The effectiveness of group training for reciprocal behavior analysis on the self-efficacy among school counselors

Raziye Keramati¹, Mehrangiz ShoaKazemi², Farhad Tanhaye Reshvanloo³, Simin Hosseinian⁴

Abstract

This study aimed to study the effectiveness of group Training for reciprocal behavior analysis on dimensions of self-efficacy among school counselors. 77 counselors were participated in the current study to complete general self-sufficiency scale. Then 28 participants (21 females and 7 males) who obtained the least scores were randomly replaced in the two groups of experimental and control. Intervention trial (group training for reciprocal behavior analysis) was conducted on experimental group for ten 90-minute sessions twice a week. At the end of trial, both groups carried out a posttest. Data was analyzed by using multivariable covariance analysis. Results revealed that regarding self-efficacy and its dimensions, there is no significant difference between experimental and control group so group training of reciprocal behavior analysis has no effect on the dimensions of self-efficacy among counselors. Thus, we may come up with this conclusion that self-efficacy is a characteristics that can be modified and promoted through training. Consequently, providing such short-term educational courses is beneficial to school counselors.

Keywords: Behavior, Counseling, Reciprocal, Self-efficacy, School

Introduction

Counseling is a process which relies on references for growth, compatibility, decision making and problem solving [1]. A counselor does need a great quantity of knowledge and skills. Counselors can’t separate themselves from their beliefs, values, ideals and secrets while communicating their clients. Thus, the counselor needs to enjoy specific personal characteristics in order to be a successful healthcare provider [2]. Christiani and George believe that some characteristic traits such as:ability to establish deep friendly relationships with others, self-steem, self-awareness of values and beliefs, sense of responsibility, enjoyment of the required experience as well as realistic objectives are essential for counselors to act effectively[3]. Bourderz and Brown express that efficient and effective counselors are aware about their individual limitations in counseling. They argue such counselors try to consult with their colleagues with higher academic degrees or more experience when they face a problem and
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as a whole, they are aware of their abilities. Efficient counselors enjoy good merit and efficiency [4]. Dokanehee Fard, Shafiabadi and Sharififar conducted a research and came up with this conclusion that successful counselors are superior to their unsuccessful counterparts in terms of mental and cognitive abilities, patience, the ways of coping with problems, mental health, good fame and neatness skills, physical health and educational background [5]. Different approaches of psychotherapy such as Roger’s reference-centered treatment, behavioral cognitive approach, Nicholas and Schwartz’s Family Treatment Systems, Karkov’s Human Resource Promotion Model and IV sub-skills approach have also discussed the skills which are required to achieve an effective counseling process for counselors. For example, Rogers was of this opinion that a counselor must be able to depict quite clear understanding so that he will not lose his essence affected by references issues [6]. Larson applied cognitive, emotional and motivational processes from Bandura Social Cognitive Theory in counselors training with a different approach and gave the name of Social Cognitive Model for Counselor’s Skill Training (SCMCT) on it. Regarding Larson’s Model, Counselor’s self-efficacy model is the first determinant of an effective counseling [7]. Generally self-efficacy as individuals’ perception of their ability to perform a specific action in a definite situation is based on this presumption that the individuals’belief regarding their abilities and talents has desirable effects on their activities which is the most important determinant of their behavior. Based on the social-cognitive theory of Bendora, control source is not located in the environment, but it depends on the mutual relation of environment, behavior and individual. Personal efficiency or self-efficacy is one of the important personal variables. When self-efficacy is coupled with special goals and awareness of performance, it can play an important role in the individual’s future behavior [8,9,10,11]. On the other hand, self-efficacy unlike self-esteem is not a general concept. Rather, people’s perception of their self-efficacy level may be high in a certain situation and low in another situation. Self-efficacy perception may be different from one situation to another depending on the required qualification for different activities, existence or non-existence of other individuals, perception of other individuals competence, individual’s readiness to pay attention to failure in performance instead of success and physiological states together with behavior especially fatigue, anxiety, indifference or disappointment. Self-efficacy is a more limited and definite concept compared to self-confidence and self-esteem. It is also a stronger predictor for individual’s behaviors and their manner of doing their assigned duties [12]. People with high self-efficacy believe that they can control their own thoughts, feelings and behaviors. They are confident about their capabilities and merits. They look at the problem as a challenge not risk. They choose meaningful objectives for themselves with this belief that they can achieve them [13,14]. The results of a meta-analysis on 114 researches with more than 21600 experimental subjects indicated a positive and significant relation between the sense of self-efficacy and job performance [15]. Bendora’s approach concerning self-efficacy has not been provided to counselors; however, it is applicable to them. In this regard, Larson and Deniz define counselors’ self-efficacy as their perceptions of the ability to have effective choices in the process of counseling and making effort to face with failures or challengeable behaviors [16]. In other words, self-efficacy is the judgment counseling and counselor’s belief about individual ability and capability for likely counseling to a client. Counselor’s self-efficacy is related to his belief concerning the capability to deal with counseling activities and managing the challengeable behaviors which may occur in a counseling situation [17]. According to Savintz, such perception of self-efficacy is based on the belief of individuals functionality [6]. Bendora believes that functionality includes performing intentional activities which are performed by an individual as the result of belief in the power of controlling
the results. In other words, in functionality an individual believes that he can consciously use his capabilities in case of any change or behavior [18]. This is the basis of a counseling-based relation. If counselors believe that they can achieve their intended results in the process of counseling, they will likely be able to manage possible anxieties and risks of that process including reference resistance or selection of incorrect procedures. In a review on the researches conducted on counselors’ self-efficacy, Larson and Denliz reported that self-efficacy is associated with performance, anxiety and capability of counselors to manage counseling process [16]. The research conducted by Eldar Maki showed that the self-efficacy of counselors has a negative relationship with their anxiety but a positive relationship with the self-assessment of problem solving skill [19]. Hall observed a negative and significant relationship between self-efficacy and anxiety for counselors [20]. On this basis, it seems that the atmosphere for providing self-efficient beliefs among counselors through education should be provided. In a research conducted on 25 counseling students during education in the North America with the goal of changing the self-efficacy beliefs of counselors, Kazina, Grabuary, Stefano and Draipo reviewed the effectiveness of training general and special self-efficacy skills including treatment, managing complicated behaviors of attendants, cultural competence and awareness of values. The results indicated a significant increase in students’ self-efficacy during that training course [21]. Larson and Denliz believe that self-efficacy of counselors is based on their ability to transfer the acquired knowledge to counseling situation and to use it effectively [16]. In this way, it seems that improvement of counseling skills through training counseling approaches can be effective in promoting counselors’ effectiveness. Training how to analyze mutual behavior (TA) is one of the trainings which affects counselors’ efficiency. In a research, Tempel and Larkan taught analysis-oriented theory to a typical group of teacher training students. Follow-up results with a 6-month interval after graduation indicated that these students had higher educational and professional efficacy by the influence and application of fundamental concepts of the theory of analyzing mutual behavior [22]. Instructing how to analyze mutual behavior based on the theory of Beren is a well-disciplined procedure for personal desirable growth and changes. By providing communication viewpoints and skills, this method helps the individuals to establish a coordinated, suitable and dynamic interaction with the environment for understanding their rolepaying attention to inter-personal relations and mutual reactions of people and analyzing them [23]. The goal of mutual behavior analysis is to help individuals who are challenging with themselves to understand their roles and being aware of their responsibility and direction of life so that they can apply necessary changes in the process of their life [24]. In this approach, effort is made so that individuals reach a degree of personal growth as they can find a solution for their problems [25]. Mc Kim and Fourest used mutual behavior analysis in parallel with the improvement of educational and clinical supervision. They came to the conclusion that behavior analysis model would aid supervisors to get released from disappointment and also provides them with the possibility of establishing a desirable relation with their trainers [26]. In a research conducted by Alipour, Agha Yousefi and Adabdoost, they indicated that training mutual behavior analysis would be effective in increasing happiness, tolerating mental stress, emotional self-awareness, realism, impulse control, flexibility and self-statement [27]. Considering the prior studies, it seems that self-efficacy is important for efficacy of counselors and this trait can be improved among individuals through education. This seems essential especially for school counselors since they should be expert in the use of cognitive, emotional and behavioral interventional strategies due to their attendants. Counselors should help students in individual, social, educational and
occupational fields. They should prepare them to face with the problems they should improve their mental health and provide the ground for their prosperity [28]. In addition, counselors should be prepared to face with intentional challenges including lack of suitable tools and counseling venue, insufficient knowledge and skill for using the tools and the difficulties of establishing communication with students and parents at schools [29]. These challenges may affect counselors’ actual performance or their perception of their capabilities. In other words, training the strategies of counseling based on scientific theories in this field is expected to be effective in improving preparedness and capability of counselors. On this basis, the goal of the present research was to assess the effectiveness of training mutual behavior analysis on self-efficacy of school counselors so that they can in turn provide the methods of measurement or development of self-efficacy among the students.

Method
This research was quasi experimental study containing pre-test and post-test design with control group. Group education of mutual behavior analysis was considered as an independent variable and self-efficacy of the counselors as a dependent variable. According to the statistics of the education organization of Bojnourd, the east north of Iran. The number of counselors reached to 90 individuals. In order to select the statistical sample, 77 individuals were defined by convenience sampling method. They completed general self-efficacy questionnaire. Next, 28 individuals with the lowest scores were selected by screening method and were placed into two groups, experiment and control groups. Subjects’ consent was met orally. After assigning individuals to the experiment group and control group, mutual behavior analysis were trained to them in 10 sessions of 90 minutes for two weeks according go Bern theory. The titles and subjects of the sessions for group education of mutual behavior analysis included the following:

First session: Introduction, agreement and introducing Bern’s theory of mutual behavior

Second session: the description of modes “I” and its division with presenting examples.

Third session: the education of Ago gram and its outline in order to make individuals able to introduce themselves by using mutual behavior analysis.

Fourth session: teaching two important subjects of behavior analysis theory including ok and life modes which involve: I am not ok but you are, I am not ok neither are you, I am ok but you aren’t, I am ok, so are you.

Fifth session: introduction of caress, sixth session: presenting caress mascots by Steiner’s view.

Seventh session: Introduction of different types of diseases in view of Bern’s mutual behavior analysis.

Eighth Session: Describing the types of relationships in analysis of mutual behavior such as complementary, crossover and complicated relationships.

Ninth session: Introduction of barriers (don’t do that, don’t behave like a child) and drivers (try it).

Tenth session: working on the concept of change, features of behavior change and objectives of change for mutual behavior analysis including self-awareness, self-motivation and friendship.

Control group was excluded from this training. When the period finished, after one week, post-test was implemented. Both groups completed general self-efficacy questionnaire. In this phase, Madox and Scherer’s general self-efficacy scale was used. The scale had 17 items with three dimensions of behavior including tendency to initiate a behavior, tendency to enhance effort for completing task and resistance in facing the barriers. Vodrov and Kashmar used general self-efficacy scale and explored its structural validity through explorative factor analysis. Also, Asgharnejad et al have normalized the general self-efficacy scale for the Iranian population. They studied the structural validity of the scale by using confirmatory and explorative factor analysis. Also, they reported the reliability of the scale 0.56 to 0.76 of Chornbach’s alpha for the subscales and 0.83 for the total scale (0.30). In the current study the reliability of the questionnaire was calculated 0.88 by using Cronbach’s alpha. The general questionnaire of
self-efficacy was scored on a five point Likert Scale from completely agree (5) to completely disagree (1). After reversing the scores of some of the questions (3, 8, 9, 13, 125), the total scores for the participants were calculated to be used as a criteria for their self-efficacy. The score range for tendency to behavior initiation was 7 to 35, for tendency to extend efforts was 3 to 15 and for the total scale from 17 to 85. Higher scores for the individual dimensions and the total scale reflect a desirable status for the individuals.

Data were analyzed with multivariate covariance analysis. For this analysis, the following assumptions were necessary: data normality for variable distributions, homogeneity of variance and lack of difference between the matrix of variances and covariance. The assumptions were investigated by Kolmogorov Smirnov test, Levine test and M box. The variables were categorized as follows: the scores of self-efficacy within post-test as dependent variable, belonging to either experimental or control group as independent variable, and the score of self-efficacy within pre-test as covariance variable. All analyses were conducted by using SPSS 17.

### Results

Demographic indices showed that, the ratio of men to women was 4:10 in control group and 3:11 in experimental group. Mean age of the female participants for experimental group was 3.4 and 28.6 for control group this ratio for male participants were 35.7 and 40.5, respectively. Totally, 21.4% of the participants in experimental group were single and 78.6% married. In control group, the ratios were, 14.3% and 85.7% respectively. For the experiment group, 92.9% had “bachelor of art degree and 7.1% had theological educations. For the control group, 78.6% of the participants had bachelor of art“, 14.3% master of art and 7.1% Ph.D degree. The descriptive indices of post-test and pre-test scores for self-efficacy of both groups are provided in Table 1.

As mentioned before, multivariable covariance analysis needs some assumption. The results of testing normality of variables distribution and variances homogeneity are presented in Table 2. The results in Table 2 indicate that the value of statistics in Levin test is not significant for all variables. Therefor, the homogeneity hypothesis

<table>
<thead>
<tr>
<th>Group</th>
<th>Pre-test</th>
<th>Post-test</th>
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<tbody>
<tr>
<td></td>
<td>Mean ± SD</td>
<td>Mean ± SD</td>
</tr>
<tr>
<td>Tendency to initiate behavior</td>
<td>Experimental</td>
<td>27.07±4.45</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>26.86±4.59</td>
</tr>
<tr>
<td>Tendency to extend efforts</td>
<td>Experimental</td>
<td>21.71±3.7</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>23.14±3.39</td>
</tr>
<tr>
<td>Resistance in facing barriers</td>
<td>Experimental</td>
<td>10.50±2.62</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>11.21±2.01</td>
</tr>
<tr>
<td>General self-efficacy</td>
<td>Experimental</td>
<td>63.36±10.26</td>
</tr>
<tr>
<td></td>
<td>Control</td>
<td>64.86±9.91</td>
</tr>
</tbody>
</table>

### Table 2

The normality of variable distribution and homogeneity of variances

<table>
<thead>
<tr>
<th>Results from Levin test</th>
<th>Kolmogorov-Smaernov</th>
</tr>
</thead>
<tbody>
<tr>
<td>df1</td>
<td>df2</td>
</tr>
<tr>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>Tendency to initiate behavior</td>
<td>1</td>
</tr>
<tr>
<td>Tendency to extend efforts for completing task</td>
<td>1</td>
</tr>
<tr>
<td>Resistance in facing barriers</td>
<td>1</td>
</tr>
<tr>
<td>General self-efficacy</td>
<td>1</td>
</tr>
</tbody>
</table>
of the variances is accepted. Other results of the table show that the index Z for Smearnov Kolmogorov is not significant. Thus, it could be concluded that the assumption of normality in variables' distribution is correct. The hypothesis of lack of differences between variance and covariance matrices was also investigate by M box test. The results was Bo X’s M = 5.99, F=-0.87, P=0.51). With accepting these assumptions, the multi variable covariance analysis can be done with certainty. The results from this analysis and its dimensions are provided in Table 3 and Table 4, respectively.

The results in table 3 show that the difference of adjusted mean differences in control and experimental groups in terms of total score of self-efficacy are not statistically significant (F=0.71, P=0.56). Therefore, it could be said that group education of mutual behavior analysis didn’t have significantly influence on counselors’ self-efficacy. The influence of these educations were too small (0.09) and accuracy of the test was low (0.17).

Table 3 Results from analysis of Covariance analysis in control and experimental groups for total score of self-efficacy

<table>
<thead>
<tr>
<th>Change source</th>
<th>Wikle’s Lamda</th>
<th>F</th>
<th>P</th>
<th>Effect size</th>
<th>Test power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Group membership</td>
<td>0.91</td>
<td>0.71</td>
<td>0.56</td>
<td>0.09</td>
<td>0.17</td>
</tr>
</tbody>
</table>

There is no significant differences between adjusted means of tendency to behavior initiation (F= 0.01, P=0.93), tendency to extend effort for completing task (F=0.32, P=0.58), resistance in facing barriers (F=1.04, P=0.32) in both groups. So it means that group education of mutual behavior analysis did not have an influence on dimensions of counselors’ self-efficacy.

Table 4 Results from multivariable covariance analysis for the effects of mutual behavior analysis on the dimensions of self-efficacy in the control and experimental groups

<table>
<thead>
<tr>
<th>Dimensions of self-efficacy</th>
<th>Index</th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>P</th>
<th>Effect size</th>
<th>Test power</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tendency to initiate behavior</td>
<td>Pretest</td>
<td>9.82</td>
<td>1</td>
<td>9.82</td>
<td>1.43</td>
<td>0.24</td>
<td>0.06</td>
<td>0.21</td>
</tr>
<tr>
<td></td>
<td>Group membership</td>
<td>0.05</td>
<td>1</td>
<td>0.05</td>
<td>0.01</td>
<td>0.93</td>
<td>0.005</td>
<td>0.05</td>
</tr>
<tr>
<td>Tendency to extend efforts for completing task</td>
<td>Pretest</td>
<td>0.14</td>
<td>1</td>
<td>0.14</td>
<td>4.88</td>
<td>0.04</td>
<td>0.16</td>
<td>0.56</td>
</tr>
<tr>
<td></td>
<td>Group membership</td>
<td>2.26</td>
<td>1</td>
<td>2.26</td>
<td>0.32</td>
<td>0.58</td>
<td>0.01</td>
<td>0.09</td>
</tr>
<tr>
<td>Resistance in fighting against barriers</td>
<td>Pretest</td>
<td>1.17</td>
<td>1</td>
<td>1.17</td>
<td>0.61</td>
<td>0.44</td>
<td>0.03</td>
<td>0.12</td>
</tr>
<tr>
<td></td>
<td>Group membership</td>
<td>2.93</td>
<td>1</td>
<td>2.93</td>
<td>1.04</td>
<td>0.32</td>
<td>0.04</td>
<td>0.17</td>
</tr>
</tbody>
</table>

Discussion

The current research was intended to study the effectiveness of mutual behavior analysis on dimensions of self-efficacy among counselors at school. The findings of this research indicated that group education of mutual behavior analysis for the counselors at schools was not significantly influencing general self-efficacy, tendency to behavior initiation, tendency to extend efforts for completing task and resistance in facing barriers. To our knowledge, no investigation has been previously done directly on the effectiveness of training mutual behavior analysis on self-efficacy among counselors.

However, the findings of the current research are not consistent with the findings of the similar studies. For example, Lemple and Lerkan taught the analytic theory to a group of 21 teacher students in a two day schedule. Their results showed that the students by using the basic concepts like mutual behavior analysis, were able to obtain more academic and professional efficacy [22]. In addition, Kaznia et al found that in an educational course which was designed to promote basic knowledge and skills of counseling, the self-efficacy of counseling students were increased [21]. The results from these studies are not consistent with the results of the current study. Aldarmaki and Hall indicated that self-efficacy of counselors was related to their anxiety and problem solving skill. On the other hand, some researches indicated that self-efficacy could be increased by training [31]. In addition, based on the viewpoint of Larson and Denliz,
self-efficacy of counselors is influenced by their ability of transferring knowledge to the counseling situation [16]. On this basis, it is expected that instruction of counseling strategies including mutual behavior analysis which make counselors expert on psychotherapy theories can increase self-efficacy among counselors. But the results of this research did not confirm this issue. Some explanations may justify the inconsistencies our findings with those of the prior researches. First of all, self-efficacy is a characteristic which is influenced by an extensive domain of individual experiences in different fields. On this basis, change in the level of self-efficacy of counselors requires more time, so tangible changes in self-efficacy in a short time seems impossible. The age range of participants in the research strengthens this explanation because the average ages of female participants in the experimental and control groups were 34 and 28.6, orderly. These ratios were 35.7 and 40.5 for males, respectively. It means that participants in this research enjoyed a high degree of self-efficacy due to their age and tenure thus any tangible change during that 10-session training course seemed unlikely. The second possible explanation was previous acquaintance of counselors with mutual behavior analysis. Especially, in the entire participant, 21.4% had master and PhD degrees in psychology and counseling. It is likely that the counselors were relatively or sufficiently familiar with this approach so training could not make any significant change in their knowledge in regard of this topic. The third possible explanation and one of the limitations of the present research is its measurement tool. The index of general self-efficacy is a means that assesses general belief of people in different fields and it is not allocated to any special situation of behavior [30]. This tool was applied by researchers in this research for the lack of access to other valid measurement tools which assess self-efficacy of counselors with suitable psychometric characteristics within the Iranian culture. It is evident that using relevant means such as the index of self-efficacy of school counselor (SCSES) codified by Kan [32], Lent, Hill and Hoffman index of self-efficacy of counselors’ activities [33], or list of self-assessment of counselor (COSE) which was codified by Larson, Suzuki, Gilpsi, Potenzad, Bichel and Tolzeh [34], may provid more useful findings in a research like this in which the participants were school counselors. Future researchers are recommended to review the psychometric characteristics of the above tools for using in similar researches and to control some of the intervening variables including the level of previous knowledge of counselors in the field of counseling approaches.

Conclusion

We can come up with this conclusion that self-efficacy is a characteristic which may be changed and increased by training as the previous researches indicate changes in the level of self-efficacy through training. However, this process may not be possible due to the meddlesome factors such as the age of participants, type and term of trainings since self-efficacy is a characteristic which is caused by various experiences in special fields. On this basis, change in the level of self-efficacy requires more time. Despite the fact that trainings and exercises within mutual behavior analysis are associated with self-efficacy, tangible changes in this variable in a short time seems to be unlikely especially in this group whose self-efficacy had a strong level due to their age and tenure. Considering the results of the current research and the viewpoints concerning learning psychology, it is inferred that correct training by considering human’s need will be always possible and useful, especially in the field of counseling and guidance in which counselors play their roles as both a counselor and a teacher. Therefore, one of the most important indexes for a successful counseling is the establishment of a correct and effective interaction and communication which was reviewed in this analysis. Considering the work records of counselors and their postgraduate degrees, our result seemed to be acceptable because counselors all pretended to be strong enough
to apply different kinds of “I” in different levels of communication with attendants and especially students. This was the best reason of self-efficacy and there was no significant need for any change. One of the reasons for attending in the training sessions was their necessity to obtain an on-the-job certificate for the purpose of job promotion. Considering the counselors’ performance in other occupational areas, the results are not far from the mind. At the end, the fact that the researcher was younger than the participants may be a strong reason that explains any finding. Therefore, on-the-job courses with such concepts and subjects together with more experienced professors are strictly proposed. Another recommendation is training the same people to find their weaknesses, to hold workshop or group counseling with active participation of counselors and not just having the sessions on a teacher-oriented basis.

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Contributions
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Data collection and analysis: MS,FTR,SH
Manuscript preparation: RK

Conflict of interest
"The authors declare that they have no competing interests."

References
5- Dokaneh'ecifard F, ShafiAbadi A, Pasha Sharifi H. The personality characteristics and demography factors of successful counselors with regard to counselors' society approach. Iran J Psychiatry Clin Psychol2008; 3(10): 33-46. [In Persian]


23- Stuart Y, Jones V. A New Introduction to transactional analysis. Translated by Dadgostar B. Tehran: Dayereh 2010. [In Persian]


