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Revised Written Exposure Therapy Program for Posttraumatic Stress Disorder, Depression, and Posttraumatic Growth for Interpersonal Trauma Survivors

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This study aimed to examine the effectiveness of the Written Exposure Therapy (WET) program on posttraumatic stress disorder (PTSD), depression symptoms, and posttraumatic growth among individuals with interpersonal trauma. To this end, participants ($n = 20$) who had experienced at least one interpersonal trauma and scored 18 or more on the Impact of Event Scale (IES) were recruited. Participants were randomly assigned to an experimental ($n = 10$) or waitlist control group ($n = 10$). The experimental group completed eight weekly WET sessions. Assessments were conducted at baseline, post-intervention, and at four weeks following the intervention. Significant interaction effects were found between group and time of measurement for PTSD, depression symptoms, and posttraumatic growth. Additionally, significant differences were observed between the groups over time. These results demonstrated that the WET program significantly decreased PTSD and depression symptoms, while increasing posttraumatic growth. These effects were sustained at the four-week follow-up. These findings suggest that the revised WET program may be effective as an intervention strategy for PTSD in future counseling and clinical settings.

Keywords: written exposure therapy, interpersonal trauma, PTSD, depression, posttraumatic growth

Introduction

Psychological trauma is widespread in South Korea, which has experienced a series of unexpected disasters in recent years, including the COVID-19 pandemic, the Itaewon tragedy, and natural disasters. Individuals who have experienced trauma may develop posttraumatic stress disorder (PTSD) as a psychological response. More than 80% of those who develop PTSD are diagnosed with other mental health disorders, such as depressive disorders. Therefore, actively responding actively to psychological trauma with targeted therapeutic interventions is critical (APA, 2013).

Trauma can be categorized according to its frequency, as either a single-event or repeated trauma, and whether the triggering factor was interpersonal (Allen, 2008). Interpersonal trauma tends to cause a wider range of psychological difficulties and symptoms than does non-interpersonal trauma and may lead to PTSD or comorbid mental disorders (Kessler et al., 2013). Interpersonal trauma can be more distressing than non-interpersonal trauma (Allen, 2008). In previous studies conducted in Korea, individuals who experienced interpersonal trauma showed greater disruption to the self-system and exhibited different levels of depression, anxiety, and ego resilience compared to those who experienced non-

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interpersonal trauma (Jang, 2010). Furthermore, individuals who experience interpersonal trauma tend to exhibit more severe symptoms of PTSD, along with higher levels of anxiety and depression (Joo et al., 2009). Previous research examining posttraumatic outcomes by trauma type has found that interpersonal trauma is often characterized by intentionality and is more difficult to psychologically avoid than unintentional trauma (Shakespeare-Finch & Armstrong, 2010). These findings suggest that interpersonal trauma tends to have more detrimental effects than other types of trauma, highlighting the importance of focusing on interpersonal trauma and the need for appropriate psychological interventions for those affected. Depression is a common reaction to traumatic events, with nearly 50% of individuals diagnosed with PTSD also meeting criteria for a comorbid depressive disorder (Shalev et al., 1998). Furthermore, depression has been identified as a major predictor of the chronicity of PTSD symptoms (Freedman et al., 1999). Studies on the relationship between trauma experiences and depression have shown that traumatic events are positively associated with increased symptoms of depression and anxiety (Cho & Yang, 2013). Over time, these negative psychological states often do not improve; in some cases, symptoms of depression and emotional suppression worsen (Shin, 2007). Therefore, depression is considered a common psychological symptom that may appear after a traumatic event and is suggested to be a vulnerability factor that negatively affects psychological recovery following trauma.

Evidence-based trauma-focused psychotherapies include Cognitive Processing Therapy (CPT), Eye Movement Desensitization and Reprocessing (EMDR), and Prolonged Exposure Therapy (PE). These therapies share elements such as exposure and cognitive restructuring, which are core components of approaches to address PTSD symptoms (Cahill et al., 2006).

Although evidence-based trauma-focused psychotherapies have demonstrated utility and effectiveness, clients can feel resistant toward these treatments, which often involve unavoidable exposure to traumatic experiences (Cho, 2001). Therefore, researchers have emphasized the need for preliminary interventions to establish client stability before addressing traumatic events in therapy (Joo, 2016).

In response to the limitations of exposure therapy, Sloan et al. proposed Written Exposure Therapy (WET), a writing-based exposure treatment guided by a new protocol developed after conducting extensive research into the efficacy of the approach over time (Sloan & Marx, 2019). Similar to other evidence-based treatments, WET includes therapeutic exposure and cognitive restructuring. Notably, WET was recently recommended, alongside PE, CPT, EMDR, and Narrative Exposure Therapy, in the PTSD prevention and treatment guidelines published by the International Society for Traumatic Stress Studies (ISTSS; Bisson et al., 2019). Several randomized controlled trials were conducted to verify the efficacy of WET. For example, a comparative study found that WET and CPT were equally effective and that their therapeutic effects are maintained up to 60 weeks post-intervention (Thompson-Hollands et al., 2018).

Compared with other psychological treatments for PTSD, WET has several distinguishing features and advantages (Sloan & Marx, 2019). First, since therapeutic exposure is conducted through writing with no homework assignments, the dropout rate for WET is only 6%. This is significantly lower than the 18%-65% dropout rates reported for CPT and PE (Hembree et al., 2003). This significant difference in dropout rates may be attributed to the written form of therapeutic exposure used in WET, which helps patients feel more comfortable in the therapeutic setting and better tolerate the exposure process (Sloan & Marx, 2019). Another contributing factor is that, unlike other psychological treatments for PTSD, WET does not involve homework assignments, thereby avoiding the burden associated with completing between-session tasks. Difficulties in completing homework often lead to patterns of missed or canceled sessions, which can often lead to early dropout (Gutner et al., 2016). Therefore, the absence of homework assignments in WET may promote consistent session attendance and improve treatment completion rates (Sloan et al., 2018).

Second, WET consists of only five sessions, each including 30 min of writing. This makes WET cost-effective and accessible. Third, the highly structured and scripted WET protocol is simple to administer. This ensures consistent treatment regardless of the therapist. With these unique features and advantages, WET addresses many of the common limitations of other PTSD treatments, such as high dropout rates, accessibility issues, and unstructured approaches.

Notably, individuals may experience positive psychological changes after experiencing trauma. This phenomenon is known as posttraumatic growth (Calhoun & Tedeschi, 1999) and is often used to assess the effectiveness of PTSD treatment. According to this model, self-disclosure and deliberate rumination can promote posttraumatic growth. Therefore, WET, which incorporates the therapeutic elements of exposure and cognitive restructuring, may promote posttraumatic growth in individuals who experienced interpersonal trauma by helping them find new meaning in life.

Methods

Sample Size Calculation

Using G*Power 3.1, statistical analysis was set to "difference between two independent means." With a significance level of 0.05, power of 0.8, and an effect size of 0.4, the required sample size was calculated to be nine participants per group. Considering an expected dropout rate of approximately 10% during the study, the final sample size was determined to be 10 participants per group Participants.

In total, 22 participants were recruited through an online announcement posted on a local university community forum and shared in an Internet café. The participants were residents of Cheonan and Asan cities in Chungcheongnam-do, aged between 18 and 65 years. They were interviewed to assess their eligibility. Furthermore, they were required to report at least one experience of interpersonal trauma on the Interpersonal Trauma Experience Questionnaire (Ryu, 2020) and have a score of 18 or more on the Impact of Event Scale-Revised Korean (IES-R-K; Eun et al., 2005).

Of the 22 recruited participants, two individuals who scored below 18 on the Impact of Event Scale were excluded. Subsequently, through interviews, exclusion criteria, including previous trauma treatment experience, presence of severe substance use disorder, severe psychosis, and risk of suicide attempt (Kim, 2021), were assessed. No participants met these criteria. The final selected 20 participants were then divided into subgroups based on gender and age, and stratified random sampling was applied to evenly assign 10 participants to the experimental group and 10 to the waitlist control group. The researcher personally conducted the intervention program, as well as the outcome measurements and analyses. Therefore, no blinding was applied to the researcher, participants, or analyst. The experimental group received an eight-session WET program. However, the waitlist control group did not receive the intervention during the study period, and their exposures to activities or programs that could influence the study outcomes were controlled. Both groups were assessed at baseline, post-intervention, and a four-week follow-up.

This study was approved by the Institutional Review Board (IRB) of OO University (Approval number: 2022-09-015). Not only during the recruitment process but also upon visiting the research site, the purpose and procedures of the study, the use of personal information, and confidentiality measures were thoroughly explained, and written informed consent was obtained. Participants were given a small amount of compensation as a token of appreciation for their involvement. Particularly, potential emotional discomfort that participants might experience during the study was disclosed in advance. They were also informed that they could withdraw from the study at any time. All data were handled anonymously and will be destroyed immediately after the legally mandated retention period of three years.

Measures

Posttraumatic Diagnostic Scale

The Posttraumatic Diagnostic Scale (PDS), developed by Foa et al. (1997) and adapted by Ahn (2005), was used to measure posttraumatic stress symptoms. This is a valid tool for assessing PTSD (Foa et al, 1997). The PDS consists of 49 items and uses a four-point Likert scale ranging from 0 to 3. It has demonstrated high internal consistency and reliability. This study utilized only 17 items related to PTSD symptoms. These items are based on the DSM-IV (APA, 1994) diagnostic criteria. The overall Cronbach's α was .90.

Center for Epidemiologic Studies Depression Scale

Depression was measured using the Korean version of the Center for Epidemiologic Studies Depression Scale (CES-D). The original scale was developed by the National Institute of Mental Health (1971) and adapted and validated for the Korean context by Chon et al. (2001). The CES-D consists of 20 items, scored on a 4-point Likert scale ranging from 0 to 3. The total score can range from 0 to 60, and the overall reliability (Cronbach's α) was .90.

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Korean Version of the Posttraumatic Growth Inventory

The Korean version of the Posttraumatic Growth Inventory (K-PTGI) was used to measure posttraumatic growth. Tedeschi and Calhoun (1996) developed this scale, and Song et al. (2009) adapted and validated it for the Korean context. The K-PTGI consists of 16 items rated on a 6-point Likert scale ranging from 0 to 5. A higher total score indicates a higher level of posttraumatic growth. The overall reliability (Cronbach's α) was .94. Additionally, in the study by Song et al. (2009), K-PTGI demonstrated convergent validity by showing significant positive correlations with life satisfaction and positive affect.

Procedure

The revised WET program administered to participants consisted of three stages: stabilization, writing exposure therapy, and integration. The writing exposure therapy stage consisted of five sessions, which followed the original WET manual and guidelines (Sloan & Marx, 2019).

Table 1. *Structure and Content of the Revised Written Exposure Therapy Program*

Stage	Session (Duration)	Component	Content
Stabilization	Session 1 (Approx. 50 min)	Psychoeducation/ Stabilization training	• Psychoeducation (20 min) • Stabilization Training: Using videos - Diaphragmatic breathing exercise (4 min) - Progressive muscle relaxation (13 min) - Mindful breathing meditation (6 min) • Wrap-up (7 min)
	Session 2 (Approx. 50 min)	Emotional expression and regulation	• Recognizing and expressing emotions - Introduction to emotion cards (5 min) - Exploring and examining emotion cards (5 min) - Using worksheets to express emotions (35 min) • Wrap-up: Relaxation training (5 min)
Writing exposure therapy	Session 3 (Approx. 50 min)	Therapeutic exposure/ Cognitive restructuring	• Reading instructions, SUDS (5 min) • Writing about traumatic event experience (30 min) • SUDS, check-in interview (10 min) • Wrap-up: Relaxation training (5 min)
	Session 4 (Approx. 55 min)		• Feedback on previous writing (5 min)
	Session 5 (Approx. 55 min)		• Reading instructions, SUDS (5 min)
	Session 6 (Approx. 55 min)		• Writing about traumatic event experience (30 min)
	Session 7 (Approx. 55 min)		• SUDS, check-in interview (10 min) • Wrap-up: Relaxation training (5 min)
Integration	Session 8 (Approx. 50 min)	Enhancing positivity	• Introduction to the session (5 min) • Using worksheets to identify resources (30 min) • Wrap-up - Sharing reflections on the conclusion (10 min) - Relaxation training (5 min)

Table 2. *Descriptive Statistics for Baseline, Post-intervention, and Follow-up, and Baseline Homogeneity Test (n = 20)*

Variable	Group	Baseline	Homogeneity baseline score		Post-intervention	Follow-up
		M (SD)	*t*	*p*	*M (SD)*	*M (SD)*
PTSD	Experimental	20.9 (5.76)	.195	.847	7.6 (4.48)	9.5 (5.97)
	Control	20.3 (7.82)			20.1 (9.68)	18.4 (10.75)
Depression	Experimental	28.1 (6.85)	-.830	.417	12.4 (6.74)	13.9 (8.28)
	Control	30.7 (7.15)			29.1 (6.67)	27.7 (8.50)
Posttraumatic Growth	Experimental	43.8 (11.83)	-1.379	.185	67.4 (10.48)	65.8 (9.58)
	Control	52.3 (15.50)			55.6 (14.62)	49.0 (15.25)

The researcher implemented the program in the form of individual counseling sessions with participants. Each session lasted approximately 60 min, with 30 min of the session dedicated to writing during the writing exposure therapy stage. The specific content of each session is presented in Table 1.

Data Analysis

Data generated by this study were analyzed using SPSS 23.0. A frequency analysis was conducted to examine the typical characteristics of participants, as well as the characteristics of the experimental and waitlist control groups. To verify the reliability of each measurement tool, the internal consistency coefficient (Cronbach's α) was calculated. Additionally, an independent sample *t*-test was conducted to evaluate the homogeneity of baseline scores between the experimental and waitlist control groups.

A repeated-measures ANOVA was conducted to verify the effect of WET by examining the interaction between group and measurement time. Independent-sample *t*-tests were performed to investigate the difference between baseline and post-intervention scores, as well as the difference between baseline and scores at follow-up.

Results

Baseline Homogeneity Test Between the Two Groups

Group differences in baseline PTSD ($t = .195$, $p > .05$), depression ($t = -.830$, $p > .05$), and posttraumatic growth ($t = -1.379$, $p > .05$) were analyzed using independent-sample *t*-tests. No significant differences were between the experimental and waitlist control groups at baseline, suggesting that the groups were homogeneous. Table 2 presents these results.

Frequency Analysis of Participant and Group Characteristics

Both groups consisted of one man (10%) and nine women (90%). A third of the participants in the experimental group ($n = 3$; 30%) were aged 41-45 years, while participants in the waitlist control group tended to be 21-25 years old ($n = 4$, 40%). However, no statistically significant difference existed in age distribution between the two groups ($\chi^2 = 1.20$, $p = .878$). Previous research has reported that, unlike CPT, the outcomes of WET do not vary according to intelligence or educational level (Marx et al., 2021). Based on this

Table 3. *Results of Repeated Measures ANOVA (n = 20)*

Variable		SS	df	MS	*F*	*p*
PTSD	Between Group					
	Group	721.07	1	721.07	5.92	.038*
	Error	1,096.27	9	121.81		
	Within Groups					
	Time	598.63	1.31	457.68	17.721	.001**
	Group × Time	458.03	2	229.02	16.58	.000***
	Error	248.63	18	13.81		
Depression	Between Group					
	Group	1,826.017	1	1,826.017	38.324	.000***
	Error	428.817	9	47.646		
	Within Groups					
	Time	991.900	2	495.950	17.570	.000***
	Group × Time	554.433	2	277.217	15.680	.000***
	Error	318.233	18	17.680		
Posttraumatic growth	Between Group					
	Group	673.350	1	673.350	1.576	.241
	Error	3,844.817	9	427.202		
	Within Groups					
	Time	1,900.900	2	950.450	25.429	.000***
	Group × Time	1,795.300	2	897.650	21.863	.000***
	Error	739.033	18	41.057		

*$p < .05$, **$p < .01$, ***$p < .001$.

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evidence, the present study established demographic variables accordingly.

Therapeutic Effects over Time

A repeated-measures ANOVA was conducted to verify whether the experimental and waitlist control groups showed significant differences in PTSD, depression, and posttraumatic growth scores over time. Independent-sample *t*-tests were performed to investigate the difference between baseline and post-intervention scores, as well as the difference between baseline and scores at follow-up. The results are presented in Tables 3 and 4.

PTSD

The interaction effect between group and measurement time was statistically significant for PTSD scores, $F(2, 18) = 16.58$, $p = .000$, as was the main effect of measurement time, $F(1.31, 18) = 17.721$, $p = .001$. The experimental group demonstrated a statistically significant difference in PTSD scores post-intervention, compared with baseline ($M = -13.3$, $SD = 5.77$). The waitlist control group's PTSD scores were not significantly different from baseline ($M = -.2$, $SD = 7.00$). Similarly, a significant difference in the experimental group's PTSD scores presented at the four-week follow-up ($M = -11.4$, $SD = 6.15$), compared to baseline. This was not observed for the waitlist control group ($M = -1.9$, $SD = 5.88$).

Depression

The interaction effect between group and measurement time was statistically significant for depression scores, $F(2, 18) = 15.680$, $p = .000$, as was the main effect of measurement time, $F(2, 18) = 17.570$, $p = .000$. The experimental group demonstrated a statistically significant difference in depression scores post-intervention ($M = -15.7$, $SD = 9.18$) compared to baseline. The waitlist control group's depression scores were not significantly different from baseline ($M = -1.6$, $SD = 4.81$). Similarly, a significant difference in the experimental group's depression scores presented at the four-week follow-up ($M = -14.2$, $SD = 9.65$), compared to baseline. This was not observed for the waitlist control group ($M = -3.0$, $SD = 4.57$).

Posttraumatic Growth

The interaction effect between group and measurement time was

Table 4. *Group Differences Across Measurement Time Points for Each Variable (n = 20)*

Variable	Group	Baseline post-intervention	*t*	Baseline follow-up	*t*
		M (SD)		*M (SD)*	
PTSD	Experimental	-13.3 (5.77)	-4.563***	-11.4 (6.15)	-3.531***
	Control	-.2 (7.00)		-1.9 (5.88)	
Depression	Experimental	-15.7 (9.18)	-4.303***	-14.2 (9.65)	-3.318**
	Control	-1.6 (4.81)		-3.0 (4.57)	
Posttraumatic growth	Experimental	23.6 (13.33)	4.376***	22.2 (8.92)	6.336***
	Control	3.3 (6.13)		-3.3 (9.08)	

**$p < .01$, ***$p < .001$.

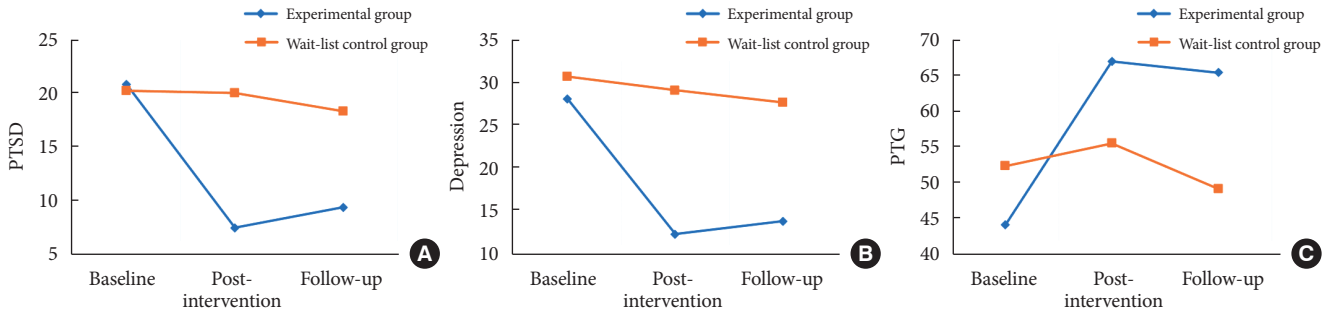

Figure 1. *Changes in PTSD, depression, and posttraumatic growth across measurement points. Baseline: before intervention, Post-intervention: immediately after the program, Follow-up: 4 weeks after intervention. (A) Posttraumatic Stress Disorder (PDS), (B) Depression (CES-D), (C) Posttraumatic growth (K-PTGI).*

statistically significant for posttraumatic growth, $F(2, 18) = 21.863$, $p = .000$, and the main effect of measurement time, $F(2, 18) = 25.429$, $p = .000$, was also statistically significant. The experimental group demonstrated a statistically significant difference in posttraumatic growth scores post-intervention ($M = 23.6$, $SD = 13.33$), compared to baseline. The waitlist control group's posttraumatic growth scores were not significantly different from baseline ($M = 3.3$, $SD = 6.13$). Similarly, a significant difference in the experimental group's posttraumatic growth scores was presented at the four-week follow-up ($M = 22.2$, $SD = 8.92$), compared to baseline. This was not observed for the waitlist control group ($M = -3.3$, $SD = 9.08$).

Figure 1 summarizes these changes in PTSD, depression, and posttraumatic growth scores over time for the experimental and waitlist control groups. These results suggest that the WET program is effective in reducing PTSD symptoms and depression, as well as in promoting posttraumatic growth.

Discussion

This study examined the effects of a revised WET program on PTSD, depression, and posttraumatic growth in individuals with interpersonal trauma experiences. These outcomes were measured in experimental and waitlist control groups at baseline, post-intervention, and a four-week follow-up using PDS, CES-D, and K-PTGI scores. We analyzed the interactions between group and measurement time, and compared post-intervention and follow-up scores to baseline scores for each group.

The revised WET program effectively reduced PTSD symptoms in individuals with interpersonal trauma. The experimental group, which received treatment, showed a statistically significant improvement in PDS scores compared to the waitlist control group, which did not receive treatment. Including a stabilization phase may have contributed to the reduction in PTSD symptoms within the experimental group. The revised WET program included a stabilization phase before the formal therapeutic exposure intervention delivered in the WET phase. The stabilization phase consisted of a total of two sessions, which included training in stabilization techniques, psychoeducation, and sessions focused on emotional awareness and expression. Abdominal breathing training, progressive muscle relaxation, and mindful breathing training in Session 1, along with relaxation exercises at the end of each session, alleviated hyperarousal and helped the participants feel a sense of physical and physiological stability. These results align with previous research, demonstrating that including a stabilization phase in a structured, stage-based approach helps improve emotional regulation and alleviate PTSD symptoms (Im et al., 2022; Jeong & Kim, 2022). Additionally, psychoeducation is believed to have increased participants' motivation for change and expectations for improvement, helping to reduce avoidance of therapeutic exposure. Such acceptance of treatment not only positively influences treatment outcomes but also appears to help relieve PTSD symptoms such as re-experiencing, avoidance, and hyperarousal (Lubin et al., 1998). The two sessions focused on emotional awareness and expression served as a preparatory phase for the exposure stage, concentrating on trauma-related thoughts and feelings, as well as sessions for emotional regulation. Participants seemed to experience symptom relief by becoming aware of their emotional states and perceiving greater control over their emotions. These findings align with previous studies reporting reductions in PTSD symptoms following WET treatment (Park et al., 2021; Sloan et al., 2012, 2013, 2018; Yun & Lee, 2022).

Second, the revised WET program was effective in reducing depression among individuals with interpersonal trauma. The experimental group, which received treatment, showed a statistically significant improvement compared to the waitlist control group, which did not. The program's focus on writing about the details of the traumatic event may have contributed to the reduction in depression within the experimental group. Naming and expressing emotions experienced during the event helps reduce negative emotions when re-experiencing trauma, thereby contributing to the reduction of depression (Pennebaker & Beall, 1986). These results are consistent with studies reporting that WET reduces depressive symptoms in individuals with PTSD (Morissette et al., 2023; Park et al., 2021; Sloan et al., 2012, 2013, 2018; Yun & Lee, 2022), as well as with studies confirming the effectiveness of writing programs as an intervention for depression (Lee & Lee, 2023; Park, 2023).

Third, the revised WET program was effective in promoting posttraumatic growth among individuals with interpersonal trauma. The experimental group, which received treatment, showed a statistically significant improvement compared to the waitlist

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control group, which did not. This result is consistent with studies suggesting that expressive writing has a positive impact on posttraumatic growth (Gebler & Maercker, 2007; Hussain, 2010). Based on research emphasizing the importance of meaning exploration and meaning-making processes in expressive writing for posttraumatic growth (Zheng et al., 2019), the intervention during the writing exposure phase of this program, which encouraged participants to explore how their trauma experiences impacted their lives and their meaning, may have contributed to the promotion of posttraumatic growth. Furthermore, the final eighth session helped clients maximize and integrate their psychological resources. Consequently, positive self-evaluation was fostered and coping abilities for trauma were enhanced, leading to further facilitation of posttraumatic growth.

Through therapeutic exposure in the writing phase, the revised WET program may have promoted posttraumatic growth by helping participants discover their strength, value their relationships with others, and realize new possibilities in life. This study offers several clinically relevant contributions to therapeutic interventions for PTSD. First, this study developed an enhanced WET program by integrating empirical evidence and expert evaluations. As difficulties with emotional expression are common among Koreans, the program expands the WET program to include additional sessions addressing emotional recognition and expression, thereby providing appropriate therapeutic exposure for the Korean context. Second, this study demonstrated the efficacy of the revised WET program on PTSD, depression, and posttraumatic growth in individuals with interpersonal trauma experiences. Furthermore, these effects were sustained at follow-up after four weeks. Third, the revised WET program has the potential to be used as a therapeutic tool for clients who have experienced trauma.

The limitations and suggestions of this study are as follows. First, the participants comprised 10 individuals in the experimental group and 10 in the waitlist control group, all aged between 20 and 40 years, and residing in Cheonan and Asan. Given this narrow demographic scope, it is difficult to expect the same results if the WET program is applied to adults of different ages or from other regions. Therefore, future studies should expand the sample size and recruit a more diverse population in terms of age, region, and gender to enhance the validity of the program's effectiveness. Second, participants were selected based solely on the presence or absence of interpersonal trauma and excluded individuals with overlapping trauma experiences. Future research should conduct studies that account for overlapping trauma, severity of distress, and different types of trauma while also implementing diverse intervention strategies. Third, this study only compared experimental and waitlist control groups. Future research should include additional comparison groups to identify program-specific change factors and clarify the therapeutic advantages of the revised WET program. Finally, the follow-up assessment was conducted four weeks after the program, allowing only an evaluation of the program's short-term maintenance effects. Therefore, to more thoroughly analyze the sustained effects of the program, longer-term follow-up assessments and repeated validation studies are recommended.

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Author contributions statement

Jungyoon Kim, M.A. in Psychology, Dankook University, designed the study and conducted the data analysis and manuscript preparation. Seungho Lee, Ph.D. student in the Department of Psychology, Dankook University, provided additional revision and feedback during manuscript development. Sung-Man Bae, Department of Psychology and Psychotherapy, College of Health Science, Dankook University, edited and revised the manuscript, supervised the final version of the paper. All authors provided critical feedback, participated in the revision of the manuscript, and approved the final submission.

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