UNIVERSITI PUTRA MALAYSIA

EFFECTIVENESS OF COGNITIVE BEHAVIOR THERAPY AND REIKI THERAPY ON ADOLESCENTS WITH DEPRESSIVE DISORDERS IN TEHRAN, IRAN

MANSOUREH CHARKHANDEH

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By

MANSOUREH CHARKHANDEH

Thesis submitted to the School of Graduate Studies, Universiti Putra Malaysia, in fulfilment of the requirements for the Degree of Doctor of Philosophy

May 2014
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DEDICATION

To my parents
To the masters who teaches to me with love and compassion

To my daughter
“Anita”
Abstract of thesis presented to the Senate of Universiti Putra Malaysia in fulfilment of the requirement for the degree of Doctor of Philosophy

EFFECTIVENESS OF COGNITIVE BEHAVIOR THERAPY AND REIKI THERAPY ON ADOLESCENTS WITH DEPRESSIVE DISORDERS IN TEHRAN, IRAN

By

MANSOUREH CHARKHANDEH

May 2014

Chairman: Mansor Abu Talib, Ph.D.

Faculty: Human Ecology

Depression in childhood and adolescence is among the most common and disabling disorders. It is defined as a mood of sadness plus other emotional symptoms, such as low self-esteem, anhedonia, anxiety, guilt, pessimism, and loneliness. Depression disorders are assessed through structured clinical interviews and observation. Estimates of the prevalence of Major Depression Disorder (MDD) in adolescence range from 0.4% to 8.3% lifetime prevalence. Epidemiological studies from the literature on mental health of youth indicate that depression, drug abuse and suicide are among the three most common causes of death among young people. Some studies have been conducted to assess the state of mental health in Iran. The rate of attempted suicide among depressed patients in a community area is 0.5% in Iran, which is significantly lower than in the most recent clinical research. The aim of current research is to investigate the effectiveness of CBT and Reiki among depressed adolescents in Tehran, Iran.

It is expected that using the CBT and Reiki approaches in the present study pioneers further work in this particular area of depression in children. Cognitive behavior therapy and Reiki are two non-pharmacological therapies. The purpose of the current study is to make a comparison between a psychotherapeutic approach (CBT) and an alternative medicine method (Reiki). Cognitive behavioral therapy is effective for mild childhood depression. Most anxiety and depression treatments include general skills-building strategies such as self-monitoring, psycho-education, problem-solving, social skills training, and reward plans thus; successful CBT would be expected to engender positive change in cognitive processing including decreasing negative automatic thoughts, maladaptive attitudes and assumptions, and decreased threat interpretations. Reiki is described by supporters as a holistic therapy which brings about healing on physical, emotional, mental and spiritual levels. It is classified as an alternative, complementary, or integrative method or therapy.
This study involved a quantitative data collection method, with pre-test and post-test design with two experimental groups and one control group. There were two periods of data collection for this study. The period one employed pre-test (T1) to assess depression score of participant by CDI, and the period two (T2) to measure depression score when two treatments (CBT and Reiki) are performed. One of the most common mental disorders in children and adolescents in Tehran is depression. These adolescents had been referred to psychotherapy clinics in different districts in Tehran. A multistage random sampling method was used in this study. A random sample was constructed by taking a series of simple random samples in different stages. The eligible adolescents referred to these health centers recruited for the study from June to September 2010. The following criteria were used to recruit participants: (a) aged 12-17, (b) met a minimum CDI score of 20, (c) met DSM-IV-TR criteria for major depression based on structural interview by two clinical psychologists, and (d) completed a pretreatment assessment. Each of the three treatment groups (CDI, Reiki, and the control group) included 80 samples, which provided an accumulated mixed gender total of 240 boys and girls. The number in the CBT group was reduced to 63 (34 girls and 29 boys). Reiki group therapy was performed for 65 depressed adolescents (34 girls and 31 boys). The number of samples in the control group at the end of treatment was 60 (33 girls and 27 boys).

The data in this study were collected by a self-rating scale “Child Depression Inventory” (CDI) and backgrounds questionnaire. The CDI is a self-rating scale modeled on the Beck depression inventory (BDI) and adapted to young people 7-17 years of age. The depressive symptoms assessed include cognitive, affective, somatic and behavioral aspects. The 27 items were scored from 0 to 2. Clinical / categorical approach is proven that it covers symptoms of depression, most major and minor, according to the DSM-IVTR. The CDI takes about 10-20 minutes to complete and contains five subscales: negative mood, interpersonal problems, ineffectiveness, anhedonia and negative self-esteem. The CDI was taken before start of treatment at the first stage to determine the level of depression score in adolescence (pre-test). At the second stage, the CDI was used after period of 12 sessions in Reiki and CBT treatments to determine depression score of the participants and to assess the effectiveness of the two methods on reduction of depression in adolescents (post-test). The CBT program was arranged in two sessions of one and a half hours per week. The planning totaled eighteen hours in twelve sessions over six weeks of the treatment period. Some of the treatment activities such as relaxation, discussion, solving of problems skills, and positive cognitive changes in CBT method were performed in groups.

Reiki therapy was individually for 20 minutes in each session and two sessions in a week. The participants in a waitlist control group condition attended information sessions and were familiarized with the goals of the research. They were not receiving any treatment and education. Pearson Chi Square analysis to check any significant association although the demographic variables (gender, age, parental education, medical problems, living arrangements and family income) between three group (CBT, Reiki and control). Paired t-test was used to analyze the difference between pre-test and post-test in one group. One way ANOVA test and post-hoc test were used for analysis the difference between pre-test or post-test in three independent groups (CBT, Reiki and
control). An independent *t-test* was also done to determine differences between post-test of male and female scores.

The current study determined that CBT is an important independent variable in reducing depression score of Iranian adolescents more than Reiki therapy. The CBT was same effect in decreasing depression scores of male and female while Reiki had different effect. The side results showed that CBT and Reiki programs led to reducing subscales scores (negative mood, interpersonal problems, ineffectiveness, anhedonia, negative self-esteem). Successful CBT treatment brings about positive changes in cognitive processing, including decreased negative automatic thoughts settings, and maladaptive assumptions and reduced threat interpretations. One of the most important findings from the quantitative data of this study is the number of participants who reported feeling relaxes during and after treatment. Some participants noted that the use of Reiki increases energy.

Moreover, the CBT effects should help to solve these social and individual problems and it is recommended that counseling centers and the Iranian Ministry support both schools and other educational institutions, in helping to minimize if not solve the problem of mental disorders among Iranian youth. The practice of Reiki should be promoted and there should be efforts made to train Reiki masters. Reiki research should be encouraged and this traditional art of healing should be introduced to the scientific community. To control depression, there must be practical programs, such as relaxation, mediation, individual and group counseling, so they can support programs and help students and their abilities to deliver better services in the school.
KEMURUNGAN DALAM ZAMAN KANAK-KANAK DAN REMAJA ADALAH GANGGUAN YANG PALING TERUK DAN PALING KERAP TERJADI. IANYA DIDEFINISIKAN SEBAGAI PERASAAN SEDIH BERCAMPUR SIMPTOM EMOSIONAL YANG LAIN SEPERI RENDAH DIRI, ANHEDONIA, KEGELISAHAN, PERASAAN BERSALAH, PESIMIS DAN KESUNYIAN. GANGGUAN KEMURUNGAN TELAH DINILAI MENERUSI TEMURAMAH BERSTRUKTUR KLINIKAL DAN PEMERHATIAN. JANGKAAN BAGI PREVALEN BAGI MAJOR DEPRESSION DISORDER (MDD) DALAM JANGKA ALAM REMAJA DARIPADA 0.4% KEPADA 8.3% PREVALEN SEUMUR HIDUP. KAJIAN EPIDEMIOLOGIKAL DARIPADA SOROTAN KAJIAN KE ATAS KESIHATAN MENTAL REMAJA MENUNJUKKAN KEMURUNGAN, PENYALAHGUNAAN DADAH DAN BUNUH DIRI ADALAH ANTAGA TIGA KES YANG KERAP PENYEBAK KEMATIAN DI KALANGAN GOLONGAN MUDA. SESETENGAH KAJIAN TELAH DJALAKKAN BAGI MENILAI TASIHAN KESIHATAN MENTAL DI IRAN. KADAR CUBAAN MEMBUNUH DIRI DI KALANGAN PESAKIT KEMURUNGAN DALAM SATU KAWASAN KOMUNITI ADALAH 0.5% DI IRAN YANG MANA ADALAH SECARA SIGNIFIKANNYA RENDAH BERTABANG DARIPADA KEBANYAKAN KAJIAN KLINIKAL TERKINI.

TUJUAN KAJIAN INI ADALAH UNTUK MENYIASAT KEBERKESANAN BAGI CBT DAN REIKI DIKALANGAN REMAJA MURUNG DI TEHRAN, IRAN. IANYA DIJANGKAKAN DENGAN MENGGUNAKAN PENDEKATAN CBT DAN REIKI DALAM KAJIAN INI, PENDUKUNG LEbih MEMFOKUSKAN KERJA DALAM BIDANG KHUSUS BAGI KEMURUNGAN BAGI KANAK-KANAK. TERAPI TINGKAH LAKU KOGNITIF DAN REIKI ADALAH DUAA TERAPI BUKAN FARMASOLOGIKAL. TUJUAN KAJIAN INI ADALAH UNTUK MEMBDANINGKAN PENDEKATAN PSIKOTERAPIKUT (CBT) DAN PENDEKATAN PERUBATAN ALTERNATIF (REIKI). TERAPI TINGKAH LAKU KOGNITIF ADALAH EFEKTIF BAGI ZAMAN KEMURUNGAN KANAK-KANAK SEDERHANA. KEBANYAKAN RAWATAN KEGELISHAN DAN KEMURUNGAN TERMSUKLAH STRATEGI UMUM PEMBINAAN KEMAHIRAN SEPERTI PEMBERHATIAN KENDIRI, PENDIDIKAN PSIKO, PENYELESAIAN MASALAH, LATIHAN KEMAHIRAN SOSIAL DAN RANCANGAN GANJARAN LALU, CBT YANG BERJAYA DIJANGKA DAPAT UNTUK MENGAKIBTATAN PERUBAHAN POSITIF DALAM PEMPROSESAN KOGNITIF TERMSUKLAH MENGURANGKAN PEMIKIRAN AUTOMATIK NEGATIF, SIKAP MALADAPTIF DAN DANAAN DAN MENGURANGKAN INTERPRETASI ANCAMAN. REIKI TELAH DITERANGKAN OLEH PENYOKONG SEBAGAI TERAPI HOLISTIK YANG MEMBAWA KEPADA PENYEMBUHAN KEPADA FIZIKAL, EMOSIONAL, IANSOUEREH CHARKHDANEH

Mei 2014

Pengurus: Mansor Abu Talib, Ph.D.

Fakulti: Ekologi Manusia dengan
mental dan tahap kerohanian. Ianya telah diklasifikasikan sebagai alternatif, komplementari atau pendekatan integratif atau terapi.

Kajian ini termasuklah pendekatan pengumpulan data kuantitatif dengan pra dan pasca ujian telah direka dengan dua kumpulan eksperimental dan satu kumpulan kawalan. Terdapat dua tempoh masa bagi pengumpulan data bagi kajian ini. Tempoh masa pertama menggunakan pra ujian (T1) untuk menilai skor kemurungan bagi peserta bagi CDI, dan tempoh masa kedua (T2) untuk mengukur skor kemurungan apabila dua rawatan (CBT dan Reiki) dijalankan. Salah satu gangguan mental yang paling biasa berlaku kepada kanak-kanak dan remaj di Tehran adalah kemurungan. Remaja ini telah dirujuk kepada klinik psikoterapi dalam daerah berbeza di Tehran. Satu kaedah pelbagai tahap persampelan rawak telah digunakan dalam kajian ini. Sampel rawak telah dibina dengan mengambil satu siri sampel rawak ringkas dalam pelbagai tahap. Remaja yang layak dirujuk kepada pusat kesihatan yang telah dilantik dalam kajian bermula Jun sehingga September 2010. Kriteria yang berikut telah digunakan untuk melantik peserta: (a) berumur 12-17, (b) memenuhi skor minimum CDI daripada 20, (c) memenuhi kriteria DSM-IV-TR bagi kemurungan utama berdasarkan keatas temubual berstruktur oleh dua psikologis klinikal, dan (d) menjawab ujian pra rawatan. Setiap daripada tiga kumpulan rawatan (CBT, Reiki, dan kumpulan kawalan) termasuklah 80 sampel, yang telah menyumbang kepada campuran jantina terkumpul berjumlah 240 lelaki dan perempuan. Bilangan dalam kumpulan CBT telah dikurangkan kepada 63 (34 perempuan dan 29 lelaki). Kumpulan terapi Reiki telah dijalankan bagi 65 remaja murung (34 perempuan dan 31 lelaki). Bilangan sampel dalam kumpulan kawalan di penghujung rawatan adalah 60 (33 perempuan dan 27 lelaki).

Data dalam kajian ini telah dikumpulkan dengan skala penilaian kendiri ‘Child Depression Inventory (CDI)’ dan borang kajiselidik latar belakang. CDI adalah skala rating kendiri yang dimodelkan berdasarkan kepada Inventori Kemurungan Beck (BDI) dan digunakan kepada orang muda lingkungan 7-17 tahun. Simptom kemurungan dinilai termasuklah kognitif, afektif, somatik dan aspek tingkah laku. 27 item telah diskorkan bermula daripada 0 hingga 2. Pendekatan klinikal/ kategori telah terbukti dimana ianya meliputi simptom bagi kemurungan, kebanyakannya major dan minor menurut DSM-IVTR. CDI mengambil masa lebih kurang 10-20 minit untuk menyiapkan dan menyimpan lima sub skala: suasana negatif, masalah interpersonal, ketidakberkesanan, anhedonia dan nilai diri negatif. CDI telah diambil sebelum rawatan bermula pada tahap pertama untuk mengenalpasti tahap skor kemurungan dalam remaja (pra ujian). Pada tahap kedua, CDI telah digunakan selepas 12 sesi dalam rawatan Reiki dan CBT bagi mengenalpasti skor kemurungan bagi peserta dan menilai keberkesanan dua cara ke atas pengurangan kemurungan dalam remaja (pasca ujian). Program CBT telah diatur dalam dua sesi meliputi sejam setengah setiap minggu. Rancangannya berjumlah lapan belas jam dalam dua belas sesi merangkumi enam minggu tempoh rawatan. Beberapa aktiviti rawatan seperti rehat, perbincangan, kemahiran penyelesaian masalah dan perubahan kognitif positif dalam kaedah CBT telah dijalankan dalam kumpulan.

Terapi Reiki secara individu telah dijalankan selama 20 minit bagi setiap sesi dan dua sesi dalam seminggu. Peserta dalam senarai menunggu kumpulan kawalan telah hadir.
for session information. Participants did not receive any interventions or education. Pearson Chi Square analysis was used to test any significant association among the demographic variables (gender, age, parental education, medical issues, living conditions, and household income) among the three groups (CBT, Reiki, and Control). Paired t-tests were used to analyze differences between pre-intervention and post-intervention within each group. ANOVA and post-hoc tests were used for analysis of differences between pre-intervention or post-intervention within the three control groups (CBT, Reiki, and Control). t-tests were conducted to determine differences between post-intervention scores for males and females.

This study confirmed that CBT is a significant factor in reducing the depression scores for Iranian adolescents compared to Reiki therapy. CBT resulted in the same effect for reducing depression scores for males and females, whereas Reiki had different effects. Study findings showed that CBT and Reiki programs have linked the sub-scores (mood-negative, interpersonal difficulties, helplessness,anhedonia, negative self-esteem) . Successful CBT treatments can bring about positive changes in cognitive processing including reduction of automatic negative thoughts and maladaptive beliefs and reducing threat interpretations. One of the important findings from the quantitative data of this study is the number of participants who reported feeling calm both during and after treatment. Some participants also noted that Reiki usage increased their energy.

Moreover, the effects of CBT are suggested to help in solving social and individual problems and it is recommended that schools and educational institutions in Iran support this in helping to reduce mental health issues among adolescents. Reiki usage should be promoted and efforts should be taken to train Reiki experts. Reiki practice should be encouraged and the traditional healing arts should be introduced to the scientific community. For controlling depression, it is suggested to hold practical programs such as relaxation, meditation, counseling individually and collectively so they can support the program and help students and their ability to provide better services within schools.
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I would like to express my deep gratitude to my parents for their love and continuing encouragement.

MANSOUREH CHARKHANDEH
I certify that a Thesis Examination Committee has met on 16 May 2014 to conduct the final examination of Mansoureh Charakedeh on her thesis entitled "Effectiveness of Cognitive Behavior Therapy and Reiki Therapy on Adolescents with Depressive Disorders in Tehran, Iran" 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 Doctor of Philosophy.

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# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABSTRACT</td>
<td>i</td>
</tr>
<tr>
<td>ABSTRAK</td>
<td>iv</td>
</tr>
<tr>
<td>ACKNOWLEDGEMENTS</td>
<td>vii</td>
</tr>
<tr>
<td>APPROVAL</td>
<td>viii</td>
</tr>
<tr>
<td>DECLARATION</td>
<td>x</td>
</tr>
<tr>
<td>LIST OF TABLES</td>
<td>xv</td>
</tr>
<tr>
<td>LIST OF FIGURES</td>
<td>xvi</td>
</tr>
<tr>
<td>LIST OF ABBREVIATIONS</td>
<td>xvii</td>
</tr>
</tbody>
</table>

## CHAPTER

1  **INTRODUCTION**                                                                 |

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1 Introduction</td>
<td>1</td>
</tr>
<tr>
<td>1.2 Statement of the Problem</td>
<td>3</td>
</tr>
<tr>
<td>1.3 Objectives</td>
<td>5</td>
</tr>
<tr>
<td>1.3.1 Main Objective</td>
<td>5</td>
</tr>
<tr>
<td>1.3.2 Specific Objectives</td>
<td>5</td>
</tr>
<tr>
<td>1.4 Research Hypotheses</td>
<td>5</td>
</tr>
<tr>
<td>1.5 Significance of the Study</td>
<td>6</td>
</tr>
<tr>
<td>1.6 Definition of Variables</td>
<td>7</td>
</tr>
<tr>
<td>1.7 Theoretical Framework</td>
<td>8</td>
</tr>
<tr>
<td>1.7.1 Piaget's Psychosocial Development Theory</td>
<td>9</td>
</tr>
<tr>
<td>1.7.2 Beck’s cognitive theory</td>
<td>9</td>
</tr>
<tr>
<td>1.7.3 Holistic nursing theories</td>
<td>10</td>
</tr>
<tr>
<td>1.8 The Conceptual Framework of the Study</td>
<td>13</td>
</tr>
<tr>
<td>1.9 Limitation of the study</td>
<td>14</td>
</tr>
<tr>
<td>1.10 Summary</td>
<td>15</td>
</tr>
</tbody>
</table>

2  **LITERATURE REVIEW**                                                    |

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Introduction</td>
<td>16</td>
</tr>
<tr>
<td>2.2 Depression in Adolescents</td>
<td>16</td>
</tr>
<tr>
<td>2.3 Prognosis and Etiology</td>
<td>17</td>
</tr>
<tr>
<td>2.4 Cognitive Behavioral Therapy (CBT)</td>
<td>18</td>
</tr>
<tr>
<td>2.5 CBT and Adolescent Depression</td>
<td>19</td>
</tr>
<tr>
<td>2.6 Reiki therapy</td>
<td>25</td>
</tr>
<tr>
<td>2.7 Reiki and Depression</td>
<td>27</td>
</tr>
<tr>
<td>2.8 Children’s Depression Inventory (CDI) in Iran</td>
<td>28</td>
</tr>
<tr>
<td>2.9 Summary</td>
<td>29</td>
</tr>
</tbody>
</table>
# METHODOLOGY

3.1 Introduction 30  
3.2 Research Design 30  
3.3 Location of Study 31  
3.4 Determination of the Sample Size 31  
3.5 Sampling Participants, Eligibility and screening 31  
3.6 Data Collection 33  
3.7 Preparing the Participants 34  
3.8 CBT Treatment Process 34  
3.9 Reiki group process 35  
3.10 Control Group Process 36  
3.11 Instruments 36  
3.12 Data Analysis 37  
3.13 Summary 38  

# RESULTS AND DISCUSSION

4.1 Introduction 39  
4.2 Respondents’ Background Children’s & Parental Demographic characteristics 39  
4.3 Depression Scores of Respondents 42  
4.4 Description of CBT, Reiki & Control groups According to Gender 42  
4.5 Differences of Depression score (CBT, Reiki) and Control Group at Pre-Test and Post-Test 43  
4.6 Discussion on General Objective 46  
4.7 Differences of Depression Scores in two Experimental Groups (CBT and Reiki) at Pre-Test and Post-Test 46  
4.8 Discussion of Objective 1 47  
4.9 Discussion of Objective 2 49  
4.10 Analysis of depression score of Male, Female at Pre-Test and Post-Test in CBT and Reiki 49  
4.11 Discussion of Objective 3 51  
4.12 Discussion of Objective 4 54  
4.13 Analysis of Subscales in CBT Group at pre and posttest 55  
4.14 Analysis of Subscales in Reiki Group at pre and posttest 57  
4.15 Summary 59  

# SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

5.1 Introduction 62  
5.2 Summary 62  
5.3 Conclusion of the Study 64  
5.4 Implications 66
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.5 Recommendations for Future Research</td>
<td>67</td>
</tr>
<tr>
<td>5.6 Summary</td>
<td>68</td>
</tr>
</tbody>
</table>

REFERENCES 69

APPENDICES 92

BIODATA OF STUDENT 135

LIST OF PUBLICATIONS 136
## LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1</td>
<td>Experimental Design</td>
</tr>
<tr>
<td>3.2</td>
<td>Sampling size</td>
</tr>
<tr>
<td>3.3</td>
<td>The Intervention and Times in Data Collection of Groups</td>
</tr>
<tr>
<td>3.4</td>
<td>CBT Programs (Treatment Activities, Treatment Goal and Session)</td>
</tr>
<tr>
<td>3.5</td>
<td>Factor Scale, Factor Measured and Items in CDI</td>
</tr>
<tr>
<td>3.6</td>
<td>Hypotheses and methods of analysis</td>
</tr>
<tr>
<td>4.1</td>
<td>Personal Characteristics and Family Profiles of the Respondent in three Groups</td>
</tr>
<tr>
<td>4.2</td>
<td>Frequency and Distribution Percentage of Depression Levels in Pretest and posttest of Respondent</td>
</tr>
<tr>
<td>4.3</td>
<td>The Normality Description of CBT, Reiki and Control group</td>
</tr>
<tr>
<td>4.4</td>
<td>One-Way ANOVA Test of the Mean Scores in Pre-Test (CBT, Reiki and Control)</td>
</tr>
<tr>
<td>4.5</td>
<td>One-Way ANOVA Test, the Mean Scores of Post-Test in CBT, Reiki and Control</td>
</tr>
<tr>
<td>4.6</td>
<td>Turkey’s HSD, Post-Test difference results in CBT, Reiki and Control</td>
</tr>
<tr>
<td>4.7</td>
<td>Paired Sample T-Tests (Pre and Post) test of CBT Scores</td>
</tr>
<tr>
<td>4.8</td>
<td>Paired Sample T-Test (Pre and Post) test of Reiki Scores</td>
</tr>
<tr>
<td>4.9</td>
<td>Paired sample t-test of male in CBT</td>
</tr>
<tr>
<td>4.10</td>
<td>Paired Sample T-Test of Female in CBT</td>
</tr>
<tr>
<td>4.11</td>
<td>T-Test, Post-Test Score of Male and Female in CBT</td>
</tr>
<tr>
<td>4.12</td>
<td>Paired sample t-test of male in Reiki</td>
</tr>
<tr>
<td>4.13</td>
<td>Paired Sample T-Test of Female in Reiki</td>
</tr>
<tr>
<td>4.14</td>
<td>T-Test, Post-Test Score of Male and Female in Reiki</td>
</tr>
<tr>
<td>4.15</td>
<td>Paired sample t-test of subscales in CBT</td>
</tr>
<tr>
<td>4.16</td>
<td>Paired Sample T-Test of subscales in Reiki</td>
</tr>
<tr>
<td>4.17</td>
<td>Summary of the findings</td>
</tr>
</tbody>
</table>
# LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Description</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>The Theoretical Framework</td>
<td>12</td>
</tr>
<tr>
<td>1.2</td>
<td>The conceptual Framework of the Study</td>
<td>14</td>
</tr>
<tr>
<td>3.1</td>
<td>The location of Tehran (Capital of Iran)</td>
<td>31</td>
</tr>
<tr>
<td>3.2</td>
<td>Sampling Process</td>
<td>32</td>
</tr>
<tr>
<td>4.1</td>
<td>Differences of (pre and post) test scores of five subscales in CBT</td>
<td>57</td>
</tr>
<tr>
<td>4.2</td>
<td>Differences of (pre and post) test scores of five subscales in Reiki</td>
<td>58</td>
</tr>
<tr>
<td>A.1</td>
<td>Chakras, indicated by circles along the center of the body</td>
<td>124</td>
</tr>
<tr>
<td>A.2</td>
<td>The different of symbols the body for Reiki therapy</td>
<td>125</td>
</tr>
<tr>
<td>A.3</td>
<td>The different positions of head for Reiki therapy</td>
<td>126</td>
</tr>
<tr>
<td>A.4</td>
<td>The different positions of front for Reiki therapy</td>
<td>127</td>
</tr>
<tr>
<td>A.5</td>
<td>The different positions of back for Reiki therapy</td>
<td>128</td>
</tr>
</tbody>
</table>
## LIST OF ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>APA</td>
<td>American Psychiatric Association</td>
</tr>
<tr>
<td>BDI</td>
<td>Beck Depression Inventory</td>
</tr>
<tr>
<td>CDI</td>
<td>Children Depression Inventory</td>
</tr>
<tr>
<td>DSM-IV</td>
<td>Diagnostic and Statistical Manual of Mental Disorders</td>
</tr>
<tr>
<td>M</td>
<td>Mean</td>
</tr>
<tr>
<td>MDD</td>
<td>Major Depressive Disorder</td>
</tr>
<tr>
<td>NCCAM</td>
<td>National Center for Complementary and Alternative Medicine</td>
</tr>
<tr>
<td>NIH</td>
<td>National Institute of Health</td>
</tr>
<tr>
<td>OAM</td>
<td>Office of Alternative Medicine</td>
</tr>
<tr>
<td>RIA</td>
<td>Relaxation Induced Anxiety</td>
</tr>
<tr>
<td>SD</td>
<td>Standard deviation</td>
</tr>
<tr>
<td>SUD</td>
<td>Subjective Units of Disturbance</td>
</tr>
<tr>
<td>US</td>
<td>United States</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
</tbody>
</table>
CHAPTER 1

INTRODUCTION

1.1 Introduction

Depression in childhood and adolescence is among the most common and disabling disorders. It is reported that childhood depression ranges from 2% -6% among the school-age population and may end up seriously affecting such children in their adult life (World Health Report, 2001). Depression is among the most common mental disorders and is often referred to as the common "cold" of mental illness. It is estimated that 5% through 25% of the population experience depression at some point in their lives and 15% of severely depressed people will commit suicide worldwide (Gotlib & Hammen, 2002). During puberty, about 2% of 13-year-olds suffer from depression and on average, 17% at age of 18 years are similarly affected worldwide (Angold et al., 2002). The current prevalence of depressive disorders in Iran is 2% (1.8% major depressive disorders and 0.2% minor depressive disorders), among those living in cities and who are not housewives (Mohammadi et al., 2006). Using the Diagnostic and Statistical Manual of Mental Disorders -IV (DSM-IV) criteria and clinical interviews, findings indicate that the prevalence of depression disorders is 9.2 % ((4.4% major depressive disorder, 3.9% minor depressive, and 0.8% dysthymia in Iran (Noorbala, 2008).Depression is defined as a mood of sadness plus other emotional symptoms, such as low self-esteem, anhedonia, anxiety, guilt, pessimism, and loneliness. Depression disorders are assessed through structured clinical interviews and observation. Estimates of the prevalence of Major Depression Disorder (MDD) in adolescence range from 0.4% to 8.3% lifetime prevalence; across youth it ranges from 15% to 20% and point prevalence rate for Depression Disorder (DD) ranges from 1.6% to 8.0%, with a small number in the world having both disorders (Roberts & Bishop, 2003).

In the past 20 years, awareness and attentiveness to depression in children have led to significant advances in treatment and the availability of much literature concerning the phenomenology, etiology correlates and psychosocial factors of depression, particularly childhood depression (Asarnow et al., 2001). Clinicians now recognize how to approach depression in children and prescribe treatment for it while parents have been made familiar with their children’s depression in order that they can better understand their children’s condition. In light of this, there are the usual requirements to explore other treatments, assess their effectiveness, and evaluate it in relation to previous treatment strategies for promoting recovery among those insensitive to any treatment. Now, clinicians have an understanding of what to do when depression is diagnosed but there is still a need to investigate alternative treatment strategies to ensure that successful treatments are available (Asarnow et al., 2001).

Adolescents may suffer from depression which may cause despair and forlornness in them, and make them disheartened about doing their daily jobs (Pike and Fitzpatrick, 2003). Depressed adolescents may not show any sign of despair or hopelessness, rather they may get easily irritated. Furthermore, they may have a cynical and antisocial
attitude toward others and have the misconception that others do not understand them. There are some social and cognitive factors which are used to define adolescent depression. Increased extent of critical self-referent attributions among adolescents (Prinstein et al., 2005), lack of proper capability to perceive oneself (Tram & Cole, 2000), idealist attitude and seeking social endorsement (Ginsburg et al., 2009), and finally, uncontrollable pessimistic perceptions about themselves and others are among these factors (Greening & Martin, 2005).

The American Psychiatric Association (2000) guidelines indicate that among psychotherapeutic approaches, Cognitive Behavioral Therapy (CBT) has the best documented effectiveness for the treatment of depression disorders. Clinical depression undoubtedly has a significant impact on the developmental pathways of youth and adolescents. The CBT psychotherapist commonly aims at ensuring a development by reducing depressingly distorted perception, achieve problem solutions, learn coping skills and promote active participation of adolescents in healthy and pleasant activities. The CBT treatments frequently consist of necessary skill-building sessions and optional modular sessions for particular problems (Tads, 2004). The findings by Oei & Dingle (2008), Henderson (2004), Fujisawa et al. (2010), Kerfoot et al. (2004), Hyun & Seo (2005), Pamela et al. (2010), Snead et al. (2004), Spielmans et al. (2007), Prins & Ollendic (2003), Weisz et al. (2006), Barlow et al. (2004), Clarke et al. (2003), Brent (1997) and Asarnow (2001) exposed that CBT intervention in group format resulted in reduction of depression of children.

In 1992, the national institute of health (NIH) established the office of alternative medicine (OAM) to evaluate alternative therapies. In 1998, there was the OAM freestanding center, National Center for Complementary and Alternative Medicine (NCCAM) (Dossey et al., 2000). The foundation has completed a study on mental health and the use of complementary therapies in the field of mental health and it is obvious that a series of different therapies can be used, for example, massage, reflexology, Reiki, therapeutic healing, herbal medicine and aromatherapy (Wiles & Brooker, 2003). Reiki is a technique that uses a spiritual approach to healing. There is evidence that Reiki can help people with various complaints, serious and minor. It is often used as a complementary therapy in some conventional hospitals today (Ell yard, 2004). It complements and enhances the health care given to the patient in the hospital or some other health care provider. The findings of past studies about comparison of Reiki therapy and control group by Miles (2003), Ell Yard (2004), Harrison et al. (2001), Fleming (2003) and Olson et al. (2003) which concluded that Reiki therapy decreases depression of participants. Reiki has not only helped patients with physical complaints, but also been effective for minor psychological problems (Nield et al., 2001). One of the most significant health benefits of Reiki is stress relief and relaxation, which triggers the body's natural healing abilities for improving and maintaining health. Reiki helps to bring about inner peace and harmony; it can be a valuable instrument in the search for spiritual growth (Peggy, 2001).
1.2 Statement of the Problem

More than 450 million people universally are affected by neurological, psychological or behavioral problems at one time or another (WHO, 2001). Epidemiological studies from the literature on mental health of youth indicate that depression, drug abuse and suicide are among the three most common causes of death among young people (Brookman, 2006). Some studies have been conducted to assess the state of mental health in Iran. Recent studies showed that 9.7% of 24-year-olds from the northwestern Iran people interviewed were diagnosed with a mental disturbance (Mohammadi et al., 2006). The number of cases has been established to increase with increasing age, and women are twice more likely than men to be diagnosed with a mental disorder (Fakhari et al., 2007). Noorbala (2008) examined the mental health of 35,014 people, including 11,448 adolescents and young adults between 15 and 24 years in Tehran with the General Health Questionnaire-28 (GHQ-28). The results showed that (women, 25.9% and men, 14.9%), about one-fifth of the population experienced mental disorders, with women being at higher risk than men. In the general population of Iran, the rate of lifetime prevalence of suicide attempts is 1.4% and the depression related to attempted suicide attempt is 0.5% (Malakouti et al., 2009). The strong religious and cultural prohibitions against suicide in Iran could have played a significant role in the survey conducted, and led to under-reporting it, so the actual suicide attempt rates could be much higher. The rate of attempted suicide among depressed patients in a community area is 0.5% in Iran, which is significantly lower than in the most recent clinical research (Nojomi et al., 2008). Otherwise, it can be expected that the rate of suicide attempts in the clinical sample to be higher than in the epidemiological studies in Iran (Mohammadi et al., 2006). Many children diagnosed with depression, when evaluated analytically, exhibit symptoms of other problems such as anxiety and disruptive disorders. A series of studies have reported that drug abuse has become a social evil due to the prevailing social, psychological (depression and anxiety), domestic and economic conditions. Moreover, the rapid rise of drug abuse has resulted in an alarming increase in the incidence of infectious diseases and other health problems in Iran (Mokri, 2002).

Depression can lead boys and girls to miss training or to lag behind in school (Busari & Uwakwe, 2001). Education is a very important determinant of adult earnings, so if school attendance and performance are significantly affected by depression, adolescents can put their future in jeopardy. Depression can negatively impact concentration among adolescents in school as well as at work. Such negative effects could be related to depression and subsequent harmful behaviors like substance abuse (smoking, alcohol and drug), and eating problems (Cooper, 2008). Additionally, Adolescent behavioral disturbances are generally much more likely to lead to higher risk of association with youth gangs and similar undesirable company. There is also the belief that depression brings on debilitating infectious diseases in adolescents (Cohen et al., 2000).

Many adolescent depressions are linked to interpersonal deficits due to social problems. These deficits lead to depression and feelings of worthlessness, hopelessness and isolation. It is important for therapists, teachers and parents to be aware of these problems and understand the full extent of these negative feelings and to examine the patient using character-playing problem-solving techniques, communication and self-assertion training and conflict resolution, which were among the most important
advances in clinical child and adult psychiatry in the last century. Conflict resolution recognizes that internalizing disorders, depression and anxiety states can be reliably diagnosed in this age group. The diagnostic criteria for depression are essentially the same for the young and the growing, with the exception of the inclusion of irritable moods (Brent et al., 1997). Teenagers and younger children can certainly become seriously depressed. Adolescents need careful treatment because i) they are going through all the stresses of adolescence, ii) they are growing rapidly and facing with all sorts of new challenges in their lives, and iii) it’s not easy to know what they’re thinking. Also, children might go to the doctor with physical symptoms, so that depression is visually very hard to recognize (Cembrowicz, 2002).

The use of CBT for children and the young has been extended with good outcomes. It is often used to treat depression, anxiety disorders and symptoms in connection with trauma and posttraumatic stress. Important work in this area has been done by Beck and his colleagues (Beck et al., 1979) in a psychology program in Chicago. Earlier studies show that cognitive behavior therapy is effective in treating depression among the adolescents (Clarke et al., 2001; Abolghasemi, 2008). Forozande (2002) investigated group CBT on college students in Shah Record (Iran). These findings highlighted that CBT is an effective intervention to decrease depression among college students in Shah Record. Alavi et al., (2013) and Khaneh Keshi et al. (2013) evaluated the effectiveness of a Cognitive Behavioral therapy for suicide prevention in decreasing suicidal ideation and hopelessness in adolescents who had at least one previous suicidal attempt in Iran. The findings shows that CBT is an effective method in reducing suicidal ideation and hopelessness in the depressed adolescents with previous suicidal attempts. The other obtained finding is consistent with the result of this study (Rohde et al., 2006; Henderson, 2005; Rossello et al., 2006; Hyun & Seo, 2005; Pamela et al., 2010) concerning depression and aimed at evaluating cognitive behaviour therapy influence and its comparison with a control group. It was concluded that CBT reduces depression levels. In general, cognitive behaviour therapy can lead to changes in depression scores of participants.

Although the use of Complementary and Alternative Medicine (CAM) has been evaluated globally, there are few studies about it and specific Reiki in Iran. The findings (Fahimiet et al., 2011; Tonekaboni et al.2011; Abolhassani et al., 2012) shows that (CAM) includes techniques such as homeopathy, acupuncture, chiropractors, herbal medicine and spiritual healing, energy therapies are used in Iran. Reiki is described by supporters as a holistic therapy which brings about healing on physical, emotional, mental and spiritual levels, in the belief is that the energy will flow through the practitioner's hands whenever the hands are placed on or held near a potential recipient (Ell yard, 2004).The effectiveness of Reiki intervention for decreasing depression is supported by other studies such as: Nancy (2010), Etephene (2006), Crawford et al. (2006), Vital & O’Connor (2006), Brathovde (2006), Ameling & Anderson (2001), Wardell & Engebretson (2001), Shiflett et al. (2002), Shore (2004), Deborah (2006) and Miles (2003).
However, the clinical impact of these two therapies are not investigated in Iranian population. Therefore, I aimed at studying CBT and Reiki, which are two non-pharmacological therapies, among adolescents in the metropolitan city of Tehran. It is expected that using the CBT and Reiki approaches in the present study pioneers further work in this particular area of depression in children. The result of this study could address the significance of juvenile conduct problems especially in the Tehran-Iran context, and leads to development of psychotherapies for reducing the prevalence of depression among children.

The current research was done among Iranian depressed adolescences to answer the following questions:

Is there any difference between the effectiveness of CBT and Reiki on depression of adolescences?
Is CBT effective in reducing depression of adolescences?
Is Reiki therapy effective in reducing depression of adolescence?
Is there any difference between the effectiveness of CBT in reducing depress boys and girls?
Is there any difference between the effectiveness of Reiki therapy in reducing depression of boys and girls?

1.3 Objectives

1.3.1 Main Objective
The main objective of this research is “to compare the effectiveness of CBT and Reiki among depressed adolescents in Tehran, Iran”.

1.3.2 Specific Objectives
The specific objectives of the study are as follows among Iranian adolescences:
To determine the effectiveness of cognitive behavior therapy in reducing depression among Iranian adolescents.
To determine the effectiveness of Reiki in reducing depression among Iranian adolescents.
To compare cognitive behavioral therapy among depressed boys and girls.
To compare Reiki therapy among depressed boys and girls.

1.4 Research Hypotheses
According to the objectives of the study, the following hypotheses were proposed:

General objective: To compare cognitive behavioral therapy and Reiki among depressed adolescents in Tehran, Iran”.
H01: There is no significant difference in the depression scores of three groups (cognitive behavior therapy, Reiki and control group) at pre-test.
Objective 1. To determine the effectiveness of cognitive behavior therapy in reducing depression among Iranian adolescents.

H03: There is no significant difference in pre-test and post-test of adolescent depression score based on CBT therapy.

Objective 2. To determine the effectiveness of Reiki in reducing depression among Iranian adolescents.

H04: There is no significant difference in pre-test and post-test of adolescent depression score based on Reiki therapy.

Objective 3. Comparison of cognitive behavioral therapy in depressed boys and girls in Iran.

H05: There is no significant difference in pre-test and post-test of male’s depression scores based on CBT treatment.

H06: There is no significant difference in pre-test and post-test of female’s depression scores based on CBT treatment.

H07: There is no significant difference in post-tests of depression scores of male and female based on CBT treatment.

Objective 4. Comparison of Reiki therapy in depressed boys and girls in Iran.

H08: There is no significant difference in pre-test and post-test of male’s depression scores based on Reiki treatment.

H09: There is no significant difference in pre-test and post-test of male’s depression scores based on Reiki treatment.

H10: There is no significant difference in post-tests of depression scores of male and female based on Reiki treatment.

1.5 Significance of the Study

Cognitive behavior therapy and Reiki are two non-pharmacological therapies. The purpose of the current study is to make a comparison between a psychotherapeutic approach (CBT) and an alternative medicine method (Reiki) (Sameer & Milind, 2011). This study compares the effectiveness of CBT and Reiki as two intervention approaches for decreasing depression among Iranian adolescent. Reiki therapy is cheaper than CBT, requires a shorter treatment time and can be easily used (Shore, 2004). This will significantly reduce the burden for the affected youth, their families and society in general. Medical treatment and prevention programs are important to focus on an individual risk and resilience factors, family and community risk and resilience variables that have been developed, including the development and maintenance of depression in adolescent treatment (Clarke et al., 2003).
The use of electro-shocks for decrease of depression in medical young treatment lead to side effects and other disadvantages while CBT and psychotherapy has important benefit for them although it is time-consuming and expensive (Mushtag, 2010). Therefore, there is a need for an effective treatment that is less time-consuming to treat adolescent depression. Reiki can be a solution to save money and time, which would be ideal at a time of economic, educational and social deficits besetting Iran and thus contribute to a healthier people, and generally a healthier public (shore, 2004). Overall, CBT aims at modifying maladaptive thinking and attitudes, increase skill sets, and change unrewarding or avoidant behavioral patterns (Weisz et al, 2006). Even though Reiki therapy has been reported to have plenty of merits and benefits, people are still cynical about its probable side effects. Dupler and Rey (2005) have demonstrated that Reiki therapy does not bring out any side effects, rather it is proved to be an easy-to-perform and light therapy. The individuals who have received Reiki therapy sometimes state that they have had feelings of hotness or coldness, or even feelings of despair and apprehension, but Reiki therapy has never been reported to cause serious side effects among its recipients. Most anxiety and depression treatments include general skills-building strategies such as self-monitoring, psycho-education, problem-solving, social skills training, and reward plans thus; successful CBT would be expected to engender positive change in cognitive processing including decreasing negative automatic thoughts, maladaptive attitudes and assumptions, and decreased threat interpretations (Chen, 2006).

This study will also focus on Reiki therapy in other areas of health care. Alternative therapies are gaining currency in the treatment of people with depression. These therapies often lack empirical insights about their effectiveness (Marshall & Hutchinson, 2001). Reiki is the least expensive and less time-consuming and can be administered very simply by non-academic technical personnel. The effectiveness of Reiki will then be compared with CBT. The research purpose is for emphasizing psychotherapy and alternative medicine method to treatment mental health problem in among youth. Quantitative findings suggest Reiki have the potential to improve health outcomes and increase individuals’ coping findings that warrant further study. One of the key findings from the quantitative data of this study is a number of participant’s reports feeling relaxed during and after Reiki treatments (Nancy, 2010). Participants’ reports of relaxation are consistent with the author’s experiences using progressive muscle relaxation and Reiki in clinical populations (Bowden et al., 2010). Another interesting finding was that, for some participants, the duration of benefit persisted for periods beyond the treatment itself. In addition, some participants’ remarks suggest that the benefits of Reiki are cumulative (Nancy, 2010). Specialists have long been concerned that it is time consuming and expensive to prevent and treat depression in health centers (Stewart et al., 2003). In Iran, depression has been attracting more and more attention in the past decade as a very significant public health problem. Depression among adolescents in Iran is a serious problem, based on reviews of the young in school and this study hopes to address this problem and contributes to solving the educational problems of adolescents (Modabber-Nia et al., 2007).
1.6 Definition of Variables

**Depression**

*Conceptual definition:* According to DSM-IV-TR, to be considered clinically depressed, a child or adolescent must have at least two weeks of persistent change in mood manifested by either depressed or irritable mood and/or loss of interest and pleasure plus a group of other symptoms including wishing to be dead, suicidal ideation or attempts; increased or decreased appetite, weight or sleep; and decreased activity, concentration, energy or self-worth or exaggerated guilt (American Psychiatric Association, 2000).

*Operational definition:* In the present study, depression was assessed based on responses to the Children’s Depression Inventory (CDI). The CDI quantifies a wide range of depressive symptoms including disturbances in mood and capacity to enjoy activities, vegetative functions, self-evaluations, and interpersonal behavior (Kovacs, 1992).

**CBT**

*Conceptual definition:* Cognitive Behavioral Therapy is a form of psychotherapy that emphasizes the role of rational thinking in how individuals feel and behave. A central tenet of this approach is that an individual's thoughts, not outside people or events, cause feelings and behaviors (National Association of Cognitive Behavioral Therapists, 2002).

*Operational definition:* The CBT program was arranged in two sessions of one and a half hours per week. The planning totaled eighteen hours in twelve sessions over six weeks of the treatment period (National Association of Cognitive Behavioral Therapists, 2002).

**Reiki**

*Conceptual definition:* Reiki is an ancient hands-on healing art that is used today as a modern healing intervention. In modern nomenclature, Reiki is classified as an alternative, complementary, or integrative method or therapy (Debbie, 2005). Reiki is described by supporters as a holistic therapy which brings about healing on physical, emotional, mental and spiritual levels.

*Operational definition:* Reiki therapy programs was arranged in 12 session of 20 minutes per week (Nield-Anderson & Ameling, 2001). The Reiki treatment proceeded with the practitioner placing his hands in various positions for three to five minutes at each position. They used the non-touching technique, where the hands were held a few centimeters away from the recipient's body, for some or all of the positions. (Ell yard, 2004).
1.7 Theoretical Framework

**CBT**
The cognitive component in cognitive-behavioral psychotherapy refers to the way people think and create meaning about situations, symptoms and events in their lives and develop beliefs about self, others and the world (Dobson & Dobson, 2009). CBT uses techniques to help people become more aware of how they reason, and types of thought patterns come to mind and make sense of things. Cognitive interventions use a style of questions to gauge people, meanings and use it to stimulate alternative viewpoints or ideas. This is called the discovery guided, and involves exploration and reflection on the style of reasoning and thinking, and opportunities to think differently and more effectively. On the basis of these alternatives, people conduct behavioral experiments to test the accuracy of these alternatives, and to adopt new ways of thinking and acting. Overall, intention is to move away from the most extreme ways unnecessary and see things for more useful and balanced conclusions (Dozois, 2001). The behavioral component in cognitive-behavioral psychotherapy refers to how people react in times of distress. Responses, such as avoidance, reduced activity and behavior may be unnecessary or the problems will get worse. CBT practitioners can help the person feel safe enough to gradually test their assumptions and fears and change their behavior. For example, it may help people to cope with feared situations gradually or avoid them as a means of reducing anxiety and learning new skills to solve behavior problems (Hembree & Foa, 2004).

1.7.1 Piaget’s Psychosocial Development Theory
Early momentum to study cognition in the United States came from Jean Piaget (1896-1980), a Swiss developmental psychologist. Piaget focused on the changes that occur in children, the thinking of the participant. To Piaget, the heart of the work of the cognitive stages is involved in the development of successive periods of growth or maturation of an individual, the participant's ability to think about acquiring knowledge, self-awareness and awareness of the environment (Mooney, 2006). Piaget studied the growth of children and how they adapt to the world they live in. Playing and interacting with their world, children develop schemas or mental frameworks. Cognitive psychologists are particularly interested in the cognitive structures and processes that allow a person to mentally represent events that transpire in the environment. Piaget said that children in general schema stretch as much as possible to adapt to new comments. But life regularly confronts them with the undeniable fact that some of their comments are simply not in their current patterns. Depressed adolescents have a negative schema of the world in which childhood and youth are affected by stressful events in life. If the person meets with such schema for a situation that is similar in a sense, the conditions in which the original schema was learned, the negative schemas will be active in that person (Neale et al, 2001).

1.7.2 Beck’s Cognitive Theory
Cognitive behavior therapy was developed by Aaron Beck in the 1960s as asset directive psychotherapy, short-term and structured to treat depression. This theory is based on theoretical assumptions underlying the individual, emotions and behaviors are largely determined by the way he structures the world. Recent developments in behavioral
psychology emphasized individual cognition. According to Beck’s theory, cognitive symptoms of depression actually precede the affective and mood symptoms of depression, rather than vice versa. To Beck, what are central to depression are the negative thoughts, instead of hormonal changes or low rates of reinforcement as postulated by other theorists. It can be seen how his contributions have been used in recent studies concerning depression, whether related to his work on negative automatic thoughts, biases and distortions or his cognitive Model of Depression (Beck et al., 1979). The many cognitive processes are emphasized in Beck’s cognitive therapy which has created a methodical series of therapy procedures. The majority of controlled trials demonstrate that Beck's cognitive therapy has been proved to be much more effective than pharmacotherapy, which often includes tricyclic antidepressants (Henderson, 2004). It is suggested that cognitive therapy along with medication can provide the most effectual treatment for clinical depression. It is verified by several controlled trials. Schwartz and Schwartz (1993) have conducted a study and have shown that a more effective result can be achieved when a joint cognitive-behavioral therapy is being used and it shows better results than when either of these therapies is being used in isolation. Accordingly, the efficiency of these approaches is approved by plentiful evidence. Such evidence shows that this therapy can be used to cure a disorder which, in its severe status, may cause a person to commit suicide.

Reiki
According to Rand (2005), Reiki energy promotes general well-being as it flows into the energy system of a person. These systems can be described as universal energy field and chakras. The field of universal energy is a multi-energy field that surrounds and permeates the physical body. Chakras are wheel-shaped vortices, often referred to as focal points for the reception and transmission of energies. Chakras bring energy to the person in the field of universal energy. There are seven main chakras that can block, thus distorting the natural flow of energy. According to Herron-Marx et al. (2008), when a person receives a Reiki treatment, the practitioner channels energy to the recipient, bring balance in mind, body and spirit. The Reiki practitioner is done by placing their hands lightly on or just above the body, using a series of training hand.

1.7.3 Holistic Nursing Theories
Martha Rogers, Margaret Newman, Rosemarie Rizzo Parse, and Jean Watson have presented holistic nursing theories (Barnum, 1998; Chinn & Kramer, 1995). The practice of Reiki easily fits into the paradigm of holistic nursing theory. Roger’s theory defines human beings as unitary wholes and as energetic beings within universal energy fields. Roger’s theory espouses the interconnection of humans to the larger universe through energy fields. According to Rogers (1994), nursing practice aims towards promoting a harmonic interaction between the person and his environment, and reinforcing the cohesion and wholeness of a person’s energy field. Its goal is to appropriately guide the organization and synchronization of a person’s fields and environment in order to achieve the highest possible health potential. Margaret Newman’s theory of expanding consciousness speaks to the unity of life, human energy fields, and the pattern and organization that is evolutionary in human beings and Nature. Health refers to a person’s
ability to interact with his environment and to integrate thinking, feeling and processing of the information contained in all natural systems. Parse (1981) also developed her own language with the concepts of coexistence, co-creation, and pattern and organization. Coexistence is the assumption that human beings exist with others and the environment and co-creation is the creative process with self, others, and the universe. Human beings interact with the environment through energy exchange in a recognizable pattern and organization. According to Parse, human is considered as a Being, of his own will, who actively participates inside the world. A person can only be whole when he participates in the cosmic process. He is whole, open and free to choose the ways of the process. Watson’s theory (Watson, 1988) is a theory of human caring that assumes nursing is a human science and that caring is the moral idea of nursing. Nurses engage clients as caring occasions in the human energy field in a lived moment, when both are touched and changed (Barnum et al., 1998). The holistic approach summarizes the psychosomatic approach of a disease and expands it by putting the patient in a specific time and cultural context. It deals with his own special needs and quality of life, by respecting his convictions (McEvoy and Duffy, 2008).

Reiki therapy is often applied as a holistic nursing medication. Holistic nursing denotes that this medical framework takes over the responsibility of improving an individual’s health from birth to death through a holism approach. According to the holism approach, a person is known as a homogeneous whole that is more substantial than its building constituents and is separate from them. Rogers, Newman, Parse, and Watson (1998) have put forward several nursing theories, which offer the idea of inter-relationship of the universe's natural phenomena. Meanwhile, what is used as a basic framework and guide for holistic nursing practice is the bio-psycho-social-spiritual model. The American Holistic Nursing Association Standards of Holistic Nursing Practice proposes a scheme to achieve such an objective and elucidates the spectrum of holistic nursing practice and the kind of protection and care a holistic nurse should give to their patients (Dossey et al., 2000). There are two different holism standpoints in holistic nursing, one identifies a person as a single whole and the other represents a person as a set of inter-relationships between the bio-psycho-social-spiritual facets of him/her in a way that the whole is more significant and substantial than the building constituents. A holistic nurse believes that the treatment process will be more effective and faster when it is offered as a therapeutic cooperation with families, communities, persons and finally patients. Implementation of self-care practice is known as a pre-requisite for holistic nursing procedure. It can result in self-knowledge, self-responsibility and recognition of connections which can enhance the treatment process. Reiki therapy draws on some fundamental notions regarding energy therapies. These notions have common conceptual foundations and are embodied through diverse frameworks in physics. However, they have never had any experimental connections with medicine or clinical results.

Figure 1.1 shows the relationship between the theories and depression. This model describes the negative thinking characteristic of depression and how this relates to the symptoms and to other emotional behavioral and functional problems in illness. In CBT, the depression results from lack of environmental interpretations and negative interactions with it. Treatment includes behaviors that challenge negative cognitions and
increasing adaptive cognitive behavioral therapy skills, as well as having an accurate identification of feelings, the supervision and care of self-reward, problem solving, social skills, and relaxing procedures (Asarnow et al., 2001). Reiki heals by flowing through the affected parts of the energy field and charging it with positive energy, raising the vibratory levels of the energy field and negative thoughts and feelings are dissipated. Reiki is guided by a universal intelligence (God). In a typical whole body Reiki treatment the practitioner asks recipient to lie down, usually on a massage table and relax. The practitioner might take a few moments to enter a calm or meditative state of mind and mentally prepare for the treatment that is usually carried out without any unnecessary talking (Ell yard, 2004).

**Figure 1.1. The Theoretical Framework**

![Diagram showing the comparison between Reiki and CBT](image_url)

**Reiki**
- Holistic Nursing Theories
  - Harmonic interaction between the person and his environment.
  - Energy exchange in a recognizable pattern and organization
- Balance on the physical, entail, the life force flows within the physical body through the chakras and meridians.

**CBT**
1. Paget’s Theories
2. Beck’s Theories
   - 1. Children develop schemas,
   - 2. Controlling negative automatic thought, changing behavioral and develop schemas.
- Increase skill sets and change avoidant behavioral. Hormonal changes, decreasing negative mood, modifying maladaptive thinking and attitudes, patterns.

**Decrease of Depression**
1.8 The Conceptual Framework of the Study

According to the theoretical background, the conceptual framework of the present study was developed (Figure 1.2). The conceptual framework of this study outlines between two treatments which are considered as independent variables CBT and Reiki, and also depression is a dependent variable. This research involved a quantitative data collection method, with pre-test and post-test designed with two experimental groups and one control group. There were two data collection stages. Stage one employed pre-test (T1) for assessing depression score of participant and stage two employed post-test (T2) to measure depression score after two treatments (CBT and Reiki) using Child’s Depression Inventory (CDI). Conceptual framework shows relationship between background factors (family income, living arrangement, medical problems, father’s education, mother’s education, age and gender) and independent variables (CBT, Reiki) with dependent variable (depression). It is important to classify the risk factors associated with depression among adolescents, as this can help control and prevent depression. Many risk elements have been reported in the literature such as being female (Danesh, 2007; Genaabadi, 2010; Rahmani, 2007), poor interparental relationship (Ghorbani, 2003; Zahirodin, 2005; Kooroshnia, 2007), low socioeconomic status (Rostamzadeh, 2001; Shojaeezadeh, 1999; Modabernia, 2005), low level of parents’ education (Mirza & Jenkins, 2004; Shahnazi, 2007), and poverty (Mirza & Jenkins, 2004). Given its vast personal, social, and economic impacts, depressive disorders create significant stresses on individuals, health service providers, and the society as a whole (Thomas & Morris 2003).

In this study, effectiveness of two non-pharmacology treatment are compared on depression levels changes, and background factors were controlled in two intervention groups (CBT and Reiki). The Cognitive Behavior Therapy was supported by Oei and Dingle (2008), Henderson (2004), Fujisawa et al. (2010), and Kerfoot et al. (2004). They stated that CBT intervention resulted in reduction of depression scores. Depressed adolescents have a negative schema of the world in which childhood and youth are affected by stressful events in life. If the person meets with such schema for a situation that is similar in a sense, the conditions in which the original schema was learned, the negative schemas will be active in that person (Neale et al, 2001). Cognitive behavior therapy can help one to break this vicious cycle of change, feelings and behavior. Cognitive behavior therapy encourages the affected child or adolescent that he or she can “do it yourself” and work out their own paths to the solution of these problems. The American Psychiatric Association (APA, 2000) guidelines indicate that among psychotherapeutic approaches, CBT and interpersonal psychotherapy have the best documented effectiveness for the treatment of depression disorders.

The effectiveness of Reiki intervention for decreasing depression is supported by Nancy (2010), Etephene (2006), Crawford et al.(2006), Vital and O’Connor (2006) and Brathovde (2006). When a person receives a Reiki treatment, the practitioner channels energy to the recipient, bring balance in mind, body and spirit (Herron-Marx et al. 2008). Furthermore, to assist policy development for tackling adolescent depression, empirical investigation and evidence are the prerequisites. Thus, considering the importance of depression among Iranian adolescents, a systematic review of the
prevalence and risk factors of depression among adolescent in Iranian studies was conducted as no such work has been carried out to the best of my knowledge.

![Conceptual Framework of the Study](image)

**Figure 1.2 The Conceptual Framework of the Study**

### 1.9 Limitation of the study

The first limitation was on the age of the participants. The CBT training and answering the CDI questions was difficult for the majority of participants who were in the age of 12-13 years. They needed longer to do assignments. The second limitation was related to times interventions. The period of treatments was only six week that this time wasn’t enough for psychotherapy. Other limitation was group training in CBT that they must became arrangement by special knowledge and persons. Control group was one another limitations of the current study. They had to be in the waiting list for six week and they didn’t receive any therapy for decrease of depression. Due to the depression of these samples and unstable mood, they may show disinterest or even cause problems by their lack of cooperation. The possibility of an error in CDI is relatively high due to the lack of necessary information/knowledge in understanding the method questions. The mood at the time of completion of the questionnaire affects the rating and total score of the CDI. In CDI, boredom and carelessness, which are caused by the high number of questions, may lead to poor reliability of the answers given. There is also some
limitation associated with the self-report measures of the CDI questionnaire. There is normally some concern about the reliability of the information which participants given by self-inventory measurements. For evaluating the level of depression based on CDI, it is possible that participants may under-report or over-report-symptoms.

The strength and weakness of Reiki cannot be estimated and the case may show lack of cooperation, which results in low effectiveness and poor treatment. This mainly takes place because Reiki therapy is neither familiar nor tangible in revealing the desired effect/result. Reiki therapy has to be conducted individually, which necessitates spending a lot of time and energy, and hiring professionals. This naturally means high expenses of the treatment. Due to the shortage of the time (six weeks) and the high number of samples, some of CBT techniques such as relaxation are to be conducted in groups. Under ideal circumstances, they can then be performed individually. Another restriction is the literature review in Iran. The researcher could not lay hands on any study similar to the present research in Iran, which could help to support of the present study.

1.10 Summary
This chapter covered the introduction, background, problem statement, research question and objectives of the study, as well as the hypothesis, and definition of terms. The theoretical framework and conceptual framework was described Piaget’s psychosocial development theory, Beck’s cognitive theory, holistic nursing theories. Limitations of the present study in relation to effectiveness of cognitive behavioral therapy and Reiki on depression of adolescents have also been discussed.
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