



UNIVERSITI PUTRA MALAYSIA

***EFFECTIVENESS OF COGNITIVE BEHAVIOURAL THERAPY AND EYE
MOVEMENT DESENSITIZATION AND REPROCESSING AMONG IRANIAN
CHILDREN WITH POST TRAUMATIC STRESS DISORDER
AFTER 2008 QESHM EARTHQUAKE***

SHOLEH NAMAZI

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**By
SHOLEH NAMAZI**

**Thesis Submitted to the School of Graduate Studies,
Universiti Putra Malaysia, in Fulfillment of the Requirements for the
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**Abstract of thesis presented to the Senate of Universiti Putra Malaysia in
fulfilment of the requirements for the degree of Doctor of Philosophy**

**EFFECTIVENESS OF COGNITIVE BEHAVIOURAL THERAPY
AND EYE MOVEMENT DESENSITIZATION AND REPROCESSING
AMONG IRANIAN CHILDREN WITH POST TRAUMATIC STRESS
DISORDERAFTER THE 2008 QESHM EARTHQUAKE**

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Chairperson: Maznah Bt Baba, Ph.D., K.B, P.A.

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The American Psychiatric Association (2008) has stated that EMDR (eye movement desensitization and reprocessing) may be useful for people who have trouble talking about the traumatic events they have experienced. Although this may be useful for children, the clinical use of EMDR in the treatment of PTSD symptoms in children has not been evaluated. The general objective of this experimental study with randomized pre-test post-test control group design was to compare the effectiveness of EMDR with CBT, a validated intervention in reducing PTSD symptoms among Iranian children 20 months following the 2008 Qeshm earthquake. Six alternative hypotheses were tested.

Respondents were 26 elementary school students aged 7 to 12 years old who were diagnosed with PTSD due to the earthquake by a psychiatrist. Respondents were randomly assigned into

three groups as follows: nine in the CBT, nine in the EMDR and 8 in the Wait-list Control group. PTSD symptoms severity was evaluated using the UCLA-PTSD DSM-IV Index (Child Form) that had already been modified for use in Iran. Other instruments used included Negative Perception of Earthquake, Relationship to Therapist, Subjective Unit of Distress and Validity of Cognition. Various efforts were made to control for internal and external threats of validity.

A one-way analysis of covariance (ANCOVA) showed that after participating in 8-12 sessions of psychotherapy, respondents in the CBT and EMDR groups exhibited significant reduction in overall PTSD symptoms compared to the Control group between pre-test to post-test $F(2,22)=19.62$ $p=0.001$ (Sig. $p<.05$). Although the effect of CBT in reducing PTSD symptoms was more than EMDR, the difference was not significant $p=.06$ (Sig. $p>.05$). One-way ANCOVA also showed that there were significant differences in PTSD severity among EMDR, CBT and Control groups between pre-test and post-test by three different PTSD criteria, namely: intrusion $F(2,22)=.86$, $p=.001$ (Sig. $p<.05$) , avoidance $F(2,22)=8.09$ (Sig. $p<.05$) and arousal $F(2,22)=.001$ (Sig. $p<.05$).

Comparisons between CBT and EMDR groups showed that CBT was significantly more effective in reducing PTSD symptoms in the intrusion ($p=.03$, Sig. $p<.05$) and arousal clusters ($p=.009$, Sig. $p<.05$) but not in the avoidance cluster ($p=.035$, Sig. $p>.05$). Although significant reduction in PTSD symptoms was reported across treatment groups, none of the children were PTSD symptoms-free as measured by the UCLA-PTSD DSM-IV Index at post-test.

The results also showed that there were no significant differences in respondents satisfaction between CBT and EMDR, $t(16) = .56, p = .57$ (sig. $p > .05$). Delayed post-test showed that post-treatment therapeutic outcomes were maintained during 45 days follow-up in terms of differences between groups $F(2, 22) = 17.78, p = .02$ (Sig. $p < .05$), but the effects of EMDR improved within this period and differences between CBT and EMDR measures in post-treatment decreased in the Follow-up evaluation, $p = .14$ (Sig. $p < .05$).

This study showed that both CBT and EMDR were effective in the treatment of PTSD among children. Further studies need to be conducted to determine the usefulness of the EMDR approach for other childhood psychopathologies.

**Abstrak tesis yang dikemukakan kepada Senat Universiti Putra
Malaysia sebagai memenuhi sebahagian syarat bagi mendapatkan
Ijazah Doktor Falsafah**

**KEBERKESANAN TERAPI KOGNITIF TINGKAHLAKU DAN DESENSITISASI
DAN PEMROSESAN SEMULA PERGERAKAN MATA DALAM KALANGAN
KANAK-KANAK BERKECELARUAN STRES PASCA TRAUMA AKIBAT GEMPA
BUMI DI 2008 QESHM, IRAN**

oleh
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Persatuan Psikiatri Amerika Syarikat (2008) telah menyatakan bahawa terapi Desensitisasi dan Pemprosesan Semula Pergerakan Mata atau *Eye Movement Desensitization and Reprocessing (EMDR)* mungkin bermanfaat bagi orang yang sukar bercerita mengenai peristiwa trauma yang telah mereka alami. Walaupun EMDR mungkin berguna untuk kanak-kanak, penggunaan secara klinikal untuk merawat simptom kecelaruan stress pasca trauma (PTSD) dalam kalangan mereka belum dinilai. Objektif umum kajian eksperimen yang menggunakan rekabentuk rawak dengan pengujian pre dan pos serta kumpulan kawalan ini adalah membandingkan keberkesanan EMDR dengan Terapi Kognitif Tingkahlaku (CBT) untuk mengurangkan simptom PTSD dalam kalangan kanak-kanak Iran 20 bulan selepas

mereka mengalami gempa bumi di Qeshm, Iran pada tahun 2008. Enam hipotesis alternative telah diuji.

Responden terdiri daripada 26 pelajar sekolah rendah berusia antara 7 hingga 12 tahun yang telah di diagnos mengalami PTSD akibat gempa bumi oleh seorang psikiatris. Para responden telah diagihkan kepada tiga kumpulan secara rawak seperti berikut: sembilan dalam kumpulan CBT, sembilan dalam kumpulan EMDR dan lapan dalam kumpulan kawalan. Tahap serius simptom PTSD telah dinilai menggunakan UCLA-PTSD DSM-IV Index (Child Form) yang telah diubahsuai untuk kegunaan di Iran. Instrumen lain yang turut digunakan meliputi *Negative Perception of Earthquake*, *Relationship to Therapist*, *Subjective Unit of Distress* dan *Validity of Cognition*. Segala usaha telah dibuat untuk mengawal ancaman terhadap kesahan internal dan external kajian.

Analisis sehala kovarian (ANCOVA) mendapati bahawa responden dalam kumpulan CBT dan EMDR menunjukkan pengurangan yang signifikan dalam keseluruhan simptom PTSD berbanding kumpulan kawalan di antara tempoh pra dan pasca-ujian selepas terlibat selama 8-12 sesi psikoterapi, $F(2,22)=19.62$ $p=0.001$ (Sig. $p<.05$). Walaupun kesan rawatan CBT dalam mengurangkan simptom PTSD melebihi EMDR, perbezaan adalah tidak signifikan, $p=.06$ (Sig. $p>.05$). Analisis ANCOVA sehala juga menunjukkan terdapat perbezaan yang signifikan dalam tahap PTSD di antara kumpulan EMDR, CBT dan kawalan antara waktu pra dan pasca ujian berdasarkan tiga kriteria PTSD, iaitu: *intrusion* $F(2,22)=.86$, $p=.001$ (Sig. $p<.05$), *avoidance* $F(2,22)=8.09$ (Sig. $p<.05$), dan *arousal* $F(2,22)=.001$ (Sig. $p<.05$).

Perbandingan antara kumpulan CBT dan EMDR menunjukkan bahawa CBT lebih efektif secara signifikan dalam mengurangkan gagasan simptom PTSD dari segi kriteria

intrusion ($p=.03$, Sig. $p<.05$), dan *arousal* ($p=.009$, Sig. $p<.05$) tetapi tidak dari segi *avoidance* ($p=.035$, Sig. $p>.05$). Walaupun terdapat pengurangan yang signifikan dalam simptom PTSD bagi semua kumpulan rawatan, tiada kanak-kanak yang bebas dari simptom pasca-ujian berdasarkan ukuran UCLA-PTSD DSM-IV Index.

Hasil kajian juga menunjukkan bahawa tiada perbezaan signifikan dalam kepuasan responden terhadap rawatan di antara kumpulan CBT dan EMDR, $t(16) = .56$, $p = .57$ (sig. $p > .05$). Delayed Pasca-ujian tertangguh menunjukkan bahawa hasil terapeutik pasca-rawatan kekal dalam tempoh susulan 45 hari antara kumpulan rawatan, $F(2, 22) = 17.78$, $p = .02$ (Sig. $p < .05$). Bagaimanapun, kesan rawatan EMDR meningkat dalam tempoh ini dan perbezaan antara CBT and EMDR pasca rawatan berkeurangan di peringkat penilaian susulan, $p = .14$ (Sig. $p < .05$).

Kajian ini menunjukkan bahawa CBT dan EMDR adalah berkesan untuk merawat PTSD dalam kalangan kanak-kanak yang menghadapi trauma akibat gempa bumi. Kajian lanjutan perlu dilaksanakan bagi menentukan keberkesanan pendekatan EMDR untuk merawat pelbagai psikopatologi di peringkat kanak-kanak.

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I certify that a Thesis Examination Committee has met on 16/Jul/ 2012 to conduct the final examination of Sholeh Namazi on his Degree of Doctor of Philosophy thesis entitled “ Effectiveness of Cognitive Behavioral Therapy and Eye Movement Desensitization and Reprocessing Among Iranian Children with Post Traumatic Stress Disorder After Qeshm Earthquake” in accordance with the Universities and University Colleges Act 1971 and the Constitution of the Universiti Putra Malaysia [P.U. (A) 106] 15 March 1998. The Committee recommends that the student be awarded the Degree of Doctor of Philosophy.

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DECLARATION

I declare that the thesis is my original work except for quotations and citations which have been duly acknowledged. I also declare that it has not been previously, and it is not concurrently, submitted for any other degree at Universiti Putra Malaysia or at any other institution.

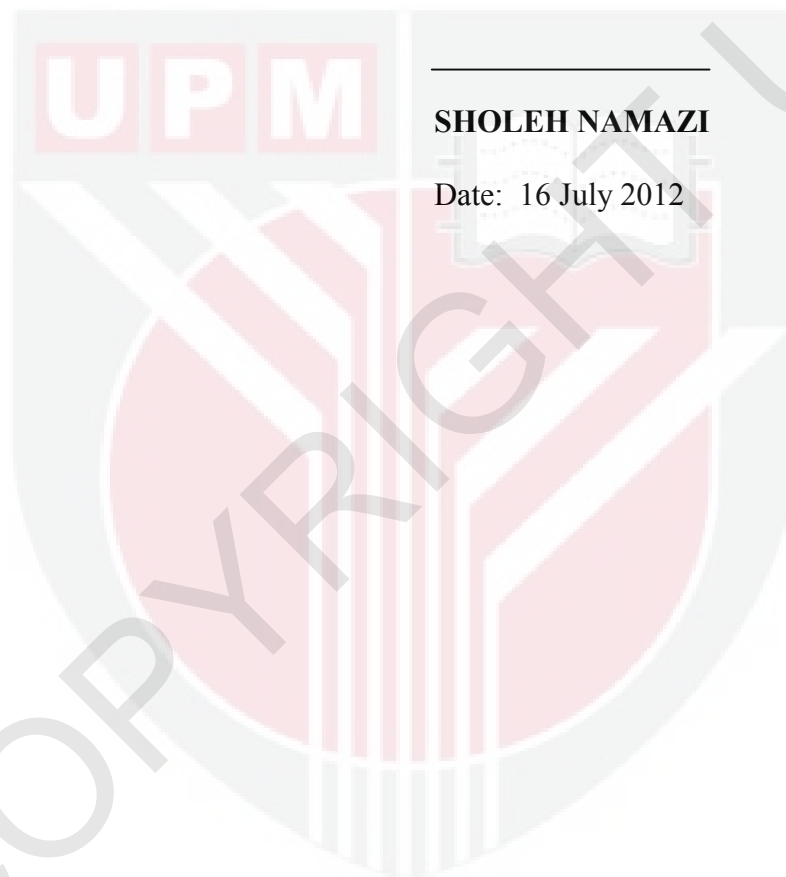


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