Studying the effectiveness of cognitive group therapy based on imaginative exposure in social phobia of university students

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This research was accomplished with aim of studying the:

**Abstract**

**Introduction:** effectiveness of cognitive group therapy based on imaginative exposure in social phobia of Payam Noor university students. **Methodology:** The design was pretest-posttest with control group. The population was the students of Varamin Payamenoor University and 120 persons were selected by random sampling. 60 subjects which had the highest grades in the social phobia were divided into 2 groups of experiment and control. Social phobia was measured with Connor's social phobia questionnaire (Alpha = 0.88). This questionnaire would asses 3 small scales of phobia, elusion and physiologic problems. Group Therapy based on imaginative exposure was performed during 8 sessions in experimental group (n = 30).In order to compare 2 control and experimental groups and understanding the effect of pre -test, statistical test of covariance analysis was used. After data collection which was performed in SPSS software. **Findings:**Based on the results of covariance analysis, the main influence of independent variable (group therapy based on imaginative exposure) and after modifying the grades of pre-test on 3 factors of phobia, elusion and physiologic problem and the general grade of social phobia was meaningful. **Conclusion:** Group therapy of imaginative exposure leads to the decrease of students' social phobia.
1. Introduction

Social phobia is showing itself in the routine life of individuals and among the problems of psychological service centers which has the impact of disturbing people lives and its outbreak and this matter would highlight the attention to social phobia, so studying this disorder is one of the responsibilities of psychological specialists (Murray, Cooper, Creswell, Schofield and Sack, 2007). Social anxiety, as an anxiety disorder, is one of the widespread kinds of social anxiety and is the third widespread psychological disorder among general population. (Hoffman and Barlow, 2004) This disorder would be cleared in one or some situations or social performance with obvious and persistent phobia in which the person has a phobia to behave somehow which would lead to his embarrassment and indignity. In the pandemic kind of this disorder, the person has a phobia of most social situations and performances and he avoids them. In a study in 2000 by the America psychology association, a 13/3 percent outbreak for lifelong and a 7/9 percent for one year for social phobia had been achieved (American association of psychology, 2000, translated by Nikkhuh and Avadisianes, 2009). Social phobia is more complex than other kind of anxieties, because it's about the phobia of unobservable events like negative assessment, criticism or rejecting from other people. 70 to 80 percent of individuals with social anxiety report main other disorders (Magee, Eaton, Wittchen, McGonaglr and Kessler, 1996). Therefore, the therapy of this disorder is one of the efforts of psychology specialists and different and various therapies had been developed. Encountering this stressful situation is a behavioral attitude toward the therapy of this disorder and based on it, some exposure therapies had been developed. Imaginational exposure or exposure based on conceptual portrayal is one of these therapies (John Bozorgi and Noori, 2003).

Systematic desensitization and implosive therapy are some kinds of these therapies. Therapies based onimaginational exposure and portrayal exposure are of exposure therapies which are used in behavior therapies. (John Bozorgi and Noori, 2003) Imagination has a deep influence on behavior and in many fields, leads to deep and stable behavioral guidance. This skill could be used as an independent method for completing an efficient psychological plan. There's no limitation for the imagination. Whatever raises and deepens the feeling of peace could be the subject of directed imagination. (John Bozorgi and Noori, 2003) High imagination necessitates that the individual imagines all aspects of a fearful subject to become calm. In the real situation, he would stay in that fearful condition to stop his fear and instead, calmness would be displaced. In performing these situations, the constant presence of a supportive and good therapist is essential (Tad and boo hart, 1999, translated by Firoozbakht, 2000).

Imaginative exposure is also recommended for social anxiety. Exposure is one of the main parts of cognitive-behavioral therapies. Group cognitive behavioral therapy includes 3 parts of exposure, cognitive reconstruction and home duties (Klark and Ferboren, 1997, translated by Kaviani, 2001). Exposure therapies often leads to anxiety decrease( Hope, Heimberg and Brouch, 2006) performing exposure in the form of imagination leads to reformative experiences for people and based on emotional processing theories can be studied (Clark and Ferboren, 1997, translated by Kaviani, 2001). Many studies had been done about group cognitive behavioral therapy, which was influential (Hoop, Hymberg and Brouch, 2006; Hymberg et al, 1990, Hymberg, Salesman, Holt and bandel, 1993, Woodi, Chambelz and Gelas, 1997, Hoofman and Leh, 2006).

Echeburua (2010) in the study of the combination of psychological therapies on stress disorder after trauma concluded that exposure therapy is one of the effective therapies. In the study of group therapy during 3 sessions of exposure for social anxiety disorder patients, Hayes, Hoop and Heimberg (2008) showed that exposure mechanisms are effective. Heimberg et al., in the comparison of group cognitive behavioral therapy with drug therapy, group therapy and supportive therapy and placebo understood that individual responded more to Fenelzin therapy and group cognitive behavioral therapy than placebo and supportive-therapy groups and there was no difference between 2 groups cognitive-behavioral therapy and drug therapy.Halprin, Nathan, Drummond and Castle (2001) considered group cognitive behavioral therapy useful in the meaningful decrease of emotional anxiety. Cognitive behavioral therapy had been used for curing social anxiety with the help of cognitive reconstruction and interventions based on exposure, solely or with the help of other methods in individual or
group forms (Hoop et al, 2006). When exposure therapies are with the decrease of security behaviors, their effectiveness would increase (Wilson and Rapi, 2005). The results of Woodi, Champels and Glass (1997) studies show that the self-attention during collective cognitive behavioral therapy of individuals with social phobia had decreased, while the external attention was without change. Based on this result, Wales and Papa Georgio(1998) stated that exposure therapy combined with some instructions for the construction on outside environment is more effective than used exposure therapy. Thus, the therapy instructions in this study are such that the combinational grouping and duties concentrated on the outside environment are resolving the mentioned defect.

With the increasing interest to study social anxiety during the recent years, an extreme need to achieve assessment methods and curing this disorder is felt (MehrabizadehHonarmand, Taghavi and Atari, 2009, sharifi, 2009, Babashahabi, 2004) collective performance of these exposures would increase the effectiveness of its advantage. It seems that using this method with collective advantages in combination with effective imaginational exposure is useful. Therefore, the aim of this study is answer generally to this question that whether collective therapy based on imaginational exposure leads to the decrease of students' social anxiety? Novel aspects of this study includes: therapy with imaginational exposure technique for the first time in Iran students society.

The researcher believes that group activity increases the effectiveness of these therapies in a collective form, so leads to the therapy acceleration and group experiences would be testable. Collective performance leads to the cost loss and more interests of the patients. Collective therapy based on imaginational exposure leads to the decline of social anxiety in students. Collective therapy based on imaginational exposure leads to the decline of phobia factor in social anxiety of students. Collective therapy based on imaginational exposure leads to the decline of avoidance factor in social anxiety of students. Collective therapy based on imaginational exposure leads to the decline of physiologic problems factor in social anxiety of students.

2. Methodology

This study is experimental and in the case of pretest-posttest designs with control group and random appointment (Delavar, 2006). In this design, intervention therapy of imaginational exposure is an independent variable and social anxiety level is a dependent variable.

2.1. Population, sample and sampling method

The population of this study includes BA/BS students of Varamin Payam Noor University in 2010-11. The sample was determined based on this formula: \( N : \frac{\sigma^2*Z^2}{d^2} \) of 120 persons \( \frac{2(34.05/0)/2(64/1)*2(33/11)}{2} \) and sampling was done with multiple level random method as the following: first, among the 4 main groups of basic sciences, technical and engineering, agricultural and human sciences, 2 groups of human sciences and basic sciences were selected randomly. Biology and physic majors of Basic sciences and law of social sciences were chosen, Of each major, 2 classes and 15 persons were selected randomly.

2.2. Methods

For this study, social phobia questionnaire and the protocol of imaginational exposure therapy had been used.

2.3. Social anxiety questionnaire

This questionnaire had made a report of Connor, Davidsen, Curchill, Sherwood, Foa and Wisler(2000) for measuring the social anxiety which has 17 materials and 3 sub-scale of phobia (3 material), avoidance (7 material) and physiologic problem (4 material). Each material with 5 choices (Never (0), Low (1), Normal (2), Very High (3), and Infinite (4)) would be responded and graded. Social phobia questionnaire was firstly provided by Connor et al (2000) in order to assess social phobia. Clinical allusions of this questionnaire represents that in 3 fields of phobia, avoidance and physiological symptoms, some information is provided which has a number of advantages of shortness, simplicity and easiness. This tool having stable characteristics of psycho-assessing characteristics could be used as a reliable tool to assess the severity of social phobia symptoms. Furthermore, it has some applications as a sieving tool to test answering to therapy in social phobia and finally, this scale can discriminate therapies with different utilities.

2.4. Validity and stability of the questionnaire
In Momeni study (2005), Cronbach Alpha of the whole questionnaire was /88, first and second half alpha of questionnaire were /81 and/77, correlation between 2 halves was /77 and reliability coefficient was reported /87 using Spierman Brown test. Its stability was reported by using retest method in some groups with discriminating social phobia disorder of /78 to /89 and its Cronbach Alpha in a disordered group is /94 and for sub scales of phobia, /89, avodane, /91, and physiologic problem, /80 was reported. (Connor et al 2000)

In order to study test’s validity, the comments of 10 professors in the field of therapy and psycho -therapy of Azad university were used and all of them using their experiences and studies, confirmed the questionnaire and stated that its questionnaire were consistent with the characteristics and recognition of social phobia disorder.

Cronbach Alpha of this study with 300 persons as the sample for the general grade of social phobia of /86 and for phobia, avoidance and physiologic problem were /84, /81 and /89, respectively. Cronbakh alpha with 30 testable volume which were selected randomly was /84 for social phobia and for phobia, avoidance and physiological problem were /84, /79 and /81, respectively.

3. Collective therapy protocol for imaginational exposure

The contents of performing therapy sessions are as following:

First Session: introducing social anxiety and therapy logic and determining goal.
Second session: describing a clear intellectual imagination with details by group leader and its performance by one of the audiences and resolving defects (the volunteer has to describe verbally).
Third Session: a clear imagination with details of faces, motions, states and possible collective thoughts in which the individual is present (a situation that the person is more concerned about it would be selected and would perform a complete imagination, then he would state its details, so group leader would confirm it), next, the participants would perform it following the models.

Fourth Session: A clear imagination with the details of a person’s thoughts in a collective condition (It’s better to have third session conditions). In fact, the thoughts and the knowledge of persons with social anxiety would be imagined obviously with details and as the person observes, he would state them. Fifth Session: imagining excitements and body gestures of a person is as usual and he would continue his activities and as he observes, would state for the audience. If he does not state the details, group leader would direct him toward that goal.

Sixth Session: is a simultaneous imagination of patients’ performance during 3rd, 4th and 5th sessions. Performing by the first individual in every session would be reformed by group leader’s points. Seventh Session: The contents of 6th session are performed for situations which the individual would face. If possible, the real experienced situation between 7th and 8th session would be reported in the final session. Eights session: Performing a complete imagination and its modification by the consultant for the audience. Each one of the audience would state his learned and expectations for the group and also his fears. The final points would be selected by the therapist and based on the audience comment (Clark and Ferberen, 1997, translated by Kaviani, 2001).

In order to analyze the data and showing the effect of dependent variable (imaginational exposure therapy) on dependent variable variance (social phobia) Covariance analysis test was used.

4. Results

The results of table 1 shows the average (24/9), and standard deviation (4/67) and the age of study testable parts of the 2 experimental (26/77 and 4/14) and control group (23/03 and 4/48). The difference between the age average of the 2 groups during the t test was not meaningful.

<table>
<thead>
<tr>
<th>education</th>
<th>age</th>
<th>number</th>
<th>indices</th>
</tr>
</thead>
<tbody>
<tr>
<td>BA student</td>
<td>4/14</td>
<td>25/07</td>
<td>30</td>
</tr>
<tr>
<td>BA student</td>
<td>4/48</td>
<td>23/73</td>
<td>30</td>
</tr>
<tr>
<td>BA student</td>
<td>4/67</td>
<td>24/9</td>
<td>60</td>
</tr>
</tbody>
</table>
The results of table 2, shows the average and standard deviation of pre-test and posttest grades for social phobia and sub-scales of phobia, avoidance and physiologic problems.

Table 2
Description data of the study's variables.

<table>
<thead>
<tr>
<th></th>
<th>Physiologic factor</th>
<th>Avoidance factor</th>
<th>Phobia factor</th>
<th>Social anxiety</th>
<th>Dependent variable</th>
<th>Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard deviation</td>
<td>average deviation</td>
<td>average</td>
<td>deviation</td>
<td>average</td>
<td>Standard deviation</td>
<td>average</td>
</tr>
<tr>
<td>4/06</td>
<td>7/66</td>
<td>4/65</td>
<td>10/52</td>
<td>4/13</td>
<td>7/70</td>
<td>11/69</td>
</tr>
<tr>
<td>3/64</td>
<td>7/97</td>
<td>5/32</td>
<td>11/03</td>
<td>4/27</td>
<td>7/77</td>
<td>12/18</td>
</tr>
</tbody>
</table>

Table 3
The summary of covariance analysis for the therapy effects on the social phobia with pre-test control.

<table>
<thead>
<tr>
<th>Error level</th>
<th>Amount of F</th>
<th>Average of squares</th>
<th>Free grade</th>
<th>Total of squares</th>
<th>reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/01</td>
<td>262/29</td>
<td>3587/59</td>
<td>1</td>
<td>3587/59</td>
<td>Social anxiety</td>
</tr>
<tr>
<td>0/02</td>
<td>14/57</td>
<td>199/21</td>
<td>57</td>
<td>779/64</td>
<td>Grouping</td>
</tr>
<tr>
<td></td>
<td></td>
<td>13/68</td>
<td></td>
<td></td>
<td>Error</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>60</td>
<td>32219</td>
<td>Total</td>
</tr>
</tbody>
</table>

The results of covariance analysis (Table 3) showed that after modifying the pre-test grades as a variant variable, the main effect of therapy on social phobia grades after the test is meaningful (p=0.02, F(1/57)=14157). So, the first hypothesis of the study was confirmed. Therefore, collective therapy based on imaginational exposure had led to the decline of social phobia in the students.

Table 4
The summary of covariance analysis for the therapy effects on the phobia with pre-test control.

<table>
<thead>
<tr>
<th>Error level</th>
<th>Amount of F</th>
<th>Average of squares</th>
<th>Free grade</th>
<th>Total of squares</th>
<th>reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/03</td>
<td>119</td>
<td>478/27</td>
<td>1</td>
<td>478/27</td>
<td>Phobia factor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>51/11</td>
<td></td>
<td>51/11</td>
<td>grouping</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4/02</td>
<td>57</td>
<td>229/07</td>
<td>error</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>60</td>
<td>3396</td>
<td>total</td>
</tr>
</tbody>
</table>

The results of covariance analysis (Table 4) showed that after modifying pre-test grades as a variant variable, the main effect of therapy variable on the grade of phobia factor after test is meaningful. (P=0.01, F(1/57)=12/72). So, the second hypothesis of the study would be confirmed. Therefore, group therapy based on imaginational exposure led the decline of social phobia in the students.
Table 5
The summary of covariance analysis for the therapy effects on the avoidance with pre-test control.

<table>
<thead>
<tr>
<th>Error level</th>
<th>Amount of F</th>
<th>Average of squares</th>
<th>Free grade</th>
<th>Total of squares</th>
<th>reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/02</td>
<td>209</td>
<td>524/36</td>
<td>1</td>
<td>524/36</td>
<td>Avoidance factor</td>
</tr>
<tr>
<td>0/001</td>
<td>21/35</td>
<td>53/55</td>
<td>1</td>
<td>53/55</td>
<td>grouping</td>
</tr>
</tbody>
</table>

The results of covariance analysis (table 5) showed that after modifying pre-test grades as a variant variable, the main effect of therapy variable on the grade of avoidance factor after test is meaningful. (P=0.001, F (1/57)=21/35). So, the third hypothesis of the study would be confirmed. Therefore, group therapy based on imaginational exposure led the decline of avoidance factor of social phobia in the students.

Table 6
The summary of covariance analysis for the therapy effects on the physiological problem with pre-test control.

<table>
<thead>
<tr>
<th>Error level</th>
<th>Amount of F</th>
<th>Average of squares</th>
<th>Free grade</th>
<th>Total of squares</th>
<th>reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>0/005</td>
<td>139/17</td>
<td>432/97</td>
<td>1</td>
<td>432/97</td>
<td>Physiologic factor</td>
</tr>
<tr>
<td>0/02</td>
<td>8/08</td>
<td>25/14</td>
<td>1</td>
<td>25/14</td>
<td>grouping</td>
</tr>
</tbody>
</table>

The results of covariance analysis (table 6) showed that after modifying pre-test grades as a variant variable, the main effect of therapy variable on the grades of physiological problem after test is meaningful. (P=0.02, F (1/57)=21/57). So, the third hypothesis of the study would be confirmed. Therefore, group therapy based on imaginational exposure led the decline of avoidance factor of social phobia in the students.

5. Discussion and conclusion

The results about first hypothesis is consistent with the findings of the Mehrabizadehonarmand, Taghavi and Atari (2009), Dasetan, Anari and Saleh Sedghpoor (2007), Sharifi (2009) and Babashahabi (2004). The study of Dadsetan et al is showing the impact of therapy which was consistent with the imaginational nature of this study. So, the results are confirming the power and the effectiveness of the imagination.

Performing exposure in the form of imagination leads to correctional experiences for the individuals, that are determined based on the theories of the emotional processing. (Clark and Ferboren, 1997, translated by Kaviani 2001) a condition in which the results of the study had confirmed it. The effectiveness in all 3 factors of social phobia had happened.

So, the results of 2nd and 3rd hypotheses are consistent with the results of Hafman and Leh (2006), Woody, Chambels and Glass (1997), Hoop, Hymberg and Brouch (2006), Hymberg et al. (1990 and 1993) which had been performed bout collective behavioral therapy.

The results about the confirmation of 4th hypothesis are consistent with the researches about the effect of behavioral therapies based on exposure solely or along with other methods individually or collectively. We can point to some researches including Echeburura (2010), Hyes, Hope and Heimberg (2008), Heimberg et al. (1998).

Some researches which had used the application of group exposure and their results were such that exposure is useful for the groups with phobia disorders, supports the confirmation of this study’s hypothesis. Collective therapy shows that this method is effective and is influential in many individuals as the face to face therapy method. In fact, some factors like collective potentials and social strengthening could facilitate exposure and quickens patient’s cure. This hypothesis was supported following the results achieved in this study. (Khayer, Ostovar, Latifian, Taghavi and Samani, 2008).
With all the mentioned advantages for real exposure, in some cases in which fearful stimulations could not be used due to not accessing to real situations or when those stimulations have an imaginative nature, imaginal exposure is a reliable method, (Michelson, 1984, stated by Block and Hersen, Translated by Maher and Izadi, 2008) a method which this study has shown its effectiveness. The results of this study had confirmed the effectiveness of imaginal exposure on social phobia and its factors.

While facing stressful situations is considered an important factor in the therapy of social phobia, but its real performance has some problems (Akbari, 2005). Social situations like parties, work meetings and accidental encountering with people in the society in comparison with usual situations which are used in the therapy of persons with encountering phobia are so changeable and less predictable. Important aspects of the considered situations, like the objection and or complaint to the head of the sale part may not be long enough or repeatable to provide the possibility of appearing a change during the sessions, (Rosenhaun and Seligman, 1999, translated by Seyedmohammadi, 2005) a situation which seems that to be covered by collective performance. This defect was resolved and the effectivity of the therapy in comparison to some other researches was increased.

Modeling was one of the definitions that used in this study and in the form of collective therapy. Because some theoreticians like Bendoro had stated that modeling could be used for the cure of some complex skills for some patients with anxieties related to the social conditions. For example, suitable eye contact and speaking changeability could be presented by therapist or another patient in the practicing session in clinic. Here, the order of practical exposure could be provided by situations and its samples were performed in the therapy sessions of this study.

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