

นิพนธ์ต้นฉบับ

ผลของการจัดกิจกรรมตามแนวคิดจิตวิทยาเชิงบวกต่อต้นทุนทางจิตวิทยาและภาวะซึมเศร้าของวัยรุ่นหญิง ในสถานสงเคราะห์เด็กหญิงบ้านราชวิถี

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** นักศึกษาปริญญาโทสาขาวิชาจิตวิทยาคลินิก คณะแพทยศาสตร์ศิริราชพยาบาล มหาวิทยาลัยมหิดล

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บทคัดย่อ

ที่มาของปัญหา: จากการศึกษาพบว่าวัยรุ่นที่อาศัยในสถานสงเคราะห์มีความเสี่ยงด้านสุขภาพจิตโดยเฉพาะภาวะซึมเศร้า ผู้วิจัยจึงสร้างกิจกรรมเพื่อพัฒนาต้นทุนทางจิตวิทยาและลดภาวะซึมเศร้า โดยประยุกต์จากกิจกรรมตามแนวคิดจิตวิทยาเชิงบวกและสร้างจากทฤษฎีต้นทุนทางจิตวิทยา

วัตถุประสงค์: เพื่อศึกษาผลของการจัดกิจกรรมตามแนวคิดจิตวิทยาเชิงบวกต่อต้นทุนทางจิตวิทยาและภาวะซึมเศร้าของวัยรุ่นหญิงในสถานสงเคราะห์เด็กหญิงบ้านราชวิถี

วัสดุและวิธีการ: เป็นวิจัยแบบกึ่งทดลองชนิดศึกษาสองกลุ่ม กลุ่มตัวอย่างเป็นวัยรุ่นหญิงอายุ 15 – 18 ปี ที่อาศัยในสถานสงเคราะห์เด็กหญิงบ้านราชวิถีโดยคัดเลือกแบบเจาะจงจากวัยรุ่นที่สมัครใจเข้าร่วมและทำการสุ่มอย่างง่ายโดยเจ้าหน้าที่สถานสงเคราะห์เพื่อจัดกลุ่มกลุ่มทดลองได้เข้าร่วมกิจกรรม สัปดาห์ละครั้ง ทั้งหมด 8 ครั้ง ครั้งละ 1 ชั่วโมง โดยกลุ่มควบคุมเข้าร่วมกิจกรรม

ตามปกติของสถานสงเคราะห์ เครื่องมือที่ใช้คือแบบประเมินต้นทุนทางจิตวิทยาสำหรับคนไทย และแบบคัดกรองภาวะซึมเศร้าในวัยรุ่นในช่วงก่อน หลังทดลองและติดตามผล 1 เดือน วิเคราะห์ผลด้วยสถิติ Nonparametric test

ผลการศึกษา: เมื่อสิ้นสุดการทดลอง กลุ่มทดลองมี 8 คน กลุ่มควบคุมมี 9 คน พบว่ากลุ่มทดลองมีต้นทุนทางจิตวิทยา ในด้านการมีความหวังและการมองโลกในแง่ดีเพิ่มสูงขึ้นอย่างมีนัยสำคัญทางสถิติที่ระดับ 0.05 ในช่วงก่อนการทดลองพบว่ามีกลุ่มทดลองสองคนมีภาวะซึมเศร้า โดยเมื่อเปรียบเทียบกับค่าเฉลี่ยของคะแนนภาวะซึมเศร้าก่อนและหลัง พบว่ามีแนวโน้มลดลง แต่ไม่พบความเปลี่ยนแปลงอย่างมีนัยสำคัญทางสถิติ

สรุป: กิจกรรมตามแนวคิดจิตวิทยาเชิงบวกสามารถพัฒนาต้นทุนทางจิตวิทยาในด้านการมีความหวังและการมองโลกในแง่ดีของวัยรุ่นหญิงได้

คำสำคัญ: กิจกรรมตามแนวคิดจิตวิทยาเชิงบวก, ต้นทุนทางจิตวิทยา, ภาวะซึมเศร้า

Effects of Positive Psychology Activities on Psychological Capital and Depression among Female Adolescents in the Rajvithi Home for Girls

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Abstract

Background: Many studies have reported the negative outcomes of the placement of orphan adolescents. To promote these adolescent's mental health, the researchers created and applied activities from positive psychology interventions (PPI) and the psychological capital (PsyCap) theory to increase the psychological capital of female adolescents residing in the Rajvithi Home for Girls, Bangkok, Thailand.

Objectives: To examine the effect of positive psychology activities on the psychological capital and depression among female adolescents.

Materials and Methods: This study was a quasi-experiment research proposing the effect of positive psychology activities on psychological capital and depression. Volunteered adolescents were randomly assigned by using simple random sampling. The experimental group received treatment for eight consecutive weeks (one hour/week). The subjects' psychological capital and depression were assessed by using the Thai Psychological Capital inventory and Center for Epidemiologic Studies-Depression scale

in a pretest, post-test, and follow-up after a month. The data were analyzed using non-parametric statistics.

Results: From the pretreatment to post-treatment of the positive psychology activities, the experimental group's scores was significantly superior to the control condition in regard to hope and optimism ($p < 0.05$). However, the scores of self-efficacy, resilience, and depression in the pretest, post-test, and follow-up periods of the experimental group were not significantly different, but the depression scores tended to decrease overtime.

Conclusion: These findings suggested using positive psychology activities were a useful way to develop hope and optimism in female adolescents. Together, these activities may be useful as supplementary exercises to increase hope, optimism, and reduce depression in adolescent population.

Keywords: Positive psychology intervention, Psychological capital, Depression

Introduction

Adolescents are the future of a nation; however, unfortunately, millions of children and adolescents are separated from their biological parents either permanently or semi-permanently. As a result, they are in need of supportive living environments¹; such as, an orphanage where welfare, protection, care, education, and professional training is provided. Nonetheless, there is no consensus about the negative outcomes from orphanage care at the present time due to insufficient in-depth research. However, some studies have reported the negative outcomes of orphanage placement, which may lead to delays and vulnerability in various domains of development leading to other psychological problems.² This has been especially found in adolescence, a stressful period of an individual's life with many challenges. Without the appropriate coping skills to manage those challenges, adolescents are more vulnerable to depression and other psychological disorders³. Moreover, depression is the main cause of suicide in adolescents with one in three people in this group who have attempted suicide reporting a depressive disorder⁴. Studies have also suggested that the prevalence of depression has increased in both genders. Yet, when depressive symptoms of female adolescents were compared with those of male adolescents, it was found that depressed female adolescents reported more guilt, body image dissatisfaction, self-blame, self-disappointment, feelings of failure, concentration problems, difficulty working, sadness and/or a depressed mood, sleep problems, fatigue, and health worries⁵. In Thailand, Kongphet found that the overall prevalence of depression, conduct behavior in adolescents aged 10-15 years old from the Rajvithi Home for Girls, Bangkok, Thailand were 52.9%, 12.6% and 10.1%, respectively⁶. Unarguably, these adolescents are still a precious resource of the country. In order to protect these adolescents' mental health and prevent them from harm, tailored intervention is needed.

In recent years, the recent branch of psychology known as positive psychology has emerged, which emphasizes people's positive aspects. One of the interesting areas of this aspect of psychology is positive psychology intervention (PPI), the study of strategic and intentional activities based on positive psychology constructs and theory. PPI aims to strengthen people's positive characteristics, emotions, cognition, and behavior. This would help adolescents to cope with the negative events and moods they might experience.⁷ As a result of the novelty of this new research area, two meta-analyses of PPI have been published comprising clinical and non-clinical samples. In the first study, Sin and Lyubomirsky examined 51 PPI studies and found that PPI was effective in significantly decreasing the symptoms of depression (Cohen's $d = 0.65$) and enhancing well-being (Cohen's $d = 0.61$) with medium effect sizes.⁸ In the second meta-analysis, Bolier et al. found that PPI reduced depression (Cohen's $d = 0.23$) and enhanced subjective well-being (Cohen's $d = 0.34$) with small effect sizes for a three-six months follow-up. Even though the effect sizes were small, they were still significant for the subjective well-being and psychological well-being. This suggested that the effects of PPI may be sustainable⁹. Moreover, it was found that hope, self-efficacy, resilience, and optimism could not only reduce depression,^{10, 11} but also had definite effects on other positive factors; such as, happiness, life satisfaction, work engagement, and well-being^{12, 13}. Furthermore, hope, self-efficacy, resilience, and optimism comprise the psychological capital (PsyCap) theory. Based on the positive organizational behavior (POB) theory, PsyCap was used to develop both humans and organization.

PPI is still fairly new, so research is growing, but there are only a few applications of this field in Thailand. As a consequence, the researchers have been interested in creating activities, which have been based on the PsyCap theory, as well as applied activities from existing studies in PPI to increase the PsyCap of female adolescents in the orphanage. This

prove would very beneficial if these uncomplicated, cost-effective, and less stigmatized activities could promote adolescents' positive characteristics. This could help them manage problems and develop to pursue their happiness.

Objective

To examine the effects of positive psychology activities on the level of PsyCap and depression among female adolescents in the Rajvithi Home for Girls by:

1. Comparing the sample group's PsyCap scores before and after participating in the positive psychology activities.
2. Comparing the sample group's depression scores before and after participating in the positive psychology activities.

Materials and Methods

This study was a quasi-experimental research, which the objective was to examine the effects of positive psychology activities on the level of the PsyCap and depression of female adolescents in the Rajvithi Home for Girls. The experimental and control groups' PsyCap and depression scores from the pretest and post-test were compared, as well as the scores from the one-month follow-up of the termination of the program. This research was approved by the Siriraj Institutional Review Board, COA No. Si 466/2016.

Participants

The participants were female adolescents who 1) were aged between 15 to 18 years old and residing in the Rajvithi Home for Girls, 2) were literate and able to communicate, 3) had no auditory or visual disabilities, and 4) had not been treated for a psychiatric disorder and had no risk of committing suicide, homicide or any other form of violence. The participants were recruited by using a purposive sampling method and divided into an experimental group and a control group by using a simple random sampling method.

Interventions

The intervention in this study was developed by the researchers based on the positive psychology theory, PsyCap theory, and the derived PPI from the existing literature. The goal of the program was to promote four domains of psychological capital. The programs were validated by three psychologists: an expert in positive psychology, an expert in group activities, and a child and adolescent psychologist. The number of participants in each group was 8 - 12 based on the life skill and guidance groups¹⁴. One session of group activities was conducted per week, and each session took approximately 45-60 minutes. The duration of the program was eight weeks. The goal of the sessions was to educate participants about the concepts of PsyCap through positive psychology activities and encourage them to apply these concepts to their lives. The activities were delivered in the manner of a group activity; a group leader used verbal explanations, personal examples, video, and experiential exercises during the sessions. In each session, the group leader would help the participants to understand the concept through explanation and allow them to experience the concept through the activities. The group activities were led by a second researcher who had been a psychologist in a child and adolescent mental health institute for four years and had received at least two semesters of practicum including using PPI to promote mental health for both clinical and non-clinical participants. The co-leader was a counsellor who had two years of experience working with adolescents.

Each group session was divided into four segments consisting of (1) the review of the previous week and progress on homework assignments, (2) experiential learning through activities and psychoeducation in which new components of PsyCap and the related skills were taught, (3) discussion of ways of applying these components to participants' lives, and (4) introduction of homework for the upcoming week that focused on application to daily living. Some examples of the activities were asking

participants to use their strengths in new ways in a self-efficacy component session. Another activity that was used both in a session and as homework was 'Three good things', which participants were asked to write three good things that went well each day and to provide a causal explanation for each good

thing. Furthermore, at the beginning of the sessions, participants were asked to share their good things with others. The PsyCap components are presented in Table 1 along with the names of the group activities, which were related to each component.

Table 1 Positive psychology activities program.

Session	Domain	Activities
1, 2	Self-efficacy	Who am I?; My impression; Help me see mine; This is me!
3, 4	Optimism	Three good things; Perspective shift
5, 6	Hope	Graph of life; Best possible selves
7, 8	Resilience	Learning from the best; Letter to myself; Gratitude letter

Measurement

1. Socio-demographic data questionnaire

This questionnaire was used to collect the data, including age, grade point average, education level, and the number of years living in the orphanage.

2. PsyCap inventory, Thai version

The PsyCap inventory, Thai version, developed by Tuntatead¹⁵, which had a high reliability coefficient ($\alpha = 0.98$) and consisted of 53 items in four domains: hope, self-efficacy, resilience, and optimism.

3. Center for Epidemiologic Studies-Depression (CES-D) Scale, Thai Version

The CES-D, Thai version, developed by Trangkasombat¹⁶, was a 20-item self-report questionnaire to measure the depressive symptoms in adolescents during the past week. The total score ranged from 0 to 60 with a higher score indicating an increasing level of depression. Higher scores reflected greater levels of depressive symptoms, while lower scores displayed lower levels of the symptoms. The CES-D, Thai version, had good statistical properties with a reliability (alpha) of 0.86. Using the receiver operating characteristic (ROC) curve, the cut-off point of 22 produced the best overall screening characteristics. At this cut-off point, the CES-D, Thai version, had a sensitivity of 72%, specificity of 85% and an accuracy of 82%. The cut-off point of 22 was used to identify significant depression.

Design and randomization

This study was a quasi-experiment research. The participants volunteered and were selected by a purposive method in accordance with the inclusion criterion. Then, all qualified volunteered adolescents were randomly assigned to either the experimental group or the control group by using simple random sampling. Randomization was conducted by staff of the Rajvithi Home for Girls who was independent from the study. The experimental group received positive psychology activities for eight consecutive weeks (one hour/week), while the control group participated in the normal activities of the foster home.

Procedure

Before the experiment period, the researchers contacted the staff of the Rajvithi Home for Girls to recruit participants by announcing the details of the program. One week prior to the first session, the subjects who met the inclusion criteria completed the pretest questionnaires and self-consent form. The program began one week after the pretest PsyCap and CES-D scales were completed and was delivered once per week for eight weeks. At the end of the last week, the participants completed the post-test questionnaires. One month after the conclusion of the activities, the participants were invited to complete a follow-up PsyCap and CES-D scales. After completing the follow-up scales, focus group discussions were held by the research assistant to gather the

qualitative data on what lessons the participants had learned, how they had applied what they had learned, and their opinions about the program. All group sessions and focus group discussion were audio recorded using MP3 recorders.

Data analysis

Statistical analysis was conducted using the SPSS 11.0 software package. Descriptive statistics were used to describe the samples' demographic data, which included age, education, grade point average, and duration of living in the foster home. A non-parametric test was used to analyze the differences between the mean scores of PsyCap and depression in the pretest, post-test, and follow-up periods.

Audio recordings from the group sessions and focus group discussions in the follow-up period were transcribed verbatim and analyzed by the researchers.

Additionally, qualitative data from group activities and homework were used to help explain the variation of the responses and assess how the context may have influenced the outcome.

Results

At the beginning of the study, there were 11 participants in the experimental group and 10 in the control group. At the end of the experimental phase, the data of three participants in the experimental group were excluded because two of them had moved to live with relatives and another one had to practice with a music band for a competition. Moreover, one participant in the control group was excluded because had moved to live with relatives. As a result, the numbers of participants whose data were analyzed in the experimental group and the control group were eight (72%) and nine (90%), respectively (Figure 1).

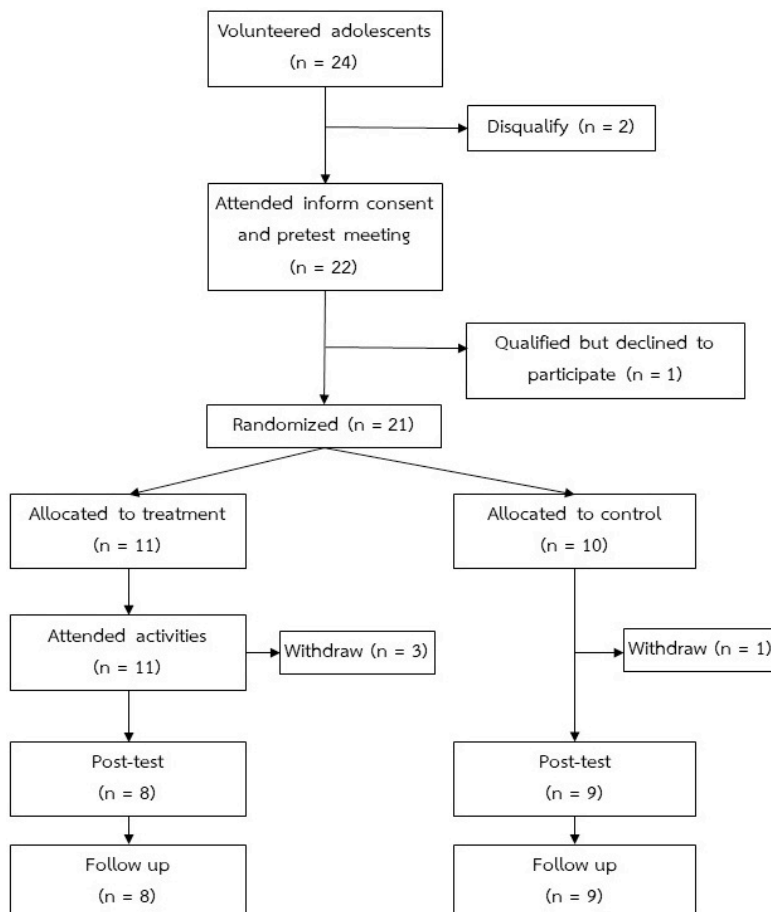


Figure 1 Participants' flow.

There was also no difference in the grade point average between the two conditions except that the experimental group were significantly older and

had lived in the orphanage longer than the control group ($p = 0.04$) (Table 2).

Table 2 Participants' characteristics.

Variable	Experimental Group (n = 8)		Control Group (n = 9)		p-value
	Mean	SD	Mean	SD	
Age	16.7	0.9	15.7	0.9	0.05
Grade point average	2.8	0.3	2.9	0.4	0.52
Years in the orphanage	10.1	4.0	6.2	3.0	0.04

To study the effect of the positive psychology activities on PsyCap and depression in female adolescents, non-parametric statistics were used (Table 2). As presented in Table 3, the PsyCap and depression mean scores of the participants in the experimental and control group did not differ in the pretest. After participating in the positive psychology

activities, it was observed that the statistical significance ($p < 0.05$) had increased in the experimental group's hope and optimism aspects. On the other hand, when comparing the participants' PsyCap means in the pretest, post-test, and follow-up periods with the Friedman Test, no statistically significant difference was found (Table 4).

Table 3 Comparison of the differences in the mean scores of the psychological capital between the groups in the pretest and post-test periods by using the Mann-Whitney U test and the Wilcoxon signed-rank test.

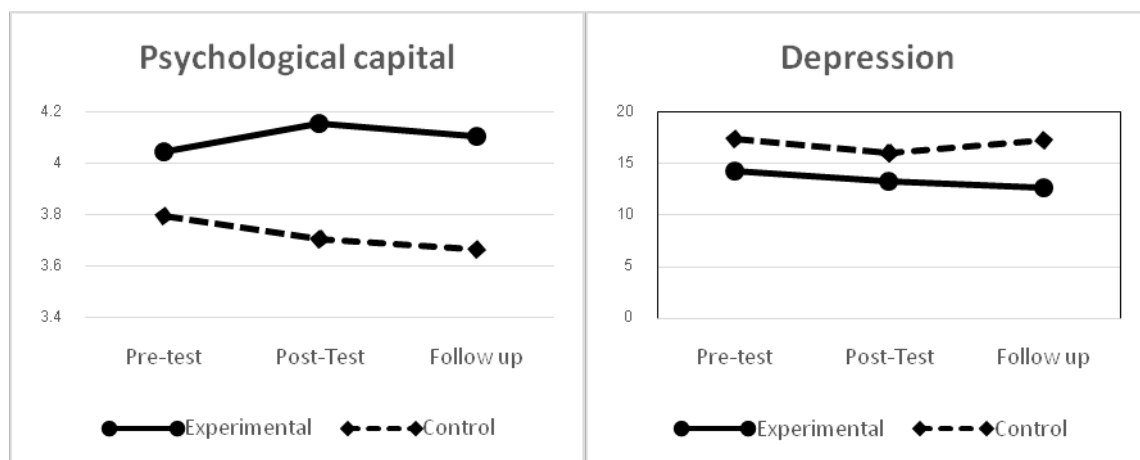
Variable	Test	Experimental Group (n = 8)		Control Group (n = 9)		p-value
		Mean	SD	Mean	SD	
Psychological capital Global domain	Pretest	4.0	0.6	3.8	0.8	0.61
	Post-test	4.2	0.6	3.7	0.9	0.28
	P-value	0.67		0.29		
Hope domain	Pretest	3.8	4.7	3.5	0.7	0.48
	Post-test	4.1	0.6	3.5	0.8	0.11
	P-value	0.05		0.23		
Self-efficacy domain	Pretest	4.0	0.6	3.8	0.8	0.67
	Post-test	3.9	0.8	3.7	0.9	0.67
	P-value	1.0		0.27		
Resilience domain	Pretest	4.3	0.6	4.0	0.9	0.61
	Post-test	4.4	0.6	3.8	1.0	0.24
	P-value	0.75		0.29		
Optimism domain	Pretest	4.1	0.7	4.0	1.0	0.89
	Post-test	4.5	0.5	4.0	0.9	0.17
	P-value	0.03		0.67		
Depression	Pretest	14.4	8.7	17.4	6.4	0.25
	Post-test	13.4	7.0	16.1	16.1	0.33
	p-value	0.62		0.55		

Table 4 Comparison of the samples' means of the psychological capital in the pretest, post-test and follow-up periods with the Friedman test (mean rank comparison).

Variable	Group	Pretest	Post-test	Follow up	p-value
Psychological capital Global domain	Experimental Group (n =8)	4.0	4.2	4.1	1.00
	Control Group (n = 9)	3.8	3.7	3.7	4.17
Hope domain	Experimental Group (n =8)	3.8	4.1	4.0	4.71
	Control Group (n = 9)	3.5	3.5	3.4	4.18
Self-efficacy domain	Experimental Group (n =8)	4.0	4.0	4.1	2.25
	Control Group (n = 9)	3.8	3.7	3.6	3.45
Resilience domain	Experimental Group (n =8)	4.3	4.4	4.1	3.46
	Control Group (n = 9)	4.0	3.8	3.8	2.60
Optimism domain	Experimental Group (n = 8)	4.1	4.5	4.2	4.46
	Control Group (n = 9)	4.0	4.0	4.0	2.00
Depression	Experimental Group (n = 8)	14.4	13.4	12.7	2.00
	Control Group (n = 9)	17.4	16.1	17.2	2.82

In Figure 2, the graph on the left shows the augmentation of the participants' PsyCap mean score. Each single dot represents the mean score in the pretest, post-test, and follow-up periods. The full line indicates the experimental group and the dash line represents the control group; they show that the PsyCap of the experimental group tended to increase

in the post-test period and decreased a little in the follow-up period. The graph on the right shows the evolution of the participants' depression score with the same composition as the left graph; this shows that the depression score of the experimental group tended to decrease. On the other hand, the control group displayed no such tendency to decrease.

**Figure 2** Pre-test, post-test, and follow-up mean scores of psychological capital (left) and depression (right).

Discussion

The purpose of the present study was to investigate the effect of positive psychology activities on the PsyCap and depression in female adolescents in the Rajvithi Home for Girls, Bangkok, Thailand. The

first hypothesis was that the psychological capital of the participants in the experimental group would increase after participating in the positive psychology activities program. In line with the hypothesis, the researchers found that after participation in the positive

psychology activities, the hope and optimism scores of the participants in the experimental group had increased with statistical significance; however, this difference disappeared after one month, which means the hypothesis was only partially supported.

The qualitative data indicated that the program was generally well-liked by the participants. They reported that at the beginning of the program they were reluctant to express their feelings, and they felt difficult to explore their strengths. However, after participating, they discovered more about their strengths and had more sense of a common humanity, which was imperfect. They had more awareness of their cognition, which later affected their feelings and behavior. In the 'perspectives shift' activity, participants had an opportunity to apply the explanatory styles of optimism¹⁷ in real life. Furthermore, in the 'graph of life' and 'best possible selves' activities, they had the opportunities to set their goals, known the meanings and the pathways towards goals. This corresponded with Layout et al.¹⁸ who proposed that PPI created individual positive thoughts, positive behavior, and positive feelings. This finding also conformed with previous studies in the experimentally manipulated 'best possible self' and 'three good things'^{19, 20}. The results that the participants' optimism and hope scores did not increase through the follow-up period might be a result of the discontinuation of the homework. Participants told that they had not continued to do the homework after the experiment period; thus, the discontinuation of activities may have affected the follow-up results. Future study should focus on the continuation of activities because the participants who actively continued acknowledging their good things mediated long-term benefits.²¹

However, the reasons why the self-efficacy and resilience of the experimental group did not increase with statistical significance may come from the duration of the activities was too short. Additionally, the activities in the self-efficacy domain were still too broad and not skill-specific enough. In this study, activities in the self-efficacy domain helped partici-

pants to discover their strengths, but this may still be insufficient for improving self-efficacy. Additionally, one of the most important factors in creating self-efficacy is modelling²². To increase self-efficacy may require a real-life model who has similar goals and skills that one needs to learn or imitate, but role models in this study may not have shared the participants' goals. Similarly, resilience needs time and experience to develop. Resilience is a consequence constructed from many factors. In this study, by fostering the participants' positive characteristics, helped participants to be aware of their internal and external resources, and learn how to be optimistic, which could help them to weather any difficulties. However, the lack of practice in these skills may have hindered the improvement of the participants' resilience. Thus, future studies should help participants choose the aspects that they want to improve or accomplish, help participants practice, let their peers provide feedback, and let participants choose their role model personally.

With regard to the last outcome, depression, the participants' depression score decreased over time, but showed no statistically significant differences in the results between the times (pre and post-treatment) and between groups. Thus, the hypothesis was partially supported. However, there were two participants in the experimental group who scored higher than 22 points on the depression scale (CES-D), which would be considered as depressed. After they had participated in the program, participant no.4 had a pretest score of 25 points, then decreased to 17 points in the post-test, and then slightly increased to 18 points in the follow-up period. This means that after attending the positive psychology activities, she had returned to a nondepressed level. However, in participant no.11, only a slight difference was found. She had a pretest score of 29 points, post-test score of 26 points, and a score of 25 points in the follow-up period. This indicated that this participant was still in a depressed level. However, these two participants differed in characteristics, the PsyCap baseline, and

level of participation in the group activities. Hence, these factors may affect the changes in their depression scores.

There were numerous factors that caused the difference between this study and previous studies. First of all, some participants were older and came together as a group. They played the roles of 'rules keeper' and 'teaser' for the others who were younger. This might have affected the openness of the others and hindered the benefits of the activities. Moreover, most participants who volunteered in this research were not depressed. One previous study on female adolescents in the Rajvithi Home for Girls used music therapy to increase self-esteem and decrease depression. The finding found that even though music therapy increased participants' self-esteem, their level of depression did not significantly decrease. Similarly, the mixture of depressed and nondepressed participants at pretreatment were observed²³. A meta-analysis study found that depressed individuals could actually gain benefits from PPI more than nondepressed people⁸. Presumably, depressed individuals were relatively eager to feel better and may put more effort into the positive activities; greater incentives and effort have been shown to increase the treatment effect. Moreover, the participants reported that sometimes they were aware of pessimistic thoughts and chose to focus on the positive instead, but not all the time. Organizing refresher sessions and allowing a longer period for practicing may help female adolescents master these skills.

However, the findings were subject to at least three limitations. The main limitation was recruitment of the sample. Due to a tight and various schedule of the female adolescents, the researcher had to use a purposive method. As a result, these volunteers' PsyCap was already at a high or very high level. The ceiling effect seems to have influenced the results. Moreover, the participants in this study were not seeking treatment, which could limit the generalizability of these results to a clinical

population. Another limitation was that all of the samples had started a new semester one week before the follow-up period. All participants reported that they always felt stressed and unsettled in this period because they had to do their homework and group assignment. Thus, this stressor might have affected the result in the follow-up period. Last, this research relied on a self-report to measure the negative effect, mood, and cognition. Therefore, it is possible that the participants reported information contained social desirability bias. Thus, additional research is needed to identify and tailor interventions that would be more suitable with different samples.

Nevertheless, these findings suggested that positive psychology activities were a useful way to develop hope and optimism in female adolescents. This would encourage the idea that PPI may be used to help people to develop and achieve their best, not just joyful or playful activities. Hence, the implication of these findings would be that combining PPI with other therapies and other activities; such as, homework or in-session activities, could amplify the benefits for participants. Since positive psychology activities are brief to very brief self-administered activities, it is possible to combine them with other therapies⁹. In future studies, researchers should modify the content and process of these positive psychology activities to suit other ages, genders, and settings.

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References

- Thielman N, Ostermann J, Whetten K, Whetten R, O'Donnell K. Correlates of poor health among orphans and abandoned children in less wealthy countries: the importance of caregiver health. PLoSOne [Internet]. 2012 [cited 2020 Jan 29]; 7(6):e38109. Available from: <https://journals.plos.org/plosone/article/file?id=10.1371/journal.pone.0038109&type=printable>
- Kreppner J, Kumsta R, Rutter M, Beckett C, Castle J, Stevens S, et al. IV. Developmental course of deprivation specific psychological pattern: early manifestations, persistence to age 15, and clinical features. Monogr Soc Res. Child Dev 2010;75:79-101.
- Horwitz AG, Hill RM, King CA. Specific coping behaviors in relation to adolescent depression and suicidal ideation. J Adolesc 2011;34:1077-85.
- UNICEF Thailand. A situation analysis of adolescents in Thailand 2015 – 2016. Bangkok: UNICEF Thailand; 2016.
- Bennetta DS, Ambrosini PJ, Kudesb D, Metz C, Rabinovich H. Gender differences in adolescent depression: do symptoms differ for boys and girls?. J Affect Disord 2005;89(1-3):35-44.
- Kongpet S, Suntibenchakul S. Prevalence of depression and conduct behaviors for adolescents (10-15 years old), at Rajvithi Home for Girls. Chula Med J 2015;59:103–14
- Seligman MEP, Rashid T, Parks AC. Positive psychotherapy. Am. Psychol 2006;61:774-88.
- Sin NL, Lyubomirsky S. Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: a practice-friendly meta-analysis. J Clin Psychol 2009;65:467-87.
- Bolier L, Haverman M, Westerhof GJ, Riper H, Smit F, Bohlmeijer E. Positive psychology interventions: a meta-analysis of randomized controlled studies. BMC public health [Internet]. 2013 [cited 2020 Jan 29];13:119. Available form: <https://bmcpublichealth.biomedcentral.com/track/pdf/10.1186/1471-2458-13-119>
- Chang EC, Sanna LJ. Optimism, pessimism, and positive and negative affectivity in middle-aged adults: a test of a cognitive-affective model of psychological adjustment. Psychol Aging 2001;16:524-31.
- Hart SL, Vella L, Mohr DC. Relationships among depressive symptoms, benefit-finding, optimism, and positive affect in multiple sclerosis patients after psychotherapy for depression. Health Psychol 2008;27:230-8.
- Youssef CM, Luthans F. Positive organizational behavior in the workplace: the impact of hope, optimism, and resilience. J Manag 2007;33:774-800
- Alarcon GM, Bowling NA, Khazon S. Great expectations: a meta-analytic examination of optimism and hope. Pers Individ Dif 2013;54:821-7.
- Trotter JP. The counselor and the group, Integrating theory, training, and practice, 4th ed. New York: Taylor & Francis Group; 2006.
- Tuntatead H, Phattharayuttawat S, Manusirivithaya V. The development of Thai psychological capital inventory. J Psychiatr Assoc Thailand 2014;59:73-83.
- Trangkasombat U, Larpboonsarp V, Havanond P. CES-D in adolescents J Psychiatr Assoc Thailand 1997;42:2-13.
- Peterson C, Steen TA. Optimistic explanatory style. In: Snyder CR, Lopez SJ. editors. Handbook of positive psychology. New York: Oxford University Press; 2002. p. 244-56.
- Layous K, Chancellor J, Lyubomirsky S, Wang L, Doraiswamy PM. Delivering happiness: translating positive psychology intervention research for treating major and minor depressive disorders. J Altern Complement 2011;17:675-83.
- Meevissen YM, Peters ML, Alberts HJ. Become more optimistic by imagining a best possible self: effects of a two week intervention. J Behav Ther Exp Psychiatry 2011;42:371-8.
- Fleming AW. Positive psychology "three good things in life" and measuring happiness, positive and negative affectivity, optimism/hope, and well-being. [dissertation]. New York: State University of New York College at Brockport; 2006.
- Seligman ME, Steen TA, Park N, Peterson C. Positive psychology progress: empirical validation of interventions. Am Psychol 2005;60:410-21.
- Bandura A. Self-efficacy: the exercise of control. New York: W.H. Freeman and Company; 1997.
- Yomaboot P. Effects of music therapy on the level of self-esteem and depression on female adolescents in Rajvithi Home [dissertation]. Bangkok : Mahidol University; 2009.