



Effectiveness of Trauma Therapy and EMDR in Patients with Psychiatric Illness in Northeastern Thailand

Nawanant Piyavhatkul^{1,2*}, Suchat Paholpak^{1,2} and Wallapa Boonpromma³

¹ Department of Psychiatry, Faculty of Medicine, Khon Kaen University, Khon Kaen Thailand

² Brain and Mind Wellness Research Group, Khon Kaen University, Khon Kaen, Thailand

³ Khon Kaen Hospital, Khon Kaen, Thailand

*Corresponding e-mail: nawanant@kku.ac.th

ABSTRACT

Objectives: To study the efficacy, process, and related factors in trauma therapy among patients with psychiatric illness in general hospitals in Northeastern Thailand. **Methods:** This was a cross-sectional descriptive study that analyzed questionnaires and medical records on identification data, diagnosis, coping with adverse events, traumatic events, psychological symptoms, therapeutic process, and the results of psychiatric trauma therapy at Srinagarind and Khon Kaen Hospitals. Anxiety, depressive symptoms, and trauma-related symptoms were assessed pre- and post-treatment using the Hopkins Symptom Checklist [HSCL-25] and the Harvard Trauma Questionnaire. The data were analyzed for percentages, median, means, standard deviations, chi-square, t-test, and one-way ANOVAs. **Results:** There were 52 females and 12 males included. Complete assessments were done for 25 patients and the HSCL-25 and HTQ scores decreased significantly after the therapy. The respective number of eye movement desensitization and reprocessing [EMDR] sessions was significantly correlated with the baseline HSCL-25 and HTQ scores [i.e., Pearson correlation 0.49 and 0.44, $p=0.012$ and 0.028 , respectively] and also correlated with overall improvement in HTQ scores and the cognitive symptoms subscale scores of HTQ [Pearson correlation 0.40 and 0.49, $p=0.045$ and 0.013 , respectively]. **Conclusion:** Trauma therapy is effective in reducing anxiety, and depressive and trauma-related symptoms in psychiatric patients. The number of EMDR sessions is correlated with overall improvements in HTQ scores as well as the cognitive symptoms subscale scores of HTQ.

Keywords: Trauma therapy, EMDR, Eye movement desensitization and reprocessing, Mental illness

INTRODUCTION

Psychological trauma can cause psychiatric illness-classified in the stress-related disorders group and is associated with other types of psychiatric illness [1-4]. Many psychiatric patients report traumatic events in childhood. For example, childhood exposure to violence in the community or physical abuse by the caretaker is correlated with mood disorders ($p=0.012$), especially bipolar disorder [5]. Exposure to sexual or interpersonal violence is correlated with suicide attempts [6], and experience of sexual violence and witnessing violence are significant predictors of lifetime suicide attempts [7]. Psychological trauma is associated with some physical diseases such as diabetes, arthritis, gastrointestinal disease, cardiovascular disease, and functional somatic syndrome [8,9]. Psychological trauma affects reasonable mastery, caring attachment, and a meaningful goal or life purpose [10]. For that reason, psychological interventions are necessary to heal the sufferer from psychological trauma and to prevent other psychological sequelae and complications.

Empirical evidence shows that eye movement desensitization and reprocessing (EMDR) and trauma-focused cognitive behavioral therapy (TFCBT) are more effective than other kinds of therapies for patients suffering psychological trauma in post-traumatic stress disorder [11]. The therapeutic process needs to balance between the confrontation (processing the traumatic material) and the containment [12]. The widely accepted guideline proposed by Van de Kolk, et al., [13].

Stabilization

Careful preparation enables the patient to deal with the challenge of confronting the trauma through establishing stability and safety in daily life, including social support, stress inoculation, learning ways of controlling symptoms, ways of containing intrusive memories, and psychopharmacological management.

Identification of Feelings by the Verbalizing Somatic States

Traumatized people are unable to interpret the meaning of their emotional arousal and feelings, so become endowed with a negative valence, wherein emotions become reminders of one's inability to affect the outcome of life events. They are unable to neutralize effects with adaptive action and tend to somatize or to discharge their emotions with aggressive actions against self or others. The way to resolve this is helping them through the integrating process by (a) staying with the patient through his/her suffering, (b) providing a perspective that the suffering is meaningful and bearable, and (c) helping to gain mastery over the trauma by putting the experience into a symbolic, communicable form (i.e., words, thoughts, and feelings).

Deconditioning of Traumatic Memories and Responses

Therapy needs to have controlled activation of traumatic memories, and to correct faulty traumatic beliefs by enabling the capacity to flexibly remember the trauma in a trusted therapeutic relationship and a safe environment. The patient must attend to fear-relevant information to activate his/her own fear memory, while some of the information that evokes the fear must be absent in the new context in which the fear is being provoked. When the patient transforms the traumatic memory into a new personal narrative, the trauma is experienced as a historical event as it was part of an autobiography. Exposure of all elements of the trauma and their associated shifts in perception of self (and others) leads to successful resolution of trauma-related symptoms.

Restructuring of Trauma-related Schemes of Internal and External Reality

Traumatic experience activates latent self-concepts and views of relationships formed earlier in life. These latent schemes affect the psychological organization of the traumatic experience, competing with more adaptive schemes. The treatment needs to address the effects of the trauma on their perceptions of self, others, and the world around them; in order to modify or accommodate their view of self and others. This approach permits adaptive action and continued attention to the exigencies of daily life, and enables them to view the traumatic experience as an event that has taken place at a particular time and place, and not to generalize it to represent the totality of his/her existence. Psychotherapy needs to address how the trauma has affected the person's sense of self-efficacy, his/her capacity for trust and intimacy, ability to negotiate personal needs, and ability to empathize.

Exposure to Restitutive Experiences

The patients need to actively expose themselves to experiences that provide them with feelings of mastery and pleasure. Engagement in physical activities that are not contaminated by the trauma can help to build up the person, and serve as a core of new gratifying experiences.

To deconditioning the traumatic memories and responses and restructuring the trauma-related schemes, we used the 8 phases of EMDR therapy [14]. Phases 1 (history taking) and 2 (preparation) were in the stabilization phase. Phase 3 (assessment) was the identification of feelings by verbalizing somatic states. Phases 4 through 8 (including desensitization, installation, body scan, closure, and re-evaluation, respectively) were designed to decondition traumatic memories and responses and to restructure trauma-related schemes of internal and external reality. Exposure to restitutive experiences occurs in both the preparation phases and is integrated throughout the therapy.

Most of the research in traumatized patients have been done with patients with post-traumatic stress disorder [11]. Since there has been no study of trauma therapy in Thailand, our study will reveal the (a) psychiatric diagnosis of traumatized patients, (b) types of traumatic experience, (c) process of therapy, and (d) results of therapy that would be beneficial to general psychiatric patients with prior traumatic experience.

Objectives

To study the clinical outcomes of trauma therapy in psychiatric patients who attended psychiatric services at two hospitals in Northeastern Thailand. The secondary outcomes include the therapeutic process and the factors associated with therapeutic results.

MATERIALS AND METHODS

This was a retrospective study. Data were collected from the trauma questionnaire for adults which was a part of the International Humanitarian Mekong Project supported by Trauma-Aid Humanitarian Assistance Program Germany

[TA-HAP Germany]. The subjects were psychiatric patients who received trauma therapy at either Srinagarind Hospital or Khon Kaen Hospital between January 1, 2011, and December 31, 2013, both hospitals were located in Khon Kaen province, Northeastern Thailand.

The inclusion criteria were:

- Live in Northeastern Thailand
- Agree to participate in the therapy program
- Have completed the trauma questionnaire for adults prior to the therapy
- The symptoms were stable enough to participate in the therapy

The exclusion criteria were:

- Live in another region of Thailand
- Did not complete the trauma questionnaire for adults prior to therapy

The information about identification data, resources, stressors, coping with stressors, traumatic experience were collected before the therapeutic process began. The effectiveness of the therapy was assessed using the Hopkins Symptom Checklist (HSCL-25) and the Harvard Trauma Questionnaire prior to, and after, therapy. Therapy was conducted according to Van de Kolk, et al., using the 8 phase's protocol of EMDR therapy [13].

During the stabilization phase, the therapist completed a comprehensive history taking and used stabilization techniques to prepare patients for the trauma confrontation. The therapists proceeded to phases 4 through 8 if the patient was stable enough to face the trauma confrontation. The therapy was terminated when the symptoms were reduced and the patient was functioning well in their life.

Descriptive statistics were used to analyze the identification of data, resources, stressors, coping with stressors, traumatic experience, number of sessions and techniques. The association and difference between groups were analyzed using chi-square and ANOVA. The effectiveness of the therapy and associated factors were analyzed using paired t-test and correlation coefficient.

RESULTS

There were 66 subjects (14 males and 42 females) included in the study. The subjects were between 18 and 59 years of age (average 33.9; SD 11.15). The majority of subjects were in school or universities (24.2%), single (48.5%), had a bachelor degree or higher (71.2%). The mean number of sessions was 9.42 (SD 12.02; median 5). The general information on the subjects is shown in Table 1.

Table 1 Demographic data of the subjects

| Variables | n | % |
|--------------------------------|----|-------|
| Sex | | |
| Female | 52 | 78.8% |
| Male | 14 | 21.2% |
| Occupation | | |
| Business owner | 9 | 13.6% |
| Employee in the private sector | 3 | 4.5% |
| Government employee | 12 | 18.2% |
| Teacher | 12 | 18.2% |
| Student | 16 | 24.2% |
| Housewife | 6 | 9.1% |
| Priest | 1 | 1.5% |
| Unemployed | 3 | 4.5% |
| Marital status | | |
| Single | 32 | 48.5% |
| Married | 28 | 42.4% |

| | | |
|---|----|-------|
| Separation | 3 | 4.5% |
| Divorced | 2 | 3.0% |
| Widowed | 1 | 1.5% |
| Education | | |
| unknown | 1 | 1.5% |
| Elementary school (6 years in school or less) | 5 | 7.6% |
| Secondary school (6-12 years in school) | 13 | 19.6% |
| Bachelor degree or higher | 47 | 71.2% |

The age of the patients and the respective number of sessions are presented in Table 2.

Table 2 General information of the subjects

| Variables | mean | SD |
|----------------------|------------------|-------|
| Age (years) | | |
| Male (18-51) | 28.21 | 9.34 |
| Female (18-59) | 35.37 | 11.19 |
| Total | 33.85 | 11.15 |
| Total session | | |
| Male (1-21) | 6.5 (median=4) | 5.06 |
| Female (1-81) | 10.21 (median=6) | 13.22 |
| Total | 9.42 (median=5) | 12.02 |

The majority of the patients talked to friends or relatives as a way of coping with stressors. Most of the patients consulted a mental health professional and many tried to forget the traumatic event(s). The coping methods least used were consulting a religious specialist or traditional healer (Table 3).

Table 3 Coping strategy to the stressors of the subjects

| Coping with stressors | n | % |
|---|----|-------|
| Talk to somebody | 64 | 97.0% |
| Talk to friends or family members | 58 | 87.9% |
| Consult the traditional healers | 9 | 13.6% |
| Consult the medical doctor | 30 | 45.5% |
| Consult the mental health professionals | 55 | 85.3% |
| Consult the religious leaders | 28 | 42.4% |
| Pray | 37 | 56.1% |
| Play sports | 41 | 62.1% |
| Try to forget | 43 | 65.2% |

Most of the patients had a primary diagnosis in the stress-related disorders group (45.4%), the most prevalent being post-traumatic stress disorder (22.7%). When comorbidities were considered, the prevalence of mood disorders equaled stress-related disorders (Table 4).

Table 4 Diagnosis of the subjects

| Diagnosis | Primary diagnosis | | | | Any diagnosis | | |
|---------------------------------|-------------------|--------|----|-------|---------------|-------|--------------|
| | Male | Female | n | % | n | % | % (in group) |
| Stress-Related Disorders | | | | | | | |
| Acute stress reaction | 0 | 2 | 2 | 3.0% | 2 | 3.0% | 45.4% |
| PTSD | 2 | 13 | 15 | 22.7% | 15 | 22.7% | |
| Complex PTSD ¹ | 0 | 4 | 4 | 6.1% | 4 | 6.1% | |
| Adjustment disorder | 4 | 5 | 9 | 13.6% | 9 | 13.6% | |
| Mood Disorders | | | | | | | |
| Major depressive disorder | 2 | 7 | 9 | 13.6% | 12 | 18.2% | 45.4% |
| Dysthymia | 2 | 4 | 6 | 9.1% | 10 | 15.5% | |
| Bipolar disorder ² | 0 | 8 | 8 | 12.1% | 8 | 12.1% | |
| Anxiety Disorders | | | | | | | |

| | | | | | | | |
|---|---|---|---|------|---|------|-------|
| Generalized anxiety disorder | 0 | 2 | 2 | 3.0% | 2 | 3.0% | 16.5% |
| Panic disorder | 0 | 2 | 2 | 3.0% | 2 | 3.0% | |
| Phobia | 1 | 1 | 2 | 3.0% | 2 | 3.0% | |
| Obsessive compulsive disorder | 2 | 1 | 3 | 4.5% | 3 | 4.5% | |
| Mixed anxiety and depression ³ | 1 | 0 | 1 | 1.5% | 2 | 3.0% | |
| Others | | | | | | | |
| Pathological gambling | 0 | 1 | 1 | 1.5% | 1 | 1.5% | 6.1% |
| Dissociative disorder | 0 | 1 | 1 | 1.5% | 1 | 1.5% | |
| Pain disorder | 0 | 1 | 1 | 1.5% | 1 | 1.5% | |
| Undifferentiated somatoform disorder | 0 | 0 | 0 | 0.0% | 1 | 1.5% | |

1: Disorder of extreme stress NOS, 2: Depressive episode, 3: Anxiety disorder NOS

The majority of patients experienced domestic violence or accidents (60.6%). The domestic violence included witnessing the destruction of family property, being beaten, witnessing beating and being raped, (45.5%, 36.4%, 33.3%, 4.5% respectively). The sexual assault outside the family context was reported by 21.1% of patients. The types of traumatic experience are presented in Table 5.

Table 5 Type of the traumatic events

| Domestic violence | n | % |
|---|----------|----------|
| Overall | 40 | 60.6% |
| Rape in a family context | 3 | 4.5% |
| Witnessing the properties destroyed in the violence | 30 | 45.5% |
| Beaten in family | 24 | 36.4% |
| Witness the family members beaten | 22 | 33.3% |
| Neglected child | 8 | 12.1% |
| Traffic | 3 | 4.5% |
| Sexual assault outside the family context | 14 | 21.2% |
| Rape outside the family context | 10 | 15.1% |
| Witness rape | 2 | 3.0% |
| War | 3 | 4.5% |
| Refugee | 2 | 3.0% |
| Accident | 40 | 60.6% |
| Robbery | 10 | 15.2% |

The types of trauma experienced in the past were not correlated with HSCL scores or HTQ. Childhood traumatic experience, family related trauma, and sexual assaults were the respective primary traumatic experience in 18.0%, 15.2%, 12.1% of patients (Table 6).

Table 6 Traumatic event that brings the subjects to the therapy

| Trauma | n | % |
|------------------------------------|----------|----------|
| Child Abuse | | |
| Child emotional abuse | 7 | 10.6% |
| Child physical abuse | 4 | 6.1% |
| Child neglect | 4 | 6.1% |
| Child emotional and physical abuse | 3 | 4.5% |
| Total | 12 | 18.0% |
| Marital and Family Problems | | |
| Family discord | 2 | 3.0% |
| Marital breakdown | 1 | 1.5% |
| Extramarital affair of a spouse | 2 | 3.0% |
| Domestic violence | 5 | 7.6% |
| Total | 10 | 15.2% |
| Accidents | | |
| Traffic accidents | 3 | 4.5% |

| | | |
|------------------------------------|---|-------|
| Other accidents | 4 | 6.1% |
| Total | 7 | 10.6% |
| Others | | |
| Sexual assault (Rape) | 8 | 12.1% |
| Emotional trauma/guilt/humiliation | 6 | 9.1% |
| Academic failure | 4 | 6.1% |
| Death of loved one | 5 | 7.6% |
| Others | 8 | 12.1% |

Stabilization techniques were used in all cases. The rank of commonly used stabilization techniques was a safe place, grounding, and psycho-education (95.5%, 93.9%, 77.3% of cases and 61.9%, 81.8%, 34.7% of sessions, respectively). Trauma confrontation techniques were used for 54 patients (81.8%); the most common being the standard EMDR protocol and the absorption technique (74.2% and 51.5% of cases and 39.1% and 10.9% of sessions, respectively). The techniques used in the therapy are presented in Table 7.

Table 7 Techniques used in trauma therapy

| Techniques | Case | | Sessions | |
|--------------------------------|------|--------|----------|---------|
| | n | % | n | % |
| Resource and trauma map | 35 | 53.0% | 44 | 7.07% |
| Container | 28 | 43.0% | 43 | 6.91% |
| framing | 1 | 1.5% | 1 | 0.16% |
| Grounding | 62 | 93.9% | 509 | 81.83% |
| Inner conference | 8 | 12.1% | 45 | 7.23% |
| Inner helper | 18 | 27.3% | 28 | 4.50% |
| Light stream | 2 | 3.0% | 5 | 0.80% |
| Point of power | 6 | 9.0% | 9 | 1.45% |
| Psychoeducation | 51 | 77.3% | 216 | 34.72% |
| Remote control | 31 | 47.0% | 44 | 7.07% |
| Resource activation | 23 | 34.8% | 56 | 9.00% |
| Safe place | 63 | 95.5% | 380 | 61.09% |
| Other stabilization techniques | 31 | 53.0% | 225 | 36.17% |
| Absorption technique | 34 | 51.5% | 64 | 10.29% |
| Inverted EMDR protocol | 3 | 4.5% | 4 | 0.64% |
| CIPOS | 4 | 6.0% | 7 | 1.13% |
| Screen technique | 8 | 12.1% | 9 | 1.45% |
| Standard EMDR protocol | 49 | 74.2% | 243 | 39.07% |
| Inner child | 4 | 6.0% | 12 | 1.93% |
| Total stabilization techniques | 66 | 100.0% | 622 | 100.00% |
| Total confrontation techniques | 54 | 81.8% | 296 | 47.59% |
| Total | 66 | 100.0% | 622 | 100.00% |

Of the 66 patients, 25 were assessed after therapy. The patients that complete the therapy were younger, received more EMDR and total sessions than those that dropped out (Table 8).

Table 8 Comparing baseline data between the patient with and without second measurement*

| Measurement | Questionnaire A only | | Questionnaire A and B | | 95% confident interval | | p-value [2-tailed] |
|--------------------|----------------------|-------|-----------------------|-------|------------------------|-------|--------------------|
| | Mean | SD | Mean | SD | Lower | Upper | |
| Age | 31.59 | 10.59 | 37.56 | 11.27 | -11.47 | -0.48 | 0.034* |
| Level of stressors | 31.88 | 5.57 | 33.56 | 5.06 | -4.41 | 1.05 | 0.223 |
| Total session | 4.83 | 5.07 | 16.96 | 19.92 | -17.47 | -6.79 | 0.000* |
| EMDR sessions | 2.39 | 2.67 | 7.92 | 6.54 | -8.03 | -3.02 | 0.000* |
| HA | 2.49 | 0.76 | 2.38 | 0.82 | -0.29 | 0.51 | 0.581 |

| | | | | | | | |
|---------|------|------|------|------|-------|------|-------|
| HD | 2.65 | 0.79 | 2.82 | 0.73 | -0.56 | 0.22 | 0.389 |
| Harvard | 2.38 | 0.61 | 2.51 | 0.61 | -0.44 | 0.18 | 0.417 |

*Statistical difference between two groups at $p < 0.05$

There was no statistically significant difference in sex, baseline stressor levels, occupation, diagnostic groups, primary trauma, HSCL, or HTQ scores between the group that completed therapy and those that dropped out (Tables 9 and 10).

Table 9 Comparing main traumatic event between the patient with and without second measurement

| Variables | Questionnaire A only | | Questionnaire A and B | |
|-----------------------------|----------------------|-------|-----------------------|-------|
| | n | % | n | % |
| Child abuse | 9 | 22.0% | 9 | 36.0% |
| Marital and family problems | 7 | 17.1% | 3 | 12.0% |
| Sexual Assault | 6 | 14.6% | 2 | 8.0% |
| Emotional trauma | 6 | 14.6% | 3 | 12.0% |
| Accidents | 3 | 7.3% | 4 | 16.0% |
| Others | 6 | 14.6% | 4 | 16.0% |

*No statistical difference between two groups at $p < 0.05$

Table 10 Comparing primary diagnosis between the patient with and without second measurement

| Diagnosis | Questionnaire A | | Questionnaire A and B | |
|---|-----------------|-------|-----------------------|--------|
| | n | % | n | % |
| Stress-Related Disorders | | | | |
| Acute stress reaction | 2 | 4.9% | 0 | 0.0% |
| PTSD | 6 | 14.6% | 9 | 36.0% |
| Complex PTSD ¹ | 2 | 4.9% | 2 | 8.0% |
| Adjustment disorder | 7 | 17.1% | 2 | 8.0% |
| Mood Disorders | | | | |
| Major depressive disorder | 8 | 19.5% | 1 | 4.0% |
| Dysthymia | 3 | 7.3% | 3 | 12.0% |
| Bipolar disorder ² | 6 | 14.6% | 2 | 8.0% |
| Anxiety Disorders | | | | |
| Generalized anxiety disorder | 1 | 2.4% | 1 | 4.0% |
| Panic disorder | 1 | 2.4% | 1 | 4.0% |
| Phobia | 1 | 2.4% | 1 | 4.0% |
| Obsessive compulsive disorder | 1 | 2.4% | 2 | 8.0% |
| Mixed anxiety and depression ³ | 1 | 2.4% | 0 | 0.0% |
| Others | | | | |
| Pathological gambling | 0 | 0 | 1 | 4.0% |
| Dissociative disorder | 1 | 2.4 | 0 | 0.0% |
| Pain disorder | 1 | 2.4 | 0 | 0.0% |
| Total | 41 | 100 | 25 | 100.0% |

*No statistical difference between two groups at $p < 0.05$; 1: Disorder of extreme stress NOS; 2: depressive episode, 3: Anxiety disorder NOS

The scores of HSCL and HTQ were decreased significantly after the trauma therapy in all subtests (Table 11).

Table 11 Comparing the levels of anxiety, depressive and post-traumatic stress disorders symptoms at baseline and after the therapy

| Variables | Mean difference | SD | 95% confidence interval | | p-value [2-tailed] |
|-----------------|-----------------|-------|-------------------------|-------|--------------------|
| | | | Lower | Upper | |
| HSCL anxiety | 0.640 | 0.590 | 0.396 | 0.884 | 0.000 |
| HSCL depression | 0.939 | 0.697 | 0.651 | 1.226 | 0.000 |
| HTQ | 0.744 | 0.577 | 0.506 | 0.982 | 0.000 |
| HTQ DSM-IV | 0.812 | 0.650 | 0.544 | 1.081 | 0.000 |

| | | | | | |
|------------------------|-------|-------|-------|-------|-------|
| HTQ somatic symptom | 0.533 | 0.198 | 0.124 | 0.942 | 0.013 |
| HTQ intrusive symptoms | 0.990 | 0.974 | 0.587 | 1.392 | 0.000 |
| HTQ avoidance symptoms | 0.740 | 1.165 | 0.259 | 1.221 | 0.004 |
| HTQ cognitive symptoms | 0.728 | 0.678 | 0.448 | 1.008 | 0.000 |
| HTQ arousal symptoms | 0.784 | 0.748 | 0.475 | 1.092 | 0.000 |

The respective number of EMDR sessions was significantly correlated with baseline HSCL depressive and HTQ scores (Pearson correlation=0.49 and 0.44, $p=0.012$ and 0.028) and improvement of the HTQ overall and HTQ cognitive symptoms scores (Pearson correlation 0.40 and 0.49, $p=0.045$ and 0.013 , respectively). The respective number of overall sessions was significantly correlated with the baseline HSCL depressive scores (Pearson correlation=0.49, $p=0.028$) but was not significantly correlated with improvement of the HSCL and HTQ scores.

Post-hoc analysis revealed that patients with a diagnosis of a stress-related or mood disorder have a higher depressive score on the HSCL, a higher respective score on the somatic and cognition symptoms parts of the HTQ than the “others” diagnosis. Patients with a diagnosis of a stress-related disorder have higher hyperarousal scores on the HTQ part than those with an anxiety disorder and/or “others” diagnosis. The types of trauma that patients experienced in the past were not correlated with scores on the HSCL and HTQ.

DISCUSSION

Diagnoses leading to being treated with trauma therapy techniques were mostly stress-related disorder (45.4%), mood disorder (45.4%), and anxiety disorders (16.5%). The most frequent diagnosis in the stress-related disorders group was PTSD (22.7%) followed by major depressive disorder (18.2%). Patients with bipolar disorder treated by trauma therapy were all in the midst of a depressive episode. Within the anxiety disorder group, the diagnoses that led to trauma therapy treatment were nearly equally distributed among generalized anxiety disorder, panic disorder, phobias, obsessive-compulsive disorders, and mixed anxiety and depression.

The post-traumatic events that most predispose a patient to a psychiatric illness needing trauma therapy techniques were domestic violence, accidents, and sexual assault. Some patients had more than one traumatic experience and some had multiple occasions of the same traumatic event. Childhood abuse was a major trauma that led patients to need therapy. The optimum result was achieved when EMDR techniques helped patients to integrate and have adaptive information processing of the traumatic memories. Essentially, the patient is able to narrate the post-traumatic experience with a new calm, acceptance, in the present.

We used interventions that included stabilization techniques for all patients and used confrontation techniques with 54% of them. This may be because of drop-outs prior to completing the treatment. In the group that underwent a second assessment, every case received the standard EMDR protocol.

Psychotherapy treatment with EMDR can decrease the symptoms of PTSD and the concomitant symptoms of depression and anxiety. The result of the current study was comparable with other studies using EMDR for psychiatric disorders. There is some research that shows that EMDR is effective in reducing symptoms in patients with a variety of psychiatric diagnoses. Most of the research reported improvements in the symptoms of post-traumatic stress disorder in children, adolescents, and adults [15-21]. Jowett, et al., reviewed 6 case studies describing EMDR therapy for psychological trauma in patients with intellectual disabilities and found improvement in symptoms with no adverse effects [22]. Mevissen, et al., also reported that EMDR can reduce PTSD symptoms in patients with severe intellectual disabilities [23]. In chronic psychotic patients who have PTSD, de Bont, et al., found that EMDR could reduce the symptoms of PTSD and paranoid thoughts and help the patient to achieve remission of psychoses better than the control subjects [24]. Croes, et al., found that EMDR helped to reduce vividness and emotionality in patients with psychoses [25]. van den Berg and van der Gaag conducted a pilot study in patients with a psychotic disorder with comorbid PTSD and found that short EMDR therapy is effective and safe in subjects with psychotic disorders and that it had a salutary effect on auditory hallucinations, delusions, anxiety symptoms, depressive symptoms, and self-esteem [26,27]. Hase, et al., studied EMDR in treating depressive episodes and found a significant reduction in depressive symptoms and a high full-remission rate [28]. Novo, et al., studied EMDR in traumatized subsyndromal bipolar disorder and found that the EMDR group compared to the group getting the regular treatment had a statistically significant improvement in depressive and hypomanic symptoms, symptoms of trauma, and trauma impact [29]. Landin-Romero, et al., have marked changes in functional imaging [fMRI] of these patients after EMDR therapy and

had clinical improvement [30]. In addition, Perez-Dandieu and Tapia did the pilot study and found that the standard EMDR protocol can treat PTSD symptoms in substance abuse patients and, decrease depressive symptoms [31]. Bae, et al., reported an improvement in gambling symptoms, depression, anxiety and impulsiveness in case series of pathological gambling patients treated with EMDR [32]. In an anxiety disorder, Doering, et al., found that EMDR can reduce dental anxiety, avoidance behavior, and PTSD symptoms in dental phobia [33]. EMDR can also reduce PTSD, depressive and anxiety symptoms in multiple sclerosis patients with PTSD [34]. EMDR can significantly reduce pain intensity in adolescents undergoing surgery, improve pain and psychological indices in chronic pain patients and decrease the mean pain scores in chronic phantom limb pain [35-37].

With the right case formulation and treatment planning, the therapy was able to target post-traumatic events; that were the touchstones of memory connected with the current psychiatric disorder. The psychotherapy was able to integrate the post-traumatic experience into an adaptive circuit, resulting in resolution of the traumatic material. Trauma therapy helped the patient to activate his/her existing resources, installing new resources, and when the patient was stable enough and still need trauma processing-the therapist was able to use the EMDR standard protocol or other trauma confronting techniques to integrate the traumatic material into an adaptive neural network. Finally, the anxiety, depression, and other disturbing symptoms disappeared and healthier functioning emerged. The study illustrated that trauma therapy was an effective treatment for psychiatric patients who were victims of child abuse, domestic violence, family problems (such as trauma-related marital breakdown or family discord), sexual assault, accidents, and emotional trauma. The symptoms of PTSD, anxiety, and depression were reduced to a significant degree.

CONCLUSION

Trauma therapy is an effective treatment for psychiatric patients who were victims of child abuse, domestic violence, family problems, sexual assault, accidents, and emotional trauma. It is effective in reducing anxiety, depressive and trauma-related symptoms. We found that the number of EMDR sessions correlated with overall improvements in HTQ scores, including the cognitive symptoms subscale. The author recommends further study in a randomized control trial in each psychiatric disorder to validate the effectiveness of trauma therapy and EMDR.

DECLARATIONS

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of Khon Kaen University Ethical Committee and with the 1964 Helsinki Declaration and its later amendments. For this type of study formal consent is not required.

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Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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