-1.368 (1.518)	-1.160 (1.487)	-0.672 (1.459)	-0.594 (1.455)
Work status				
Frontline worker	-1.749 (1.333)	-1.403 (1.300)	-0.861 (1.275)	-0.958 (1.272)
Type of agency				
Residential facility		2.700 (1.259)*	1.377 (1.248)	1.642 (1.247)
Violence-prevention training		-2.650 (1.120)*	-2.629 (1.097)*	-0.294 (1.352)
Risk-management committee		0.506 (1.181)	0.802 (1.159)	0.647 (1.158)
Workplace with excessive workloads		8.947 (1.152)***	7.147 (1.154)***	7.158 (1.151)***
Experience of client violence				
Direct experience only			4.548 (2.100)*	6.622 (3.676)
Indirect experience only			7.297 (1.511)***	13.027 (2.581)***
Both types			8.891 (1.371)***	12.679 (2.305)***
Interaction terms				
Direct experience*training				-3.055 (4.468)
Indirect experience*training				-8.639 (3.160)**
Both types*training				-5.746 (2.802)*
F	$F_{(4, 1354)}$=1.607	$F_{(8, 1350)}$=20.292***	$F_{(11, 1347)}$=38.800***	$F_{(14, 1344)}$=42.104***
R^2 overall	0.005	0.063	0.105	0.112
ΔR^2		0.058	0.041	0.007

*p<0.05; **p<0.01; ***p<0.001. IES-R-K, Korean version of the Impact of Events Scale-Revised

in PTSD across the types of experience with client violence, the study additionally included such experiences in Model 2. Upon the introduction of these variables, the accounted for variance in the dependent variable was found to increase by approximately 67% (R^2=0.105), along with the improved model fit ($F_{(11,1347)}$=38.800, p<0.001). More importantly, all types of client violence were demonstrated as statistically significant factors for predicting PTSD levels after controlling for individual- and organization-level variables. That is, study participants who had been exposed to any type of client violence were found to have significantly higher levels of PTSD than their counterparts with no experience of client violence. Moreover, it should be noted that the magnitude of the impact on PTSD from indirect experience only was determined to be greater than that from direct experience only, as indicated by the size of the regression coefficients of these variables (The same pattern in results was found when standardized coefficients were used instead, although they are not presented here).

Lastly, Model 4 in Table 5 introduced interaction terms between experiences of client violence and violence-prevention training. The additional inclusion of the interaction terms was found to enhance the model fit ($F_{(14,1344)}$=42.104, p<0.001) and the accounted for variance in the dependent variable (R^2=0.112). Moreover, the results with regard to the interaction terms included in Model 4 indicated that violence-prevention training significantly reduced negative influences on PTSD levels from having indirect experience only (B=-8.639, p<0.01) and from having both types of experience (B=-5.746, p<0.05). The negative effect of direct experience only also decreased upon the inclusion of the interaction terms, although it was not statistically significant. Implications related to this finding are discussed next.

DISCUSSION

Utilizing descriptive statistical analysis and a series of regression models, the present study investigated the following: 1) the prevalence of indirect experiences of client violence among

social workers in the Seoul metropolitan area; 2) whether indirect experiences of client violence would be significantly associated with the severity of PTSD after controlling for personal and organizational variables; and 3) whether violence-prevention training could moderate the impacts from experiences of client violence on PTSD severity. The findings illustrated that 1) approximately one in every eight social workers had indirect experiences of client violence during the preceding year; 2) an indirect experience of client violence had significant harmful impacts on PTSD that were greater than impacts from direct experience; and 3) violence-prevention training could significantly buffer the influences that experiences with client violence have on PTSD symptoms. Some aspects deserve further discussion.

First, the current study evidentially showed that harmful consequences from client violence did not stop at those directly affected by the violent behavior. In effect, a significantly detrimental consequence was observed for those indirectly involved in the violent event by witnessing or hearing about it. These findings align with previous studies indicating that direct victimization is not always necessary for an individual to experience negative consequences from a traumatic event.[18,38-40] The mere perception that one might be a potential target of a violent assault at work could alone yield various psychological problems, such as chronic alertness, depression, and excessive stress.[39,40] Thus, professionals who have not actually experienced client violence but have been continually concerned about the potential risk of such violence would be expected to exhibit negative symptoms similar to those shown by directly affected victims.[10,18,19] Particularly noteworthy is the role of fear of future violence, or uncertainty about future safety that Rogers and Kelloway[18] emphasized while explaining the adverse outcomes of a vicarious experience with client violence. One of the most important contributions this study makes is the empirical demonstration of these assumptions in the sample of social workers from the Seoul metropolitan area.

Second, it is worth mentioning that an indirect experience with client violence as identified in this study was, in addition to its statistical significance, found to have more negative effects on participants' PTSD than a direct experience. There are two possible reasons for this seemingly odd finding. As some prior studies pointed out, direct victimization from client violence is more likely to be dealt with in a more official and regulatory way due to its greater visibility, resulting in alleviated PTSD symptoms for the direct victims.[13,41] Another plausible explanation is related to allegedly greater anxiety about uncontrollable situations. In general, people tend to worry more about what will likely happen than what has already occurred, because they regard the former as less controllable than the latter, which could be subject to more ameliorative intervention.[32,38,42] In fact, a study on the impacts of violence toward child protection social workers in the UK documented that threats of violence would be more significant in causing fear in the victim than actual physical violence.[43] According to a cognitive model of PTSD proposed by Ehlers and Clark,[44] loss of psychological control during a traumatic event would increase the likelihood of the victim to experience distress. Therefore, higher levels of anxiety and stress from less controllability would explain the greater negative consequences for those victimized indirectly.

Third, this study showed that violence-prevention training significantly attenuated the pernicious influences of client violence on PTSD severity. This finding appears to lend weight to previous research reporting that training could enhance the potential to deal with client violence, mitigating its detrimental effects on psychological health.[4,29,32] More interestingly, the results of this study indicated that the moderating effect of training was not the same based on the type of experience with client violence. In this study, violence-prevention training more effectively abated the negative consequences of an indirect experience with client violence on PTSD symptoms than for a direct experience. The rationale behind this finding could be associated with the impact of training on the level of control perceived by the individual. According to previous research, violence-prevention training can not only provide people with a variety of useful information and skills needed to protect themselves from client violence, but also (and more importantly) heighten their levels of perceived control over the work environment.[17,32,45] In a study on workplace violence among hospital and group home staff, Schat and Kelloway[17] confirmed that feelings of control could be significantly elevated by training targeted at workplace aggression. Furthermore, enhanced perception of control was reported to be particularly effective in reducing fear of future violence at work.[46,47] Here, we could find the answer to why training was more ameliorating for an indirect experience of client violence than for a direct experience.

Based upon these findings, this study elicited some practical implications of importance for better coping with client violence against social workers. First, substantially more attention should be directed toward indirect exposure to client violence. Despite recently increased efforts in the field of social work in Korea to establish a variety of policies aimed at addressing client violence, all of them have exclusively focused on direct victimization by client aggression, leaving most indirect victims with no specific care or treatment. However, given its damaging effects, indirect experiences with client violence should be considered when designing every aspect of all such endeavors, ranging from preventative strategies to post-incident recovery treatment. For this purpose, a high priority would be to enact a statutory definition of client violence that clearly

includes indirect exposure to violence, thus serving as a critical legal basis for all types of intervening actions.

The other crucial implication of this study pertains to practical ways to effectively deal with an indirect experience with client violence. As the findings of the study indicated, the key factor for alleviating negative consequences from indirect exposure to client violence would be the effectual mitigation of the fear of future violence among the indirectly victimized. Therefore, it would be self-evident that actions to tackle indirect exposure to client violence (e.g., provision of training, creation of a safety protocol, offering psychological counseling, etc.) should place an intervening focus on efficacious reduction of the fear of potential violence in the future. In addition, an effective decrease in the fear of future victimization could be achieved by enhancing the employees' sense of control over workplace safety. In this light, as some previous research suggested,[8,48] we might need to change the predominant organizational culture to make an organization more committed to, and accountable for, its members' safety in the long run.

The present study has some limitations. It adopted a cross-sectional research design, making it impossible to identify causality between the main variables. Further, the study did not inclusively introduce confounding factors into the analyses, being unable to rule out potential effects of such unmeasured factors. Moreover, the concept of fear of future violence has yet to be subjected to more robust examination using a causal model based on sound theory. In addition, there is the possibility of underestimating the relationship between experiences of client violence and PTSD symptoms for the following reasons: As prior studies indicated,[12,28] persons with more PTSD-related problems, especially avoidance, are more likely to not have participated in the study. Additionally, participants might have underrated their PTSD symptoms, given the prevailing climate of the profession that tends to regard client violence as part of the job and deems victimized workers as incompetent.

Despite these limitations, the current study carries its own weight in that it reveals that more than a few social workers have suffered from indirect experiences of client violence, where negative consequences on PTSD would by no means be less than those caused by direct experiences. Furthermore, it demonstrated that violence-prevention training would have greater ameliorative effects for indirect experiences with client violence than for direct experiences.

Availability of Data and Material

The datasets generated or analyzed during the study are available from the corresponding author on reasonable request.

Conflicts of Interest

The authors have no potential conflicts of interest to disclose.

Author Contributions

Conceptualization: Yongwoo Lee, Seo-Koo Yoo. Data curation: Sun Mi Kim, HyunSoo Kim. Formal analysis: Yongwoo Lee, Sun Mi Kim, Doug Hyun Han. Funding acquisition: Yongwoo Lee. Investigation: Seo-Koo Yoo, HyunSoo Kim. Methodology: Yongwoo Lee, Sun Mi Kim. Project administration: Doug Hyun Han, Seo-Koo Yoo. Resources: Yongwoo Lee, HyunSoo Kim. Software: Yongwoo Lee. Supervision: Doug Hyun Han, Seo-Koo Yoo. Validation: Sun Mi Kim, Doug Hyun Han. Visualization: Yongwoo Lee, HyunSoo Kim. Writing—original draft: Yongwoo Lee, Sun Mi Kim. Writing—review & editing: Doug Hyun Han, Seo-Koo Yoo, HyunSoo Kim.

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