

The Effect of Solutions-Focused Approach Training on Self-efficacy and Problem-Solving Abilities in Students of Sari Islamic Azad University, Iran

Mehdi Arab Kalmeri^{1*}, Mohiddin Faghihan Jouybari², Arefe Rayatniya Shahrodi³, Reza Shabani⁴

¹Islamic Azad University, Branch of Quchan, Iran

²Mazandaran Islamic Azad University, Science and Research, Iran

³Islamic Azad University, Branch of Tonekabun, Iran

⁴Islamic Azad University, Branch of Sari, Iran

*Corresponding Author Email: Mehdi.arab.k@gmail.com

ABSTRACT: Present research was quasi-test study with pretest-posttest using control group in which the influence solution-focused approach training on the self-efficacy and problem-solving abilities were evaluated. The statistical population of this research was students of Sari Islamic Azad University in winter 2015. Sampling research consisted of 32 students (in experimental group (16 individuals) and in control group (16 individuals)) that were selected from voluntary basis by participating in communication skills workshop in the form of 6 sessions that each session were held at 90 minutes in the lectures and group discussions manner by researcher. Research's tools were two questionnaires such as Scherer General Self-Efficacy (GSE-17) and Heppner Problem-Solving questionnaire (PSI). Descriptive findings of mean, standard deviation and inferential analysis of covariance using the software were analyzed by SPSS16. Result indicated that training of solution-focused approach were effective on increasing the self-efficacy of students. Also, hypothesis testing showed that solution-focused approach training enhances the students' problem-solving. The result of covariance test revealed that of solution-focused training approach were effective on increasing the problem-solving components such as confidence to problem-solving, avoidance-enthusiasm style and personal control of students.

Keywords: Problem-Solving Abilities, Self-Efficacy, Solution-Focused Approach Training.

INTRODUCTION

Mental health is one of the major categories of psychology and psychiatry topics that a large number of studies devoted to it every year and psychologists have always been interested in factors affecting it. Student period is the period of the transformation that during which, the efficacy beliefs and capability in solving the problems on psychological consequences are very effective and important. According to Bandura perceived inefficiency have an important role in depression, anxiety, stress and other emotional states. It can also lead to feelings and beliefs absurdity (Jahani-maleki, 2011). Bandura's research (1997) showed that the low self-efficacy feelings by the psychological stress had correlation with weaker responses to pain and less motivation to track programs related to health. On the contrary, the feeling of high self-efficacy by reducing stress and less biological response to stress had

positive correlation with more power compliance and more favorites to health programs. Self-efficacy is effective on a way of thinking, manner the encounter the issues, emotional health, decision making, coping with stress and depression (Bandura & Locke, 2003) and the selection of targets and access to them (Dweek, 2000). Self-efficacy is the component that can be associated with success and academic performance of students. In fact, the self-efficacy beliefs is the person beliefs about one's abilities for adopting the performance selective levels that is guidance and shaper the events affecting the person life (Caprara et al., 2006). Self-efficacy beliefs help to determine how long people spend their activities, how much have perseverance for encounter with the possible barriers and how much are flexible in front of opposite situations (Abolqasemi & Javanmiri, 2012). Hence, judgments about self-efficacy are very important and sensitive Because of they have important role in the development of internal motivation. Some experts believe that self-efficacy beliefs of learners have the important role in motivation, desire, perseverance and effort to resolve them. Student, who has low and poor self-efficacy, may not be ready even for a simple exam and finish its efforts because it believes that will not benefit as much attempt and work hard, and not succeed. In contrast, a person who has high self-efficacy, during faced with challenges and hopes is more successful. So, the rate of learning has direct relationship with self-efficacy level (Heidarzadegan & Koochakzayi, 2015). On the other hand, the records indicated that social problem-solving abilities influences on depression and social phobia of students. There was the significant difference in rates of depression and social phobia of students who had the low, medium and high ability to solve the social problem so that students, who had higher social problem solving ability, indicated less depression and social phobia (Bayani, 2012). There are different ways for looking at problems and issues. More challenges that occur in people's lives is out of control but people continue to think about that. This matter is partly natural and is correlation with human nature. Although sometimes while we look to the problem are not aware this fact that may be the solution of this problem along with it or are occurring. Counseling or therapy which is called solution-focused, rely on the resources and the ability for compliance and create solution (Hulewat, 2004). Kim (2006) in short-term family-trophy center in Milwaukee and Wisconsin were inventor of the short-term solution-focused treatment (SFBT) (Gong, 2007). Solution-focused approach is component of short-term approach that provides more rapid therapy for referrers. Therefore, for referred who want to recover faster and achieve more favorable conditions are very useful. Researches also showed that this approach can work well in emergency situations (Corey, 2009). Short-term solution-focused approach includes a set of presuppositions communication that upon which a person can be prompted to best manner for change, adaption and growth (Boscart, 2009, Kim, 2008). Short-term solution-focused approach experts believe that individuals already have the skills to solve your problems but the problems for them are so great that forgot their strength points and ignore the their abilities. Sometimes a simple change in attention focus, from whatever that does not seem well to whatever that already doing and effective, referrers can remember their abilities and can use from these resources in large scale (Bannink, 2007). Nowadays, in spite of the deep cultural changes and changes in life style, many people in encounter with the life problems are not able to solve them. This matter cause that they are vulnerable in the face of their daily problems. Problem-solving ability is one of the life skills that help us to resolve the problem lives in the best manner. If important problems of life remain unresolved, then encounter with them as stress and threaten our mental and physical health. Hence, the problem-solving skills are essential. Solution-focused approach on different populations and situations including student growth (Super, 2013, Schieffer & Schieffer, 2000), conflict solution in work system (Weeb, 1995), marriage Counseling (Murray & Murray, 2004) problem solving of couples (Mudd, 2000; Nelson & Kelley, 2001; Gottman, 1999; Wolvon, 2009), reducing the stress rate (Daavarnia, 2013), reducing the depression (Shamsi-khani et al., 2014), efficiency and ability of nurses (Newson & Povey, 2007; Boscart, 2009; Sadeghi Shermeh, 2013) addiction treatment and psychiatric crisis to modify beliefs (Abolqasemi & Javanmiri, 2012) were used and were achieved beneficial results. Perhaps reason to gain these beneficial results in solution-focused approach is that solution-focused therapist were adopted a non-judgmental, non-exposure, understanding the cooperative, and focus on present and future, positive exceptions problem and references abilities. Also, it respects the referrer's goals and applies the internal resources and its specialized knowledge in achieving this goal of referrers. Therefore, considering the importance of self-efficacy, problem solving abilities and improvement this important thing in students, this study intends to determine "is training of solution-focused approach effect on self-efficacy and problem-solving ability of students"?

MATERIALS AND METHODS

Present research was Quasi-test study with pretest-posttest by control group that in which the influence the independent variable of the solution-focused approach training on the dependent variable of the self-efficacy and problem-solving abilities were evaluated. The statistical population of this research was students of Islamic Azad

University in winter 2015. Sampling was selected from voluntary basis that were included 32 students (16 in experimental group and 16 in control group). Students were came that after calling the investigator.

Research tools

In order to collect data and evaluating the self-efficacy and problem solving abilities, general Self-Efficacy questionnaire (GSE-17), and Heppner problem solving questionnaire (PSI) were done once before and once after solution-focused approach training sessions on research sample and control sample. The type of intervention for the experimental group was including principles and techniques of solution-focused approach treatment that in the form of 6 session's workshop that each session were held 90 minutes in the lectures and group discussions manner by researcher. The content presented were included the following techniques: techniques derived from solution-focused therapy such as deconstruction, setting the goals, finding exceptions, miracle questions, scaling or questions of grading, question coping, communication questions, constructive obligations, technique for feedback to references and encourage the capabilities and strength points (Boscart, 2009). The control group received no education and still remains waiting.

General Self-Efficacy Questionnaire GSE-17: This scale by Scherer et al (1982) has been made. The questionnaire contains 17 questions based on a Likert scale from strongly disagree (score 1) to completely agree (score 5) is graded. Thus, the items of 1, 3, 8, 9, 13 and 15 from right to left were awarded scored from 1 to 5 and other questions were belonged reversely 5 to 1 scores, respectively. The maximum score was 85 and at least 17. Reliability coefficient of this test using two halves of Gottman was evaluated 0.76 and by Cronbach's alpha were reported 0.79. The reliability of this questionnaire in the research based on Cronbach's alpha was evaluated and reported 0.84 (Rahimi-pardajani & Qobari-bonab, 2011).

Heppner Problem-Solving questionnaire PSI: To measure students' problem-solving skills, Heppner questionnaire that was prepared in 1988, was used. This questionnaire was contains 35 questions based on 6 options Likert scale. This questionnaire were consisted of three components: confidence in problem-solving by 11 items, avoidance-enthusiasm style by 16 items, and personal control by 5 items and three additional questions. Scores range of confidence in problem-solving factor, avoidance-enthusiasm to problem and personal control were 11-66, 16-96 and 5-30, respectively. Score range of the understanding of problem-solving ability was 32-192 and a lower score indicated a greater understanding of the ability (Rastgoo et al., 2010). The alpha coefficient obtained in the research Clark (2002) were 0.85 in problem-solving confidence, 0.84 in reception or avoid from problem-solving activities, and 0.72 in emotional and behavioral control during problem solving. Factors had the desirable and acceptable internal consistency (Clark, 2002). Rastgoo et al (2010) translated questionnaire in English by the help of one of the language specialists. Then was corrected it by the help of several colleagues. Finally, was conducted among 100 students. Result showed that the alpha coefficient were evaluated and reported 0.80 in confidence in problem-solving, 0.78 in reception or avoid from problem-solving activities, and 0.70 in emotional and behavioral control during problem solving (Rastgoo et al., 2010). Content and facial validity of questionnaires were studied and reviewed by five persons of experts in Educational Sciences and Psychology and then were confirmed. Reliability of the questionnaire using Cronbach's alpha, after the pilot study among 32 students were evaluated 0.84 for General Self-Efficacy Questionnaire, and for Heppner Problem-Solving Questionnaire, alpha coefficient were obtained 0.82 in confidence in problem-solving, 0.77 for reception or avoid from problem-solving activities, and 0.73 for personal control for Heppner Problem-Solving Questionnaire.

RESULTS

The first research hypothesis

Training of solution-focused approach was effective on increasing the self-efficacy of students. To test the significance of the differences observed between experimental and control groups in post-test and controlling for pretest scores were used analysis of covariance. Results related to covariance analysis for self-efficacy analysis were reported in table 1. Table 1 showed that the significance of the differences observed between experimental and control groups in self-efficacy pre-test (46.12 in front of 47.50 with $F = 31.01$, $P=0.001$) were significance. Also, mean comparison between experimental and control groups in the self-efficacy post-test by subtracting the effect of pre-test indicated a significant difference between groups (68.06 in front of 47.56 with $F = 182.86$, $P=0.001$).

Table 1. The results of analysis of variance calculations summary for self-efficacy variable.

Source of variance	SS	df	MS	F	Sig.
Pre-test	620.58	1	620.58	31.01	0.001
Intervention	3659.23	1	3659.23	182.86	0.001
Error	580.29	29	20.01		
Total	111516.00	32			

The second research hypothesis

Solution-focused training approach were effective on increasing the student's problem-solving. Table 2 indicated that the differences between experimental and control groups in problem-solving variable pre-test (139.43 in front of 139 with $F = 549.23$, $P=0.001$) were significance. Also, mean comparison between experimental and control groups in the problem-solving post-test by subtracting the effect of pretest indicated a significant difference between groups (163.56 in front of 139.18 with $F = 230.17$, $P=0.001$).

Table 2. The analysis of covariance calculations summary results for problem-solving variable.

Source of variance	SS	df	MS	F	Sig.
Pre-test	7230.18	1	7230.18	549.23	0.001
Intervention	303.02	1	303.02	230.17	0.001
Error	381.75	29	13.16		
Total	627833.00	32			

The third research hypothesis

Training of solution-focused approach was effective on increasing the problem-solving components of students.

Results revealed that the groups had significant differences together at least in one of the dependent variables. Therefore, it is concluded that there was significant different at least in one of the dependent variables between solution-focused approach training group and control group.

Table 3. The results of analysis of covariance significant tests.

Effect	Test	Value	F	Hypothesis F	Error F	P
Group	Pillais Trace	0.932	113.80	3	25	$P<0.001$
	Wilks Lambda	0.060	113.80	3	25	$P<0.001$
	Hotelling's Trace	13.65	113.80	3	25	$P<0.001$
	Roy's Largest Root	13.65	113.80	3	25	$P<0.001$

Results at table 4 indicated that the F fraction of covariance analysis in training group and control group in trust components to solve problems ($F = 86.70$, $P\leq 0.001$), reception or avoid style ($F = 129.72$, $P\leq 0.001$) and personal control ($F = 143.53$, $P\leq 0.001$) were calculated that indicated there were significant differences between the two groups of above variables.

Table 4. The results of covariance analysis of groups in dependent variables by control pre-test on post-test scores.

Variables	SS	df	MS	F	P
Confidence to solve problems	515.40	1	515.40	86.70	$P<0.001$
Avoidance-enthusiasm style	510.49	1	510.49	129.72	$P<0.001$
Personal controls	107.14	1	107.14	143.53	$P<0.001$

DISCUSSION AND CONCLUSION

The aim of this study was to evaluate the effectiveness of solution-focused approach training on self-efficacy and problem solving abilities of Islamic Azad University of Sari students. Results showed that the difference between the experimental and control groups were statistically significant in self-efficacy pretest. These findings were according to the findings obtained by Shamsi-khani et al (2014), Etemadi et al (2013), Dastbaz, (2014) and Wolvon (2009). The results of hypothesis tests showed that the solution-focused training enhanced the student's self-efficacy. Researches by Lizbeth, Salo, Vivien and Siren (2010) showed that solution-focused approach was effective on isolated children self-efficacy. It can be said that in explanation of this hypothesis, change as a continuous and inevitable matter is in the process of life and treatment. At first reflection can induce a force from a point to start the change, and this change drift to another point. Changing experience provides feeling of control and choice in life for individual and referential encourage from the surface changes to a deeper changes (Soodani, 2006). Thus, by focusing on constructive changes and emphasis on exceptions (Times when they have been able to overcome difficulties) provide the suitable background to strengthen referential self-efficacy. According solution-focused view, change is inevitable matter and, especially constructive change is possible (Ghamari, 2009).

The results of the second hypothesis test showed that training of solution-focused approach enhances problem-solving of student. These findings were according to the findings obtained by Shamsi-khani et al (2014), Daavarnia, (2013), Bayani, (2012), Newson and Povey (2007) and Gottman (1999). Problem-solving skills refers to a process of cognitive-behavioral that provide a variety of alternative and potentially responses for Coping with problems, and increase the possibility to choose the best and the most effective alternative response (Gellis & Kenaley, 2008). Tarhan & Acar (2007) indicated that problem solving-based approach had positive effect on ability to think critically, to share information and participate in group activities. Kim (2006) reported that short-term therapy of solution-focused is non-pathological approach to treatment that instead of focusing on problems and diseases emphasizes the positive aspects of healthy living.

The results of the third hypothesis test showed that training of solution-focused approach were effective on increasing the problem-solving components such as confidence to problem-solving, avoidance-enthusiasm style and personal control of students. These findings were according to the findings obtained by Shamsi-khani et al (2014), Daavarnia (2013), Bayani (2012), Newson and Povey (2007) and Gottman (1999). Experts believe that in a short-term solution-focused approach, People already have the skills to solve your problems but this problem is so great for them as far as forgot their strength points and ignore their abilities (Bannink, 2007). Solution-focused therapist does not completely know negative any situation and know change is continuous and inevitable. Instead of focusing on the problem focuses on aspects of the relationship which has already been effective and for maximizing the positive results of actions such as respecting the standpoint references and empathy with difficulties, creating hope and positive expectations are essential from solution-focused expert (Ghamari, 2009).

It should be noted that the present study had the limitation in terms of variables measuring restrictions that were questionnaire and weren't other observation tools and measuring methods. Given that the investigation was limited to a small geographical environment, caution should be considered to generalize the results to other areas. Therefore, it is recommended that the effectiveness of this approach should be compared with other approaches in this matter. This issue has not been possible in the present study. Also, posttest in this research was conducted immediately after the end of the course. It is suggested that in future research should be studied long-term impact of training and durability of learning by the solution-focused method based on self-efficacy and problem solving by adding the follow up.

Conflict of interest

The authors declare no conflict of interest

REFERENCES

- Abolqasemi, A, Javanmiri, L. (2012). The role of social desirability, mental health and self-efficacy in predicting academic achievement of female students. *School Psychology*, 1(2), 6-20.
- Bandura, A. (1997). *Self-Efficacy: The exercise of control*. 1st Edn., Worth Publishers, New York, 604.
- Bandura, A., & Locke, E. A. (2003). Negative Self-efficacy and goal revisited. *Journal of Applied psychology*. 88(1), 87-89.
- Bannink, F. P. (2007). Solution-Focused Brief Therapy. *Journal of Contemporary Psychotherapy*, 3, 87-94.

- Bayani, A. A. (2012). The Relationship between Social Problem Solving with Depression and Social Phobia among University Students. *Journal Mazandaran University of Medical Sciences*, 22(94), 92-99
- Boscart, V. M. (2009). A Communication Intervention for Nursing Staff in Chronic Care. *J Advaces in Nursing Sciences*, 65(9), 1823-32.
- Caprara, G. V., Steca, P., Gerbino, M., Pacielloi, M., Vecchio, G. M. (2006). Looking for adolescents' wellbeing: self-efficacy beliefs as determinants of positive thinking and happiness. *Epidemiology Psychiatry Society*, 15(1), 30-43.
- Clark, J. C. (2002). Problem solving and personality Factors of Two At-Risk College Population. College of Human Resources and Education of West Virginia University, Morgantown, West Virginia.
- Corey, J. (2009). *Theory and Peractice of Counseling&Psychotherapy*. Translated by: seyedmohammadiY.Tehran. Arasbaran Publications, 2(4), 43-46.
- Daavarnia, R. (2013). Effectiveness the short-term solution-focused therapy on reducing of marital stress. *Journal of Ilam Medical Sciences*, 26-18.
- Dastbaz, A., Younesi, S. J., Moradi, O., Ebrahimi, M. (2014). The effectiveness of group counseling solution-focused on compatibility and self-efficacy of high school male students of Shahriar city. *Knowledge and research in applied psychology*, 15(1), 90-98.
- Dweek, C. S. (2000). *Self-theory: Their role in motivation ,personality and development*. Philadelphia: Thylor and Francis.
- Etemadi, A., et al. (2013). Solution-focused therapy effectiveness in reducing mother-daughter conflicts on mothers. *Journal of Consulting and family psychotherapy*, 3(4), 591-565.
- Gellis, Z. D., Kenaley, B. (2008). Problem-solving therapy for depression in adults: a systematic review. *Research on Social Work Practice*, 18(2), 117-31.
- Ghamari, M. (2009). Studying the effects of solution-focused consultation on reducing the different marriage disputes between couples who both work. *Journal of Family Researching*, 19, 349-61.
- Gong, M. (2007). Does status in consistency Matter for marital quality? *Journal of Family Issue*, 28, 152-61.
- Gottman, J. M. (1999). *The marriage clinic: A scientifically based marital therapy*. New York: W.W. Norton, 69-73.
- Heidarzadegan, A., Koochakzayi, M. (2015). The relationship between spiritual health and self-efficacy among students of Engineering, and Psychology and Educational Sciences. *Journal of Engineering Education in Iran*, 17(65), 79-93.
- Hulewat, P. D. (2004). *Couples Therapy Encyclopedia of Women's Health*, 4, 334- 336.
- Jahani-maleki, et al. (2011). The relationship between awareness of life skills and self-efficacy beliefs in students. *Journal of Modern psychological researches*, 6(22), 49-19.
- Kim, H. (2006). *Client growth and alliance development in solution-focused brief family therapy*. [Dissertation]. The State University of New York at Buffalo.
- Kim, J. S. (2008). *Examining the Effectiveness of Solution-Focused Brief Therapy: A Meta-Analysis*. *Research of Social Work Practice*, 18(2), 107-16.
- Mudd, J. E. (2000). *Solution-focused therapy and communication skills training*. Blacksburg: Virginia Polytechnic Institute and State University.
- Murray, C. E., Murray, T. L. (2004). Solution-focused premarital counseling. *Journal of Marital and Family Therapy*, 30, 349-358.
- Nelson, T. S., Kelley, L. (2001). Solution-focused couples group. *Journal of Systemic Therapies*, 20, 47-66.
- Newson, L., Povey, R. (2007). The Development of a Training Program for Nurses Working In Cardiac Rehabilitation: Understanding and Applying Psychological Technique. *Health Psychology Updates*, 16(1), 26-33.
- Rahimi-pardajani, S., Qobari-bonab, B. (2011). The effect of intervention based on Gardner' theory on general self-efficacy in deaf high schools students in Isfahan. *Journal of Cognitive and Behavioral Sciences*, 1(1), 73-86.
- Rastgoo, A., Naderi, E., Shariatmadari, A., Seif-Naraq, M. (2010). Effect of Internet information literacy education on growth the student's problem-solving skills. *New Approaches in Educational Administration*, 1(4), 1-22.
- Sadeghi Shermeh, M. (2013). Effectiveness of Solution-Focused Communication Training [SFCT] on Nurses Communication Skills. *Iranian Journal of Military Medicine*, 14(4), 269-275.
- Schieffer, J. L., Schieffer, D. J. (2000). Solution-focused strategies for student development. *Journal of School Improvement*, 1, 137-164.
- Shamsi-khani, S., et al. (2014). The effect of problem solving skills on the rate of depression in nursing students. *Journal of Psychiatric Nursing, Quarterly Scientific - Research Association of Nursing*, 2(1), 63-71.

- Sherer, M., Maddux, J. E., Mercadante, B., Prentice-Dunn, S., Jacobs, B., Rogers, R. W. (1982). The self-efficacy scale: Construction and Validation. *Psychological Reports*, 51, 663-671.
- Soodani, M. (2006). Comparison of the effectiveness of couple therapy the manner of cognitive Ellis and Solution-focused therapy De shazer in reducing marital conflicts. PhD thesis. Faculty of Education and psychology, Allameh Tabatabaei University, Tehran.
- Super, P. (2013). When sup use was fully engaged in the couples' financial affairs and id familiar with a business owned by the spouse. *Journal of Family Psychology*, 7, 3-8.
- Tarhan, L., Acar, B. (2007). Problem based learning in an eleventh grade chemistry class: factors affecting cell potential. *Research in Science and Techological Education*, 25(3), 351-369.
- Weeb, S. B. (1995). A solution-oriented approach to conflict resolution in a work system. *British Journal of Guidance and Counseling*, 23, 409-411.
- Wolvon, L. J. (2009). Real estate and divorce: Breaking up is hard to do. *TexManag Real Estate J*, 25(9), 203.