

**THE EFFECTIVENESS OF EYE MOVEMENT  
DESENSITIZATION AND REPROCESSING (EMDR)  
ON IRAQI CHILD WAR VICTIMS  
WITH POSTTRAUMATIC STRESS DISORDER (PTSD)  
IN BAGHDAD**

by

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## **DEDICATION**

*I dedicate this work to my husband Saqab and my sweet kids Zobaidah and Ahmed.*

*All of them have been an inspiration in my life; their patience and deep abiding love were with me every step of the way.*

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**KEBERKESANAN PENYAHPEKAAN DAN PROSES ULANGAN  
PERGERAKAN MATA (EMDR) BAGI KANAK-KANAK IRAQ MANGSA  
PEPERANGAN YANG MENGALAMI KECELARUAN STRES PASCA-  
TRAUMA (PTSD) DI BAGHDAD  
ABSTRAK**

*Posttraumatic Stress Disorder* (PTSD) ialah suatu kecelaruan kegelisahan yang diakibatkan oleh kejadian trauma dan menyebabkan tiga jenis simptom iaitu mengalami semula, mengelak dan hiper-ransangan. Ramai dalam kalangan kanak-kanak Iraq mengalami simptom trauma oleh sebab peperangan semasa. Mereka banyak mengalami kesakitan dan tekanan; justeru, rawatan yang berkesan untuk kanak-kanak ini amat diperlukan. Salah satu rawatan ialah *Eye Movement Desensitization and Reprocessing* (EMDR) yang telah diperakukan dan disarankan oleh para profesional sebagai suatu rawatan yang terbukti secara empirikal untuk PTSD. Tujuan utama kajian ini adalah untuk mengenal pasti keberkesanan rawatan EMDR bagi mengurangkan simptom-simptom PTSD pada kanak-kanak Iraq. Kajian ini juga bertujuan mengenal pasti korelasi antara simptom-simptom PTSD dan pembolehubah lain seperti umur, jantina dan juga kepercayaan trauma-ikatan ibu bapa. Seramai 300 orang kanak-kanak Iraq yang berumur 7 hingga 12 tahun mengambil bahagian dalam kajian ini. Dalam Fasa 1, simptom-simptom PTSD dalam kalangan kanak-kanak ini dikenal pasti dengan menggunakan UCLA PTSD INDEX untuk DSM-IV (Parent Version, Revision 1) (Rodriguez, Steirnberg, & Pynoos, 1998). Seterusnya dalam Fasa 2, 200 orang ibu bapa mengambil bahagian dalam kajian ini untuk mengenal pasti kepercayaan trauma-ikatan mereka. Dua alat ujian digunakan untuk mengukur reaksi kanak-kanak terhadap EMDR: *Subject Unit Disturbance Scale* (SUD) dan *Validity of Cognition Scale* (VOC). Dalam Fasa 3 pula, 50 orang kanak-kanak yang telah didiagnos dengan PTSD tetapi tidak pernah

menerima apa jua rawatan dibahagikan secara rawak ke dalam 2 kumpulan: kawalan dan eksperimental. Keputusan menunjukkan wujudnya simptom-simptom PTSD yang tinggi (78%) dalam kalangan kanak-kanak Iraq. Tiada korelasi antara simptom-simptom PTSD dengan jantina,  $t(298) = .57, p = .57$  tetapi Pekali Korelasi Pearson dwiperubah  $r = .26 (p < .01)$  menunjukkan terdapatnya korelasi positif antara simptom PTSD dengan umur. Kanak-kanak yang berusia lebih tua mempamerkan lebih banyak simptom PTSD berbanding dengan kanak-kanak berusia muda. Majoriti ibu bapa mempunyai kepercayaan trauma-ikatan yang tinggi; mereka mempunyai gangguan yang signifikan tentang keselamatan, kepercayaan, harga diri, intimasi dan kawalan yang berkaitan dengan simptom-simptom trauma. Keputusan regresi dwiperubah *linear* menunjukkan bahawa terdapat korelasi antara kepercayaan trauma-ikatan ibu bapa dengan simptom-simptom PTSD anak-anak. Analisis pekali regresi *multivariate* telah dijalankan untuk meramal simptom-simptom PTSD dalam kalangan kanak-kanak yang tinggal di Baghdad. Usia kanak-kanak dan kepercayaan *trauma-attachment* ibubapa boleh meramal simptom-simptom PTSD iaitu semakin meningkat umur kanak-kanak dan semakin tinggi kepercayaan ikatan-trauma ibu bapa, maka semakin teruklah simptom PTSD kanak-kanak. Analisa ujian *t* dijalankan untuk menguji perbezaan min untuk simptom-simptom PTSD yang dialami oleh kumpulan eksperimen sebelum menjalankan program EMDR, keputusannya ialah  $t(48) = 6.83, p < .001$ . Kesimpulannya, EMDR berkesan dalam rawatan PTSD dalam kalangan kanak-kanak Iraq. Kajian ini mendapati bahawa ramai kanak-kanak mengalami simptom-simptom PTSD tetapi tidak menerima sebarang rawatan. Justeru, rawatan awal dengan menggunakan kaedah EMDR mungkin boleh membantu mencegah simptom-simptom PTSD dalam kalangan kanak-kanak Iraq supaya mereka boleh memperoleh kesejahteraan dan masa depan yang lebih baik. Ibu bapa, Kementerian

Kesihatan, Kementerian Pendidikan dan kerajaan Iraq harus prihatin dan memberikan komitmen dalam hal penjagaan psikologi sebagai suatu cara untuk membendung reaksi negatif terhadap trauma dalam kalangan kanak-kanak Iraq. Hal ini penting kerana kanak-kanak merupakan peneraju masa hadapan bagi negara Iraq.

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**ABSTRACT**

Posttraumatic stress disorder (PTSD) is an anxiety disorder following a serious traumatic event that causes three clusters of symptoms: re-experiencing, avoidance and hyperarousal for survivors. Many Iraqi children have developed traumatic symptoms following the exposure to the current war. Their lives are filled with pain and distress; hence, there is an acute need to explore an effective treatment for the traumatized children. One such treatment is Eye Movement Desensitization and Reprocessing (EMDR), which is approved and recommended by professionals as an empirically supported method of treatment for PTSD. The primary purpose of the present study was to identify the effectiveness of EMDR in reducing symptoms of PTSD in Iraqi children. Also, it examined the relationships between PTSD symptoms and other variables such as age, gender and parental trauma-attachment beliefs. The participants of the present study were 300 Iraqi children (ages 7-12). UCLA PTSD INDEX for DSM-IV (Parent Version, Revision 1) (Rodriguez et al., 1998) was used to measure PTSD symptoms in Iraqi children. Further, 200 children's parents were recruited to determine their trauma-attachment beliefs in Phase 2. Two instruments were used for assessing children's reactions to EMDR: the Subject Unit Disturbance Scale (SUD) and the Validity of Cognition Scale (VOC). In Phase 3, 50 children who were diagnosed with PTSD but had never received any treatment were divided randomly into two groups: control and experimental. The results showed a high prevalence of PTSD symptoms (78%) among the child participants. There was no

correlation between PTSD symptoms and gender,  $t(298) = .57, p = .57$ , but a two-tailed bivariate Pearson's Correlation test ( $r = .26, p < .01$ ) indicated there was a correlation between PTSD symptoms and age: Older children showed more PTSD symptoms than younger children. Iraqi parents had high trauma-attachment beliefs; they manifested significant disruptions with regard to safety, trust, esteem, intimacy, and control vis-à-vis trauma symptoms. Bivariate linear regression revealed a significant correlation between parental trauma-attachment beliefs and PTSD symptoms. Multivariate regression analysis was conducted to predict PTSD symptoms among children who were living in Baghdad. Results showed that children's age and parental trauma-attachment beliefs could predict PTSD symptoms: the older the child and the higher the parental attachment beliefs, the more severe the child's PTSD symptoms. Finally,  $t$ -test was utilized to test differences in means of PTSD symptoms for the experimental group before the EMDR program. The result showed that EMDR was effective in treating PTSD symptoms in children [  $t(48) = 6.83, p < .001$  ]. The present study found that many children suffered from PTSD symptoms without being treated. Also, an early treatment using EMDR might prevent Iraqi children from developing PTSD symptoms and might lead to better well-being and a better future for them. Iraqi parents, the Health Ministry, the Education Ministry and the government must give due interest and commitment to psychological care as a pathway to containing negative reactions to trauma among children. This is crucial as children represent the future of Iraq.

# CHAPTER 1

## INTRODUCTION

### 1.0 Overview

Post-traumatic stress disorder (PTSD) is the development of characteristic symptoms following exposure to an extreme traumatic stressor involving direct personal experience of an event (APA, 2005). After the invasion of Iraq in 2003, many Iraqi children developed characteristic symptoms following exposure to an extreme traumatic stressor involving direct personal experience of war. The lives of Iraqi children who are survivors of traumatic events are filled with pain and distress.

There is a need to look beyond the symptoms of PTSD in Iraqi children and to find an effective treatment for them. One such treatment is Eye Movement Desensitization and Reprocessing (EMDR), which is now approved and recommended by a variety of independent reviews by academics and professionals as an empirically supported method of treatment for PTSD (Bleich, 2002).

This study investigated the prevalence of PTSD among Iraqi children age 7-12 and focused on the relationship between symptoms of PTSD and age, gender, and parental beliefs. This information could be used to develop treatment plans in EMDR. The present study also examined whether Eye Movement Desensitization and Reprocessing (EMDR) can be used as an effective method to treat Iraqi children with PTSD.

## 1.1 Iraq and the Current War

Republic of Iraq is a country located in Western Asia. Baghdad is the capital of Iraq. The population is 25.39 million. Throughout the past three decades, there have been a growing number of refugees fleeing Iraq and settling throughout the world, peaking recently with the latest invasion of Iraq by USA in 2003. The Iran-Iraq war from 1980 to 1988, the 1990 Iraq invasion of Kuwait, the first Gulf war and other subsequent conflicts all resulted in hundreds of thousands if not millions of refugees (Bacon & Younes, 2009).

There are different ethnic and religious groups in Iraq. The religious groups are varied and consist mainly of Shi'i and Sunni Muslims in the center around Baghdad. After the 2003 invasion of Iraq, according to Cordesman (2006), the Arab-Sunni faction and the Arab-Shi'ite are the main two participants in the violence in Iraq. However, there have been conflicts within each group too. Sunni-Shiite violence in Iraq continues, during which Iran assists the Shi'ites, whereas Arab nations help the Sunnis.

The bomb aimed at civilians attacks during and after invasion usually target crowded places such as marketplaces and mosques in the Shi'ite cities and districts. The bombings, which are sometimes coordinated, often inflict extreme casualties. Some analysts suspect that the aim of these attacks is to show chaos and sectarian discord. The attacks on non-military and civilian targets began in earnest in August 2003, and Iraqi casualties have increased since then (Cordesman, 2006).

On January 28, 2008, Opinion Research Business (ORB) published an update based on additional work carried out in rural areas of Iraq. Some 600 additional interviews were undertaken and as a result of this; the death estimate was revised to 1,033,000 with a given range of 946,000 to 1,120,000 (Opinion Research Business, 2008).

Humanitarian situation in most of the country remains among the most critical in the world. Thousands of Iraqis have been killed, injured, and have relatives who are sick, injured or detained, or who have been forced to flee their homes, often to move to another region or to leave the country altogether. As a result, many Iraqis have developed symptoms of posttraumatic stress disorder.

## **1.2 War Trauma and Children**

In the last 60 years there have been over 200 wars and armed conflicts, in which the main targets were often marginalized ethnic groups and the poorest sectors in different societies in the world. Though it is well-known that violent conflicts have a great impact on individuals, communities, and/or specific ethnic groups, little and not enough attention has been paid on studying the local patterns of distress, long-term impact on health and their psychosocial consequences on individuals (Kienzler, 2008). However, in the last three decades, there have been some significant studies focusing on the phenomenology and prevalence of post-traumatic stress disorders (PTSD) of at risk groups of children from different

ethnicities and cultures all over the world (Green, Grace, Vary, Kramer, Gleser, & Leonard, 1994; Kinzie, Sack, Angel, Mnsion, & Rath, 1996).

As a result of war, children see and experience real violence as well as the threat of violence. Both violence and the fear of violence have their negative effect on development because they debilitate people. As a result of this, children may become aggressors themselves; countries may enlist young people as their enemies (Dodge, 1991). Children in war zones and areas may have the experience of hatred strong enough to lead to destruction, murder, rape, and torture. The moral development of children who witness such violence can be severely affected (Garbarino, Kostely, & Dubrow, 1998). Post-traumatic stress disorder (PTSD) is another result of living in war-torn regions, and the major sources for post-traumatic stress disorder include the reaction to catastrophic situations, such as witnessing lifeless corpse and combat (Beckham, Moore, Feldman, Hertzberg, Kirby, & Fairbank, 1998; Crowson, Frueh, Beidel, & Turner, 1998; Dahl, Mutapcic, & Schei, 1998; Keane, 1998; Lee, Vaillant, & Torrey, 1995; Marshall, Jorm, Grayson, & Toole, 1998; Scenger, Fairbank, Jordan, & Caddell, 1999).

Kira (1999) found Iraqi refugee children and their families who settled in the United States had PTSD after being exposed to the Gulf war. Wadaa and Mohd Zaharim (2008) showed that 19.6% of Iraqi children are still suffering from PTSD despite having resettled in a new, safe land. In addition, Elebedour, Bensel and Maruyama (1993) found that Palestinian and Israeli-Arab children from Gaza, Israel, and West Bank suffered high levels of PTSD.

The psychological effects of war can be serious. As in all modern wars, the civilians are the main victims of the latest wars in Middle East. There is an accumulated knowledge about the children's responses to air raids bombardment, shelling, loss of family members, being targeted and witnessing killing and destruction (Qouta, El-Sarraj, & Punamaki, 2003). Such accumulated knowledge involves studies on acute responses during the two world wars (Brander, 1941; Freud & Burlingham, 1943), mental health of Middle Eastern children during military attacks (Baker, 1990; Bryce & Walker, 1986, Macksoud & Aber, 1996; Milgram & Milgram, 1976; Saigh, 1991; Zive & Israeli, 1973), as well as military violence and persecution in Africa (Cliff, 1993; Dawes, 1992).

### **1.3 Eye Movement Desensitization and Reprocessing: Treatment Method for PTSD**

Eye Movement Desensitization and Reprocessing (EMDR) integrates elements of several effective psychotherapies in structured protocols that are designed to maximize treatment effects. These include psychodynamic, cognitive behavioral, interpersonal, experiential and body-centered therapies and non-hypnosis psychotherapy procedure (Shapiro, 1989a; 1989b).

EMDR is an information processing therapy, in which an eight-phase approach is used for treatment of PTSD (Shapiro, 1997). During the sessions of EMDR, the client is asked to attend to two types of experience: past and present in brief sequential doses while simultaneously focusing on an external stimulus. Then the client is given instructions to let new material become the focus of the next set of

dual attention. This sequence of dual attention and personal association is repeated many times in the session of EMDR (Shapiro, 2002).

Also, EMDR works with memory network and enhances information processing by linking the distressing memory with more adaptive information contained in other memory networks. It is thought that the distressing memory is transformed when associated with more positive and realistic information. This results in a transformation of the emotional, sensory, and cognitive components of the memory. So, when memory is accessed, the individual is no longer distressed (Maxfield, 2003).

Shapiro suggests that EMDR, as a brief therapy, is highly successful. In 1989, she found that a single session of then-called “EMD” was 100% successful in removing distress associated with PTSD (Shapiro, 1995; 2001). She also claims that 84-90% of clients (war-related) no longer have post-traumatic stress disorder after only three sessions of treatments. Consequently, EMDR basic principles, protocols and procedures (Shapiro, 2001) have gained rapid popularity, and it has been demonstrated to be an effective means of helping the client with distressing memories of trauma.

Greenwald (1999) has shown that the applicability of EMDR to treatment of traumatized children appears to be quite promising. Several reports on hundreds of children cases (Greenwald, 1993) support the effectiveness of EMDR with this population, as well as the need for additional training to master age-appropriate technical variations of EMDR. Case reports have been positive and consistent with

findings on similar treatment of adults, with the exception that child treatment may be more rapid than it is with adults (Cocco & Sharpe, 1993; Greenward, 1993; Pellicer, 1993; Shapiro, 1991). In addition, according to Sack et al. (2001), several reviews and meta-analyses have shown and have proven effect sizes for EMDR treatment that are comparable to other methods of interventions such as exposure therapy, cognitive behavior approaches or psychopharmacology.

Moreover, EMDR, along with cognitive behavioral therapy, have been recognized by the International Society for Traumatic Stress Studies as the only two effective psychotherapies in the treatment of PTSD (Chemab, Tolin, Van der Kok, & Pitman, 2000; Foa, Kean, & Friedman 2000; Van Etten & Taylor, 1998).

EMDR may be similar to other CBT approaches with regard to efficacy and acceptability. However, much less homework is required, and the treatment effect may be achieved in fewer sessions. Besides, EMDR has proven to be more efficient with regard to the amount of change achieved per session, or at least with two of three outcome measures (Vaughan, Armstrong, Gold, O'Connor, Jenneke, & Tarrier, 1994). Therefore, EMDR is chosen to be the best and suitable therapy for treating traumatized children who live in Baghdad.

#### **1.4 The Relationship between Age, Gender and Parental Beliefs and PTSD**

There are different factors that can contribute to PTSD. These factors include parental beliefs, gender and age. The following paragraphs discuss the possible effects of these factors on PTSD.

Being a contributory factor to PTSD, age has received a wide attention among researchers. Yet, the results of such studies have been inconsistent. This is because some researchers have suggested that younger children have great ability to handle their experiences, while others have reported opposite findings and different conclusions (Elbedour, Bensel, & Bastien, 1993).

There are researchers such as (Maercker, Michael, Fehm, Becker, & Margraf, 2004; Trickett, & Putnam, 1998) who have given diverse explanations relating to their findings and others' reports. One of the explanations for such findings is that younger children lack the repertoire of coping skills and available cognitive abilities and those older children may have the benefit of having spent a longer period of time amid peaceful conditions. According to Pynoos and Eth (1985), the efforts children make in order to cope with traumatic stress are considered as a function of maturity. Pynoos and Eth have also described a variety of responses that can be matched to children's cognitive and developmental abilities at different stages of development of their life.

In a study on the possible effects of terrorism and exile on refugee children, neither gender nor age differences on the Child Behavior Checklist were reported (Miller, 1996). Therefore, the factors of age or gender should not be viewed as isolated determinants of the responses of children, but rather parts of the integrative factors that influence children's responses to life events.

Other than age, gender may also have bearings on PTSD (Cross & Markus, 1993) and is one of the earliest social constructs that children apprehend (Kohlberg,

1966; Kohlberg & Ullian, 1974). Studies have shown that gender constitute a strong factor that influence children's perception and understanding about traumatic events, while some studies indicated that there is no direct relation between gender and PTSD. However, evidence of the significance of gender on people's responses to issues abounds in the study of Gerring, Slomine and Vasa (2002). In addition, Dawes and Tredoux (1989) who have reported that adolescent females were at a greater risk for PTSD than adolescent males in South Africa. This is because it is more socially acceptable for males to participate in wars and that they are less vulnerable than girls:

Finally, parental beliefs have been associated with PTSD because some studies have shown that people's beliefs can often over-exaggerate threat (Foa & Cahill, 2001). Negative parental beliefs may influence children's perception of some events as being hostile, dangerous, or threatening. Based on this, it is right to point that the role of parental beliefs in the development of PTSD remains crucial (Reson, 2004). After all, earlier studies which focused on the effects of parental psychological disorder and their beliefs in relation to the psychological outcome of adolescents, when exposed to community violence have demonstrated that trauma exposed to children are at significant risk for negative psychological outcome, when their parents have psychological problems (Green, Korol, Grake, Leonard, Gleser, & Smitson-cohen, 1991).

## 1.5 Statement of the Problem

After a traumatic experience such as war, individuals differ in their rate and extent of recovery. Many develop symptoms of post-traumatic stress disorder (PTSD), which include re-experiencing the trauma memory, avoidance of thoughts and feelings associated with the trauma, and hyperarousal symptoms. Recent and ongoing wars and conflicts between Sunnis and Shi'is in Iraq have left thousands of people suffering from PTSD. The Iraqi people have endured decades of war and recently occupation. The situation in Iraq has recently turned worse; it was bombed by the United States in 2003, approximately 1,033,000 of Iraqis have consequently been killed and 946,000 to 1,120,000 Iraqis have been injured or displaced from their homes (Opinion Research Business, 2008). Thousands still live in make-shift tents on a barren landscape without adequate food and water (Cordesman, 2006).

Children in Iraq, especially, may suffer from PTSD because their family members or relatives were killed in the war or threatened with death (Wadaa, Mohd Zaharim, & Humoud, 2010). The current war has left children deprived of homes, community, parents, and family members. Iraqi children are deprived of clean living conditions, safe water, adequate nourishment and electricity. Many Iraqi children die as a result of these terrible conditions (Garbarino, Kostelny, & Dulbrow 1998).

However, Sandler (2001) found people who have trauma may alter their beliefs and have a high mean for trauma-attachment beliefs. Besides, Weems, Berman, Silverman, and Rodrigues (2002) have shown that negative beliefs and

behaviors of the parents may directly and indirectly influence their children. Parents who live in Baghdad have already been exposed two previous wars.

For those reasons, there is a need to explore the prevalence of PTSD among Iraqi children and to find an effective treatment method for them. Until today, there is no study focusing on Iraqi children (ages 7-12) that suffer from PTSD and a treatment program for PTSD for Iraqi children.

Therefore, the present study identifies many problems to focus on:

- 1- The prevalence of PTSD among children (age 7-12) who live in Baghdad and are exposed to traumatic war is unknown.
- 2- Many previous studies showed that there is a correlation between gender and PTSD symptoms and many others showed the opposite.
- 3- Many previous studies showed that there is relationship between age and PTSD symptoms and many others showed the opposite.
- 4- Parents who live in Baghdad were exposed to two previous wars: Iran-Iraq and Gulf wars. The effect of this exposure on the parents and their children is unknown.
- 5- Some children develop trauma due to the beliefs of their parents.
- 6- The potential severity of PTSD influence on Iraqi children's development makes it crucial to address such problems immediately.
- 7- The effectiveness of the treatment method (EMDR) for PTSD in children who live in Baghdad is unknown.

## 1.6 Significance of the Study

The study was significant in a quite number of ways. In the first instance, war has serious and brutal consequences on children's (Dodge, 1991) and parents' lives. Iraq experiences of wars and conflicts, which exposed many people to 'war zone trauma' are disturbing. More specifically, Iraqis have already encountered three wars for three decades. Accordingly, the study provided a deep examination of Iraqi children, who had trauma due to their exposure war-related events. With the help of an investigation of how trauma is interpreted and understood by Iraqi children, appropriate diagnosis and treatment methods could be discovered for the benefit of traumatized children in Iraq and other war-like societies around the world.

Second, the study aimed to identify Iraqi children's symptomatology as it has a direct relation to their functioning in different contexts, for purposes of assessment, diagnosis and treatment. This is to give appropriate intervention and treatment for Iraqi children suffering from PTSD symptoms and to prevent negative consequences.

Third, the treatment of posttraumatic stress among Iraqi children attempted to change trauma behavior, so as to promote trauma recovery (Friedmann, 2000), as well as to reduce the distressing aspect of relieving trauma (Wilson, Friedman, & Lindy, 2001) among traumatized children.

Fourth, this study was important because of the crucial significance of childhood. Towards this end, the present study attempted to highlight the dangers of

PTSD on Iraqi children and explain the need for taking adequate preventive measures associated with mental health.

Fifth, this study attempts to shed further light on the effectiveness of EMDR for treating children. Based on the theoretical assumption that unresolved childhood trauma sets the stage for serious childhood and adult psychological disorders, the treatment of children using EMDR may help counter the need for long-term treatment of adults suffering from chronic mental disorder.

Sixth, the study attempts to bridge the gap in the investigation into the effectiveness of EMDR by linking parental beliefs to PTSD. The EMDR treatment plan for children should incorporate and address the influence of parental beliefs.

Seventh, the study attempts to understand the influences of gender and age on the stress reactions of child sufferers of PTSD (Hughes & Barad, 1983; Wolfe, Jaffe, Wilson, & Zak, 1985). Studies that have addressed and focused on the intersection of developmental age and traumatic events have primarily been based on victims of single episode traumas such as war. In the case of treatment for children, clinicians treating traumatic stress must consider the effect of age on traumatic experience and response as well as the effect of trauma on the child's continuing development (Maercker, Michael, Fehm, Becker, & Margraf, 2004).

## **1.7 Research Objectives**

The objectives of the present study were sevenfold: to identify the prevalence of PTSD among Iraqi children (ages 7-12); to examine the relationships between symptoms of PTSD and other variables such as, gender, age and parental beliefs; to determine trauma-attachment beliefs for Iraqi parents; to determine if children's age and parental trauma-attachment beliefs can predict PTSD symptoms; and to determine the effectiveness of EMDR in reducing symptoms of PTSD in Iraqi children.

## **1.8 Research Hypotheses**

The hypotheses of the present study are:

- 1- There is no correlation between gender and PTSD symptoms in children who live in Baghdad.
- 2- There is no relationship between age and PTSD symptoms in the children who live in Baghdad.
- 3- There is no relationship between parental trauma attachment beliefs and PTSD symptoms in children who live in Baghdad.
- 4- There are no relationships between parental trauma-attachment beliefs, age and PTSD symptoms in children who live in Baghdad.
- 5- There is no statistically significant difference in PTSD symptoms in the control group before and after EMDR program.

6- There is no statistically significant difference in PTSD symptoms in the experimental group before and after the EMDR program.

## 1.9 Definition of Terms

For more clarity, the following are conceptual and operational definitions of the key terms that are used throughout this study:

**Trauma** is any situation or event that causes the experience of physical or psychological threat. This experience can be described as uncontrollable and distressing (Rosen, 2004).

In the present study the term trauma is operationally defined as a war event (e.g., bombs, attacks) that causes the experience of physical or psychological threat to the children of Baghdad.

**Post-Traumatic Stress Disorder** can be defined as an enduring, distressing emotional disorder that follows exposure to severe helpless or fear inducing threat. Victims of PTSD often re-experience the trauma, avoid stimuli associated with it, and develop a numbing responsiveness and an increased vigilance and arousal (Durand & Barlow, 2006).

**Eye Movement Desensitization and Reprocessing** is a form of imaginal exposure which concentrates on a client's disturbing image or memory. This process is accompanied by saccadic eye movements as a consequence of the client's following the therapist's finger (Shapiro, 1995).

In the present study the term Eye Movement Desensitization and Reprocessing is operationally defined as a therapy that integrates elements of several effective therapies (e.g cognitive therapy) in structured protocols. It is used to maximize the treatment process of traumatized children who have been exposed to the war in Baghdad. Such a process is usually accompanied by saccadic eye movements as a consequence of child's following the therapist's finger.

## CHAPTER 2

### LITERATURE REVIEW

#### 2.0 Introduction

The current chapter is a review of existing literature related to the purposes and objectives of the present study. First, trauma and post-traumatic stress disorder will be described in detail. Second, the theories of PTSD and instruments for assessing PTSD will be presented. The last section in this chapter will be devoted to describing the hypothesis of EMDR. Studies related to the topics mentioned above will be reviewed while highlighting the need for doing research on the use of EMDR for treating PTSD among Iraqi children.

#### 2.1 Posttraumatic Stress Disorder (PTSD)

The year 1980 witnessed the addition of PTSD to the DSM-III. (APA, 1980) defined it as "an anxiety disorder that develops in response to a psychologically traumatic event outside the range of normal human experience and that would be markedly distressing to almost anyone" (p. 250). Within this conceptual premise, PTSD constitutes a patterned human disturbances that flow from a wide range of affective, cognitive, psycho-motor, and behavioral responses and consequently evoke mild and severe stress to the individual and collectivity (Andearsen, 1985). The conceptualized clarifications of PTSD do not expose the role of biological and psychological adaptation processes in determining traumatic experiences and lives among individuals. Moreover, they showcased a variety of traumatic processes and patterns, such as emotional processes of trauma, chronic

and premature processes of inhibiting traumatic conditions and successful processes of resolving traumatic experiences.

More so, the conception identifies stress as a primary outcome of traumatic events, like misunderstanding, conflict, crisis, feud, war among others. Against this background, Gibbs (1989) argued that stress, especially its nature, causes, consequences and treatment is a central issue in trauma studies. Thus, stressors remain a fundamental factor in determining patterns and types of symptoms associated with PTSD. Furthermore, Gibbs (1989) posited that the client's ability to recover from a stressful condition, which is caused by a traumatic event, depends largely on the victim's capacity for adaptive behavior. He also pointed that the severity and duration of traumatic experience are contributory factors to the individual's ability to recover on the one hand and his/her potential vulnerability in developing PTSD symptoms on the other.

### **2.1.1 Trauma**

According to Shapiro and Forrest (1997), trauma is a life-threatening event or serious injury; it involves death or serious injury to others. In this respect, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR) defines trauma as experiencing an event that involves "an actual or threatened death or serious injury, or any other threats to one's physical integrity". It also embeds witnessing or learning about "an event that involves death, injury, or threat to the physical integrity of another person (criterion A1). Children's response to the event must involve intense fear, helplessness, or horror. Such a response may be expressed

by disorganized or agitated behavior (APA, 2000, p. 465). Herman (1992) proposed that trauma is a sudden and threatening event that disturbs one's basic assumption that the world is a safe and controllable place.

Another definition of trauma focuses on uncontrollable threatening events and on any type of experiences that involves threats to life or close encounter with violence. Such a definition coincides with the present definition of trauma in the current study; for both regards traumatic war as threatening events, where thousands of people are killed and injured. However, the researcher disagrees with Herman, (1992) in only one point that traumatic events might be repeated.

Carlson and Dalenberg (2000), on the other hand, emphasized individual perception in their definition of traumatic events: an individual who is exposed to traumatic events will have a negative impact on his physical, psychological or emotional well-being. Such a thing may cause severe injury or death. Furthermore, an individual may experience fear due to lack of control over the negative impact of the event. So, it seems that this definition deals with questions like: How do children perceive the traumatic events? Why does their perception of war as a threat to their life or to their physical integrity play a determining role in their traumatic reaction rather than in the threatening event as a whole (Carlson & Dalenberg, 2000).

Another definition focuses on the suddenness of the traumatic event. An unexpected event that causes an imminent danger or threat to an individual will more likely result in traumatic reaction. Besides, the suddenness of the event allows

the individual no time to protect himself from the psychological or physical impact of the trauma. For example, the suddenness of an automobile accident or a natural disaster occurs so suddenly that an individual is provided no opportunity to protect himself. When an event occurs gradually, the expected reactive outcome will be less tense, as time allows an individual to psychologically, emotionally or physically prepare himself for the trauma (Carlson & Dalenberg, 2000).

Additionally, traumatic events occur outside an individual's normal range of experiences (Carlson & Dalenberg, 2000). Empirical research defined traumatic events as being broader in scope than the one presented by DSM-IV-TR definition. Other researchers, on the other hand, asserted that trauma occurs because victims are unable to escape from traumatic experiences.

Gurvith, Sitterle, Young and Pfefferbaum (2002) presented another characteristic of trauma, which is represented by being exposed to the event consequently, secondary as well as tertiary. Responders to victims of traumatic events, for instance, have reported high rates of traumatization. Additionally, individuals who have their close mates endangered, reported high rates of traumatization. Thus, both indirect and direct exposure to an event can result in traumatization (Gurvith, Sitterle, Young, & Pfefferbaum, 2002). In this respect, the researcher agrees with this characteristic of trauma because parents who lived in Baghdad had already been exposed to two previous wars. Traumatic history might disrupt their beliefs that are related to trauma and be consequently transferred to their children.

Each definition above focuses on a certain point. The first definition, for instance, focuses on the uncontrollability of these threatening events. The second emphasizes the perceived negativity of the event whereas the emphasis of the third definitions on the suddenness of the event. The researcher, in this respect, agrees with only two definitions, the first and the second, because they explain the thought of children when being exposed to traumatic war. When children attempt to control their environment, their physical construction, physical and emotional responses serve to protect and allow them to gain control over the environment. A traumatic event which is usually uncontrollable in its nature, can threaten an individual's sense of control over their environment. For example, terrorists' attacks, assaults and natural disasters, such as earthquakes create a feeling of lack of control in an individual. Not surprisingly, individuals' perception of control over stress determines the intensity of the traumatic reaction. Moreover, people who might feel the same in the future, or who can change their behavior in an attempt to decrease risk, tend to have a higher rate of recovery after experiencing trauma (Carlson & Dalenberg, 2000).

As far as the types of traumatic events are concerned, research has examined specific types of such events in children, such as natural disasters (La Graca, & Prinstein, 2000), wars (Qouta, El-Sarraj, & Unamaki, 2003; Nader, Pynoos, Fairbanks, Al-Ajeel, & Al-Asour, 2003) sexual abuse (Trickett, & Putnam, 1998), and accidents (Mirza, Bdaarinath, Goodyer, & Gilmour, 1998). All these traumatic events can be classified under two general types: acute and chronic (Holtman, 2006). Acute trauma, in Holtman's (2006) point of view, is a short, severe and an isolated incident that could be caused by any events, such as natural disasters or by medical

trauma, as motor vehicle accidents, physical assaults, falls, burns and hospitalization (Holtman, 2006). Chronic trauma, on the other hand, results from the persistent exposure to repeated physical and sexual abuse, the ongoing neglect, combat, or from violence (Holtman, 2006). Chronic trauma is much more likely to generate symptoms of posttraumatic stress disorder (PTSD) than acute trauma (Holtman, 2006). Previous studies showed the impact of chronic stress or severe trauma on the physiology and development of brain. Moreover, an exposure to trauma can lead to changes in brain chemistry and morphology (Beers & Bellis, 2002). Furthermore, the repetition of traumatic war causes children to have a posttraumatic stress disorder; a point that is highly agreed upon by the researcher.

Shapiro and Forrest (1997) argued that different effects or consequences are associated with trauma, among which are intense fear, extreme feelings of helplessness and a crushing loss of self-control. The victims of trauma are therefore likely to become easily upset due their past experiences, feelings, beliefs, physical sensations and behaviors and these features can subsequently affect their nervous systems. Chemtob, Tomas, Law and Cremmlter (1997) revealed that another major trait of the survivor's response to trauma is anger. Thus, anger stands as one of the core survival mechanisms being displayed by victims of traumatic activities or as a driving force in traumatized victims to help them cope with life's adversities. Anger provides the victims with increased energy to exist and persist in the face of obstacles that flow from traumatic events. However, the excessive sense of anger is considered a fertile pipeline to a continued condition of feeling weird. Such a sense facilitates a wide variety of social maladjustments in the lives of the victims of PTSD (Chemtob, 1997). Raphael and Dobson (2001) illustrated that findings from

past studies have shown that adaptive resolution of either trauma or loss is bound to be aggravated through the re-occurrence and co-occurrence of life event stressors. This facilitates the description, explanation, understanding and prediction about the effects of psychological variables in trauma studies and indeed in therapy-oriented inquiry.

Knowing about the contents and contexts of traumatic events is necessary in grasping the mechanics with which the victims of PTSD especially the children, cope within their daily life situations. It is beyond doubt that the impacts of traumatic events are evident across individuals with varying age-groups; however, the effects are more threatening with regard to children, young persons and aged people than with young adults and middle age people (Chemtob, 1997).

In the case of children, traumatic experiences that are precipitated by war, physical abuse, neglect, peer or family suicide, dog bites, severe burns, natural disasters, fires and medical procedures often influence their perceptions about the world. Speaking of the effects of trauma on the perception of individuals, Van Der Kolk, McFarlane, Alexander and Weisaeth (1996a) argued that a patient who experienced harsh and life-threatening psychological trauma usually develop permanent helplessness image about the world that is filled with anger. Consequently, the perceived helplessness, which stems from the effect of trauma, distorts the regulatory functions of the systems in victims or patients' bodies.

In sum, traumatic events are conduits of psychological disturbances and feelings, such as stress, anxiety, self-doubt, poor self-esteem, phobia, fears and chronic pain. These attributes of traumatic experiences are pathways to the distortion

of the individual's assumptions about equity, fairness, justice, decency, and the goodness of human nature (Van Der Kolk, 1996a; Wilson, Friedman, & Lindy, 2001). Van Der Kolk et al. (1996a) and Wilson et al. (2001) posited that traumatic stress induces some observable changes in an individual's beliefs, attitudes, values and ideological systems. It is important therefore not to limit traumatic events, their causes, consequences and the measures of controlling it to a particular stage in an individual's life. Rather, one should extend it to every facet of his/her existence, that is, in every segment of human life cycle from conception to birth and death. Lifton (1979) observed that human beings have an in-built predisposition for having an "illusion of invulnerability" that stands to be distorted by traumatic events. In other words, every stage of human development—infancy, childhood, adolescence, middle and late adulthood—remains vulnerable to the effects of trauma. Thus, no immunization exists for a traumatic life experience, but rather humans are expected to device strategies that help them survive despite the traumatic events.

### **2.1.2 Clinical-Oriented Characteristics and Symptoms of Posttraumatic Stress Disorder**

The major clinical features of PTSD are identified and discussed in the Diagnostic and Statistical Manual of Mental Disorders published by the American Psychiatric Association (APA, 1994). According to APA (1994), the major symptoms of PTSD are classified into three: re-experiencing symptoms, protective reaction symptoms and arousal symptoms. The re-experiencing symptoms of PTSD are intrusive memories and/or nightmares, etc. The protective reaction symptoms