

The Effectiveness of PSS (Problem Solving Strategy) in Enhancing The Ability of Anger Regulation

Ferisa Prasetyaning Utami¹, Permata Sari², Siti Zahra Bulantika³, Ike Kurnia Ani Khusana⁴, Citra Tectona Suryawati⁵, Nisa Ariantini⁶
{ferisha.utami@gmail.com¹, permataontel93@gmail.com²}

Slamet Riyadi University¹, State Islamic University of Raden Intan Lampung^{2,3}, State Islamic Institute of Samarinda⁴, Sebelas Maret University⁵, Borneo Tarakan University⁶.

Abstract. This study aimed to examine the effectiveness of Problem Solving Strategies to enhance the ability of emotion regulation for high school students. The data collection instruments for the selection of subjects using the ability of emotion regulation test. This study was conducted at Malang Smart Brawijaya High School in which the research subjects consisted of 12 people divided into two groups, namely the experimental group (n = 6) and the control group (n = 6). The experimental group was given training on Problem Solving Strategies and the control group was not given training. Analysis of the data used was non-parametric statistical analysis of the Mann Whitney U Test. Based on the results of the Mann Whitney U Test statistic showed that the Asymp value. Sig or P value of 0.003 < 0.05, thus, it can be concluded that there was a significant difference between the post-test scores between the experimental group and the control group, further, it can be concluded that the Problem-Solving Strategy was regarded as the effective technique for enhancing the ability of anger regulation. The suggestion for further researchers was to combine these techniques with behavioralistic techniques. The suggestions for counselors in schools can be used with intervention techniques. Problem Solving Strategies was as an alternative technique to enhance the ability of anger regulation.

Keywords: Problem Solving Strategy; the ability of anger regulation; anger

1 Introduction

In adolescence is not merely the physical growth and the development but socio-emotional development occurs, especially the developments can affect the adolescents behaviours. The emotional changes during adolescence often due to conflicts with adults, between peers and adults because there is something wrong and the value of adults (Papalia, Old, Feldman, 2008). During the adolescence, the brain is involved in generation and regulation, including the limbic system and prefrontal cortex can improve the structural and the sustainable functional development, thus, in this period is considered as the period of increasing for internalizing and externalizing associated with the poor emotional regulation i which it includes of depression, fear, and antisocial therapy [1]. In line with the cognitive development of the adolescence, they are able to think about the effects of behaving in a way that is harmful to others. However, this does not guarantee that all teenagers can manage their emotions by considering the negative effects if they are not able to control emotions. It is very consistent that emotional experiences are intense in adolescence in which the adolescents

experience emotional turmoil more frequently happens rather than younger or older individuals[2]

The phenomenon found was related to adolescents based on the result survey of a preliminary study given to 119 random respondents of 47.9% BSS high school students, as many as 57 students revealed that the emotion often appeared in their daily lives was anger emotion[3]. The percentage was classified as the most of the negative emotion namely sad (22.7%), disappointed (12.6%) and afraid (16.8%). Experiences are felt when facing situation that makes anger. Furthermore, the way to cope anger is to restrain the anger of 43 students (36.4%), think positively 41 (34.7%), ignore 28 students (23.7%) and vent emotion 6 students (5.1%). Furthermore, based on the interview process with BK teachers in Malang Brawijaya Smart School (BSS) Malang, it was revealed that adolescence tends to have overflowing emotion, thus, the social issues related often happen caused by the inability of students in anger regulation, stress tendencies and depression. According to the counseling teacher, some students who could see students could not control their emotions among others, hiding anger in solitude, cursing with harsh words to others, and students who do bullying verbally led to quarreling. The BK teacher also added that the main triggers for students to do this behavior is they are more like to exaggerating the problem, being too prejudiced with others which made students have negative thinking.

Anger can stimulate behavior with passion, increase desire to respond, focus on threatening situation, express the negativity to displeasure, aggressive protection and over-dramaticization[4]. In interpersonal relationships, uncontrolled anger can cause resistance[5]. Furthermore, anger emotion can provoke due to self-protection and resistance caused by the inability of individuals to control the negative effects of anger[6]. Some people are more likely to aggressive with the other people while others tend to maintain their anger or changing their anger to themselves[7]. It is in line the issue that individuals who cannot control emotions tend to encourage aggressive and destructive, they are shunned by their social environment. Individuals who have difficulty in overcoming these problems will face the serious risk of psychological and physiological health[8]. In addition, the inability to anger regulation tend to have psychopathological problems, for example individuals who have external problems to express and are impulsive [9].

Therefore, the adolescents need to have the ability of anger regulation in which it is related with the person's ability to control anger and respond in a acceptable way to the surrounding environment (Gentry, 2007). Adolescents who have the ability of emotional regulation will have higher social competence, prosocial behavior, better academic achievement, and fewer problems of internalization and externalization (Riediger & Klipker, 2014). Adolescents who are able to manage their emotions will help them to cope stress and it is as an initial provision to face their future lives with the provision of mental health[10].

The process of emotion regulation involves a cognitive role, so the capacity to regulate emotions is a significant cognitive function for human adaptation, and most of the negative emotion regulatory determine to effect on mental and physical well-being[11]. The cognitive strategies are crucial in managing threatening, helping individuals to regulate, manage, and control emotions[12]. A strategy for regulation of emotions that involves cognitive functions in the process is implementing the Problem-Solving Strategy. The potential strategies for reducing anger that combine cognitive and behavioral are suggested by [13] can help individuals to have the ability of problem solving and teach individuals to assess the uniqueness of situations that cause anger and reduce anger in the most appropriate way in certain situations by involving several solutions to be applied and evaluated for anger control [14]. The purpose of implementing Problem-Solving Strategy is to improve the ability of

information processing for individuals who exhibit angry, aggressive and disturbing behavior, the main point of implementing this technique is "Thinking before Acting" [15]. Briefly, the implementing of this technique in anger regulation can teach individuals to construct cognitive that is initially irrational to be rational when an angry emotional situation occurs. Problem-solving interventions provide about developing thinking skills, how to think about causes, consequences and solutions to situations that can provoke anger.

The implementing of PSS in anger regulation will be carried out in counseling groups. The use of counselling groups become consideration because it focuses on interpersonal processes and problem solving strategies of thoughts, feelings and behavior (Corey, n.d. 2013). This is based on consideration of the characteristics of the PSS technique in regulating groups allow individuals to get input from group resources (Eskin, 2013). The use of counseling group will help individuals to get support from fellow participants in the group and motivate individuals to progress better. The participation of members in this group activity will help to teach the useful skills.

2 Method

This study was a quantitative method using an experimental design. The experimental design used was true-experimental design namely, Nonequivalent Control Group Design (Sugiyono, 2016). This design used two groups, namely the experimental group and the control group. The selection of research design was based on the fact that the subject selection was not random, but it was done by purposive sampling for the experimental group and the control group. Both groups had the same situation, but the experimental group was given intervention in the form of Problem-Solving Strategy, while the control group was not given special treatment from researchers, however, it was assumed that they have followed the guidance and counseling service program provided by the school counselor or counselor as usual.

The instruments used in this study were (1) Anger Emotional Ability Management Tests, and (2) the instrument of treatment guidelines for Problem-Solving Strategy, the anger emotion management ability test used was tested for validity and reliability by involving 40 high school BSS students. The number of items before being tested for validity and reliability was 35, then after testing the validity of the 24 items produced were valid and reliable. Valid items were used by researchers to screen research subjects who have low anger regulation abilities.

The research was conducted at SMA Brawijaya Smart School (BSS) involving 12 students who were identified as having low anger regulation abilities based on the results of the test of anger regulation abilities. The twelve students were divided into two groups, namely the experimental group ($n = 6$) and the control group ($n = 6$). The implementation of group counseling interventions using the Problem-Solving Strategy technique was carried out during 7 meetings for the experimental group. After the intervention has been provided to the two groups, the researcher conducted a post-test by providing a test of the ability to anger regulation to the research subjects.

The data analysis in this study obtained through the statistical analysis of the Wilcoxon Signed Rank Test and the Mann Whitney U Test with the help of the IBM Statistics 16.0 SPSS program. Wilcoxon Signed Rank Test analysis was used to measure whether there were differences in the pretest and post-test scores. While the Mann Whitney U Test analysis was

used to measure the difference in the post-test score between the experimental group and the control group. The main text should be written using Times New Roman, 10pt, fully justified. Italics can be used for emphasis and bold typeset should be avoided.

3 Result

The results of testing the hypothesis in this study are presented in the following table:

Table 1. Hypothesis Testing Results Through Wilcoxon Signed Rank Test Analysis

	Negative ranks	Positive ranks	Ties	Mean Rank	Sum of Ranks	Z	Asymp. Sig. (2-tailed)
Experimental Group	0	6	0	3.50	21.00	-2.000 ^b	.027
Control Group	0	4	2	2.50	10.00	-2.000 ^b	.046

Dealing with the results of the above output, it is discovered that the subjects in the experimental group increase after being given a problem solving-strategy treatment of 6 people with a mean rank of 3.50 and a sum of rank of 21.00. Asymp.Sig Value. (2-tailed) in the experimental group of 0.027, it shows that there is a change in the ability of anger regulation after they are given a *problem-solving strategy treatment*, this is due to the sig value of $0.027 < 0.05$, further, it can be concluded that H_a is accepted. This shows that there are significant differences in the ability of anger regulation in the experimental group subjects before and after they are given treatment.

Whereas in the control group there are also 4 subjects who experienced an increase and 2 subjects do not experience changes in the ability to manage emotions. The significance value indicates there is a difference in the ability to manage emotions before and after following the guidance and counseling program provided by school counselors or counselors as usual at $0.046 < 0.05$.

Table 2. Mean Rank (Experiment and Control Groups Average)

	Ranks			
	method	N	Mean Rank	Sum of Ranks
post test experiment	Pb	6	9.50	57.00
	St	6	3.50	21.00
	Total	12		

In the table above shows that the Mean Rank or average rank of each group. The experimental group is given treatment with a problem-solving strategy have a mean value of 9.50 greater than the mean value of the control group given the counselor as usual method, which is equal to 3.50. Then, the test results by comparing the post-test values in the experimental group and the control group with the statistical analysis of the Mann-Whitney U test to produce the following data;

Table 3. Analysis of the Mann-Whitney U Test on the post-test scores of the Experiment and Control Group

Test Statistics ^a

	post test experiment
Mann-Whitney U	.000
Wilcoxon W	21.000
Z	-2.903
Asymp. Sig. (2-tailed)	.004
Exact Sig. [2*(1-tailed Sig.)]	.002 ^b

a. Grouping Variable: metode

b. Not corrected for ties.

The table above shows a U value of 0,000 and a W value of 21,000. If it is converted to Z value, the amount is -2.903. Sig or P Value of 0.004 <0.05. It can be concluded that there is significant differences between the post-test scores in the experimental group and the control group. Based on the results of the statistical hypothesis test, it can be interpreted that the interventions is given to the experimental group have efficacy and are effective in increasing the ability of anger regulation, thus, the Problem-Solving Strategy technique is effective to improve the ability of anger regulation for high school students.

4 Discussion

After testing the pre-test and post-test values in the experimental group using the Wilcoxon Signed Rank Test, the Asymp Sig (2-tailed) value is 0.027 so that the Asymp Sig (2-tailed) 0.027 value is less than 0.05, it can be concluded that there is a difference in scores on the ability of anger regulation in the experimental group between before and after the treatment of Problem-Solving Strategy is given. It can be interpreted that the PSS technique has an effect on increasing the score the ability of anger regulation for high school students which is marked by a significant difference in scores after the intervention is given. The meta-analysis study of Problem-Solving Strategy has more advantages to reduce anger in situations compared to the affection training strategies (including relaxation, positive images, emotional training), because the Problem-Solving strategy is taught to train how to think of causes, consequences and solutions in anger situations[15].

Furthermore, the statistical test results use the Mann Whitney U Test by comparing the post-test scores of the experimental group in which it is intervened with the Problem-Solving Strategy with the control group and it shows that there are significant differences between the post-test scores of the two groups. Thus, it can be discovered that problem-solving strategy has the efficacy to enhance the ability of anger regulation in high school students. The results of this study are supported by the research on anger regulation training with cognitive behavioral therapy . This approach is regarded as effective to reduce student anxiety and increase the level of anger regulation abilities[8].

The first finding when giving intervention in the field is related to the emergence of angry emotions felt by the participants due to an individual's perception of the emotional situation. According to the research subjects, The feeling of anger are generally caused by negative prejudice about situations that cause anger. Emotion arises because of a situation which is experienced by an individual to interpret a situation. If the evaluation given is positive or

negative, it will effect on individual emotions. Emotion arises when the individual faces a a meaningful situation or interaction, then he or she evaluates the situation according to his or her purpose as indicated by the emergence of the response of the individual concerned to the stimulus that appears[17]–[19]. This is in line with the opinion of [15] who argues that the failure in the thought process can cause anger so that a process of cognition has a relationship with anger and aggression. Adolescents who have aggression problems are more likely to get benefit of interventions with CBT elements and individual components[20].

The counselee's experience when they experience angry emotions caused by prejudice or negative thought patterns on emotional situations has a relationship with the implementation of Problem-orientation as part of the stages of the Problem-Solving Strategy technique. This is in line with research conducted by[21] who stated that the Problem-Solving Therapy technique has a significant effect to overcome mental and health problems and giving intervention on PST has a significant effect by involving problem-orientation training. Implementing problem-orientation training places the evaluation of problems as challenges, besides, it is found that problems can be solved and the problem solving requires the effort and time [22]. This is also relevant to the research conducted[23] one of the emotional regulation strategies, which is reappraisal has the highest impact on the acceptance and repression strategy. Furthermore, a study conducted by[5] asserted that individuals carry out effective strategies to reduce anger is an attempt to modify the situation by changing the situation through re-evaluation. The problem-orientation stage has similarities with reappraisal, which is reassessing an issue.

The second finding in this study is the selection of solutions conducted by the experimental group to overcome interpersonal conflicts that cause angry emotions have led to constructive solutions. For example, if there are interpersonal conflicts, then the suggestion and input given in the group counseling process is discussing carefully between the two parties to avoid misunderstanding. The desire to solve the problem as a solution is the progress in providing the intervention of Problem-Solving Strategy. This is in line with research conducted by[24] who asserted that the implementation of the Social Problem-Solving Program can reduce aggressive behavior, and the training can facilitate the social competence, anger regulation and conflict resolution. It can be assumed that proving an intervention Problem-Solving Strategy can help individuals to solve problems constructively when the conflicts occur and avoid aggressive responses arising from angry emotions when facing interpersonal conflict. According to Eskin (2013) a rational solution is aimed to notice the problems accurately and take rational steps for systematic resolution. When individuals can implement problem solving strategies to manage emotions, at least, they have a tendency to solve problems in a solutive and constructive manner.

The third research finding is the subjects are less able to practice implementing solutions in the form of responses. Although the researcher implements the Problem-Solving Strategy that developing the cognitive processes, however, the subjects can not reach the stage of implementing the solution, so then, each subject is asked to practice responding to the demonstration when facing an angry situation. They are less skilled in expressing emotional responses when they are asked to imitate them. In addition, emotions must be expressed in a good way in a way that is not harmful, the right time and in the right way in a situation [25], so then, the need for individuals to master the skills to express emotions. Although this Problem-Solving Strategy can help to construct the mindset and encourage the individual to design a behavioral response. However, the implementation of Problem-Solving Strategy is

not sufficient to help the change in individual's behaviour even though the solution provided in this technique tends to the response to the behavior forms. Therefore, the implementing of this Problem Solving Strategy is combined with behavioral intervention. Likewise, the research conducted by [26] who conducted research on anger regulation training using Social Problem Solving Training and Social Skills Training. In the research findings show that Sukhodolsky does not merely discusses SPST to help individuals in developing the ways of thinking and finding solutions, however, he also teaches about the practice of social skills and it discusses about how to respond or replace maladaptive responses to be adaptive in conflict situation through SST. The research conducted [27] also proves that providing a cognitive therapy with others is effective rehabilitation therapy, for example, combining of CBT with the relaxation, social training and cognitive relaxation have the highest effect on overcoming anger. Also like the research conducted by [28] who developed a culture-based counseling approach to anticipate bullying, then in the context of emotional regulation requires a multicultural approach that is tailored to the characteristics of the community in building a multicultural approach to emotion regulation.

5 Conclusion

Based on the literature of studies and the research results have been carried out, it generates conclusions to answer the research questions, namely, Problem-Solving Strategy techniques are effective for enhancing the ability of anger regulation in high school students. Giving treatment of Problem-Solving Strategy in the experimental group is found that there is an impact on the research subject, the subject can construct negative thought patterns on emotional situations into positive thought patterns and the subjects are able to find constructive solutions when dealing with emotional situations. These findings can be interpreted that the PSS technique provides an impact on research subjects as a strategy to anger regulation.

Based on the results of the study, the counselors of the school need to facilitate students to achieve emotional maturity. Especially for adolescents, the anger regulation in social relationships is important because in this period of development is characterized by a number of changes that impact on the social, cognitive, and psychological domains, moreover, the adolescence often characterized with their peer relationships become increasingly prominent and it is considered as important thing to illustrate the potential role of anger regulation in the context of peers [29]. In term of the emotions are inseparable from humans, so, they need to anger regulation properly. The various strategies can be done to help students manage emotions, for example by implementing the intervention of the Problem-Solving Strategy technique within the scope of psychoeducation groups or group counseling.

Suggestion for the future researchers is the implementation of Problem-Solving Strategy needs to explore deeper by combining other techniques such as behavioristic that can teach how individual expresses the right response when facing emotional situation.

References

- [1] A. Saz, P. A. Amanda, and L. Sebastian, "Accepted", *Accid. Anal. Prev.*, 2015.
- [2] J. S. Silk, L. Steinberg, and A. S. Morris, "Adolescents' Emotion Regulation in Daily Life: Links to Depressive Symptoms and Problem Behavior Author(s): Jennifer S. Silk, Laurence Steinberg and Amanda Sheffield Morris Published by: Wiley on behalf of the Society for Research in Child Develop.," vol. 74, no. 6, pp. 1869–1880, 2003.
- [3] F. P. Utami, B. B. Lasan, and I. M. Hambali, "Tingkat Kemampuan Kelola Emosi Marah Siswa SMA," pp. 262–266, 2019.
- [4] R. W. Novaco, "Anger," *Stress Concepts, Cogn. Emot. Behav. Handb. Stress*, pp. 285–292, 2016.
- [5] S. E. Rivers, M. A. Brackett, N. A. Katulak, and P. Salovey, "Regulating anger and sadness: An exploration of discrete emotions in emotion regulation," *J. Happiness Stud.*, vol. 8, no. 3, pp. 393–427, 2007.
- [6] B. A. Ammerman, E. M. Kleiman, L. L. Uyeji, A. C. Knorr, and M. S. McCloskey, "Suicidal and violent behavior: The role of anger, emotion dysregulation, and impulsivity," *Pers. Individ. Dif.*, vol. 79, pp. 57–62, 2015.
- [7] A. Lonigro, B. H. Schneider, and T. Brunner, "Is Cyberbullying Related to Trait or State Anger?," 2014.
- [8] T. F. Karahan, "The Beliefs, Attitudes and Views of University Students about Anger and the Effects of Cognitive Behavioral Therapy-Oriented Anger Control and Anxiety Management Programs on Their Anger Management Skill Levels," vol. 14, no. 6, pp. 2071–2082, 2014.
- [9] J. Zeman, M. Cassano, and C. Perry-parrish, "Emotion Regulation in Children and Adolescents," vol. 27, no. 2, 2006.
- [10] J. A. Silvers, J. J. Gross, and K. A. Remy, "and Rejection Sensitivity in Adolescence," vol. 12, no. 6, pp. 1235–1247, 2014.
- [11] Y. Liu, Q. F. Fu, and X. L. Fu, "The interaction between cognition and emotion," *Chinese Sci. Bull.*, vol. 54, no. 22, pp. 4102–4116, 2009.
- [12] K. R. Zlomke and K. S. Hahn, "Cognitive emotion regulation strategies: Gender differences and associations to worry," *Pers. Individ. Dif.*, vol. 48, no. 4, pp. 408–413, 2010.
- [13] T. J. D'Zurilla and M. R. Goldfried, "Problem solving and behavior modification," *J. Abnorm. Psychol.*, vol. 78, no. 1, pp. 107–126, 1971.
- [14] J. R. Moon and R. M. Eisler, "Anger control: An experimental comparison of three behavioral treatments," *Behav. Ther.*, vol. 14, no. 4, pp. 493–505, 1983.
- [15] D. G. Sukhodolsky, H. Kassinove, and B. S. Gorman, "Cognitive-behavioral therapy for anger in children and adolescents: A meta-analysis," *Aggress. Violent Behav.*, vol. 9, no. 3, pp. 247–269, 2004.
- [16] G. Corey, "Theory and Practice of Counseling and Psychotherapy."
- [17] K. R. Scherer, "What are emotions? and how can they be measured?," *Soc. Sci. Inf.*, vol. 44, no. 4, pp. 695–729, 2005.
- [18] R. A. Thompson, "Emotion Regulation: A Theme in Search of Definition," *Monogr. Soc. Res. Child Dev.*, vol. 59, no. 2/3, p. 25, 1994.
- [19] J. J. Gross, "Emotion regulation: Affective, cognitive, and social consequences," pp. 281–291, 2018.
- [20] L. M. Hoogsteder, G. J. J. M. Stams, A. Figge, K. Changoe, and J. E. Van Horn, "The Journal of Forensic Psychiatry & Psychology A meta-analysis of the effectiveness of individually oriented Cognitive Behavioral Treatment (CBT) for severe aggressive behavior in adolescents," no. April, pp. 22–37, 2015.
- [21] J. M. Malouff, E. B. Thorsteinsson, and N. S. Schutte, "The efficacy of problem solving therapy in reducing mental and physical health problems: A meta-analysis," *Clin. Psychol. Rev.*, vol. 27, no. 1, pp. 46–57, 2007.

- [22] A. M. Nezu, "Problem solving and behavior therapy revisited," *Behav. Ther.*, vol. 35, no. 1, pp. 1–33, 2004.
- [23] P. L. Szasz, A. Szentagotai, and S. G. Hofmann, "The effect of emotion regulation strategies on anger," *Behav. Res. Ther.*, vol. 49, no. 2, pp. 114–119, 2011.
- [24] Z. Seer and H. G. Ogelman, "Analysis of the Effect of a Social Problem-Solving Program on the Aggression of Children," vol. 21, no. 2, pp. 142–153, 2011.
- [25] P. Ekman, *Emotions {R}evealed*. 2003.
- [26] D. G. Sukhodolsky, A. Golub, E. C. Stone, and L. Orban, "Dismantling anger control training for children: A randomized pilot study of social problem-solving versus social skills training components," *Behav. Ther.*, vol. 36, no. 1, pp. 15–23, 2005.
- [27] A. H. Lee and R. Diguseppe, "ScienceDirect Anger and aggression treatments : a review of meta-analyses," *Curr. Opin. Psychol.*, vol. 19, pp. 65–74, 2018.
- [28] P. Sari and A. Mappiare, "Panduan Pertimbangan Nilai Ajaran Nengah Nyappur Etnis Lampung untuk Mereduksi Perilaku Bullying Siswa SMK," pp. 1095–1099, 2018.
- [29] C. Perry-parrish *et al.*, "Anger Regulation and Social Acceptance in Early Adolescence : Associations With Gender and Ethnicity," 2015.