

ผลของโปรแกรมการระลึกถึงความหลังแบบกลุ่มด้วยการใช้ดนตรีต่อภาวะซึมเศร้าของผู้สูงอายุ ในศูนย์พัฒนาการจัดสวัสดิการสังคมผู้สูงอายุ Effects of Music-based Group Reminiscence Program on Depression in the Elderly at Social Welfare Development Center for Older Persons

นิพนธ์ต้นฉบับ

Original Article

กานดา มั่นคง¹, รัชนิกรรณ์ ทรัพย์กรานนท์²และ สหัทธยา รัตนจรณะ^{2*}

¹ ผลิตหลักสูตรพยาบาลศาสตรมหาบัณฑิต

² สาขาวิชาการพยาบาลผู้สูงอายุ

^{1,2} คณะพยาบาลศาสตร์มหาวิทยาลัยบูรพา อ.เมืองจ.ชลบุรี 20130

* Corresponding author:sahattar@yahoo.com

วารสารไทยเภสัชศาสตร์และวิทยาการสุขภาพ2563;15(1):29-36.

Kanda Mankong¹, Rarcharneeporn Subgranon² and Sahattaya Rattanajarana^{2*}

¹ Student in Master's of Science (Nursing) program

² Department of Gerontological Nursing

^{1,2} Faculty of Nursing, Burapha University, Muang, Chonburi, 20130, Thailand

* Corresponding author:sahattar@yahoo.com

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บทคัดย่อ

Abstract

วัตถุประสงค์: เพื่อศึกษาผลของโปรแกรมการระลึกถึงความหลังแบบกลุ่มด้วยการใช้ดนตรีต่อภาวะซึมเศร้าของผู้สูงอายุในศูนย์พัฒนาการจัดสวัสดิการสังคมผู้สูงอายุ **วิธีการศึกษา:** การวิจัยกึ่งทดลองมีกลุ่มตัวอย่างเป็นผู้มีอายุ 60 - 75 ปี ซึ่งอาศัยอยู่ในศูนย์พัฒนาการจัดสวัสดิการสังคมผู้สูงอายุบ้านบางละมุง จังหวัดชลบุรี ในปี พ.ศ. 2561 ที่มีภาวะซึมเศร้าระดับเล็กน้อยและปานกลางได้มาโดยวิธีสุ่มตัวอย่างอย่างง่ายจำนวน 24 คน จัดเข้ากลุ่มทดลองและกลุ่มควบคุมด้วยวิธีจับฉลากกลุ่มละ 12 คน กลุ่มทดลองได้รับโปรแกรมการระลึกถึงความหลังแบบกลุ่มด้วยการใช้ดนตรี 7 ครั้ง ติดต่อกัน 4 สัปดาห์ กลุ่มควบคุมได้รับการดูแลตามปกติ เก็บข้อมูลด้วยการสัมภาษณ์ตามแนวข้อคำถามในแบบวัดความเศร้าในผู้สูงอายุของไทย และแบบทดสอบสภาพจิตจุฬาฯที่ก่อนการทดลอง เมื่อเสร็จสิ้นโปรแกรมและการติดตามผลหลังโปรแกรม 3 สัปดาห์ สถิติที่ใช้ในการวิเคราะห์ข้อมูล คือ ค่าเฉลี่ย ร้อยละ ส่วนเบี่ยงเบนมาตรฐาน การทดสอบไคว์สแควร์ สถิติ Independent t-test วิเคราะห์ความแปรปรวนแบบวัดซ้ำ และทดสอบรายคู่ด้วยวิธีบอนเฟอร์โรนี **ผลการศึกษา:** 1) ผู้สูงอายุในกลุ่มทดลองมีคะแนนเฉลี่ยภาวะซึมเศร้าเสร็จสิ้นโปรแกรมและในระยะติดตามผล 3 สัปดาห์ต่ำกว่าผู้สูงอายุกลุ่มควบคุมอย่างมีนัยสำคัญทางสถิติ (P -value < 0.05) 2) ผู้สูงอายุในกลุ่มทดลองมีคะแนนเฉลี่ยภาวะซึมเศร้าเมื่อเสร็จสิ้นโปรแกรมและที่ติดตามผล 3 สัปดาห์ต่ำกว่าก่อนการทดลองอย่างมีนัยสำคัญทางสถิติ (P -value < 0.05) **สรุป:** โปรแกรมการระลึกถึงความหลังแบบกลุ่มด้วยการใช้ดนตรีมีผลในการลดภาวะซึมเศร้าในผู้สูงอายุ พยาบาลที่ปฏิบัติงานในศูนย์พัฒนาการจัดสวัสดิการสังคมผู้สูงอายุสามารถนำโปรแกรมไปใช้ลดภาวะซึมเศร้าให้กับผู้สูงอายุ และควรวิจัยเพื่อพัฒนาโปรแกรมการระลึกถึงความหลังแบบกลุ่มด้วยการใช้ดนตรีให้นำไปใช้ในผู้สูงอายุกลุ่มอื่นได้ต่อไป

Objective: To determine effects of the music-based group reminiscence program on depression in the elderly at a social welfare development center for older persons. **Method:** In this quasi-experimental research, the sample was persons aged 60-75 years old who had mild or moderate depression in the Ban Bang Lamung Social Welfare Development Center, Chonburi in 2018 who met inclusion criteria. Twenty participants were selected by simple random sampling and assigned either to the experimental group or the control group (12 each). The experimental group received the music-based group reminiscence program for a total of 7 session for 4 weeks. The control group had received a usual nursing. Data were collected from both groups at pre-test, post-test and 3-week follow-up. The research instruments included the music-based group reminiscence program, Thai Geriatric Depression Scale, and Chula Mental Test. The statistics used were frequencies with percentage, mean with standard deviation, Chi-square, Independent T-test, and repeated measure analysis of variance with Bonferroni correction. **Results:** Depression mean scores in the experimental group at the post-test and 3-week follow-up were significantly lower than the control group (P -value < 0.05). Depression mean scores in the experimental group at the post-test and 3-week follow-up were significantly lower than the pre-test (P -value < 0.05). **Conclusion:** Music-based group reminiscence program was effective in reducing depression in the elderly. Nurses taking care of the elderly in the social welfare development center could use the program to alleviate depression among elderly people. More studies should be carried out in the elderly in other settings.

คำสำคัญ: ผู้สูงอายุ, ภาวะซึมเศร้า, โปรแกรมการระลึกถึงความหลังแบบกลุ่มด้วยการใช้ดนตรี

Keywords: elderly, depression, music-based group reminiscence program

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Introduction

Depression in the elderly has been increasing worldwide. The World Health Organization (WHO) reported that in 2017, depression was found in 7% in the elderly.¹ In Thailand, the Department of Mental Health, Ministry of Public Health reported as high as 62% of the elderly in 2017 had depression.² Depression in the elderly is a psychological disposition with the feeling bored, less interested in things, easily sad or hurt, useless and hopeless in life.³ If left

untreated, the symptoms of depression usually get worse and could lead to definite illness of clinical depression, and eventually suicide.

Based on the data collected by the Department of Mental Health, in 2015, the elderly aged 70 – 74 years were with the highest tendency of suicide.⁴ Successful suicide attempts among depressed elderly were as high as 28.9 per 100,000 Thai populations.⁵ The study of Wongpakaran and co-workers

revealed that 23% of the elderly in social welfare support centers nationwide had depression.⁶ This could be attributable to the fact that with no one to take care of at home, the elderly had to leave their residence and go live in the social welfare support center, and that needed a vast and abrupt adjustment. In addition, since some elderly were abandoned by their offspring, siblings and relatives, they were more likely to feel depressed and sad.⁷ As a result, elderly in the social welfare support center were prone to depression and should receive attention and care to prevent and treatment for depression.

In caring and treating the elderly with depression, biological, psychological and social aspects surrounding depression must be considered.⁸ The treatment of depression in the elderly include medications and electroconvulsive therapy (ECT) which are somewhat effective but could cause some adverse effects such as drowsiness from medications and joint dislocations from the ECT.⁹ Consequently, other safer treatment modalities for depression treatment in the elderly are in a great need.

In Ban Bang Lamung Social Welfare Development Center (BBLSWDC) in Chonburi province, activities for the elderly were carried out to promote their mental health and to prevent isolation from their peers by encouraging socializing. These activities were developed by participation of nurses, social welfare workers, social developers and caregivers and carried out by nurse and caregivers. The BBLSWDC aimed to assess and prevent depression by encouraging the elderly to participate the weekly program under supervision of the nurse. All activities in the program including religion-based therapy, movie viewing, relaxing massage, and karaoke singing were to gather the elderly for socialization by in-person mingle.¹⁰ However, since depressed elderly were more likely to avoid and isolate from their peers¹¹, they neglected program participation and, if participating, avoided conversation and communication. In the literature review by Klungsri, a pilot test of Thai massage to alleviate depression among the elderly at the BBLSWDC found that 52.9% of the elderly had a moderate level of depression. After four consecutive massage sessions, the elderly in the experimental group experienced a significant decrease in depression symptoms (P -value < 0.01). Significantly different depression symptoms were also found between the elderly in experimental and control groups (P -value < 0.01).¹² Some other mental health promotion modalities could be applicable for the elderly to prevent and alleviate depression. Since nurses are responsible for

managing effective program to promote mental health for the elderly, especially programs that encourage interactions among the elderly. With this concern, this study aimed to test the effectiveness of group reminiscence therapy which has been increasing in popularity.¹³⁻¹⁵

Reminiscence therapy is a method to help elderly individuals with depression since the elderly were more likely to engage in reminiscence than other age groups.¹⁶ Reminiscence could bring happiness and satisfaction in life for the elderly.¹⁷ Stinson proposed and defined the concept of group reminiscence as interpersonal interaction process of recalling the past events, both favorable and unfavorable, and telling lives. of the elderly.¹⁸ The attitude and atmosphere of peer acceptance, exchange, and admiration could allow bond and friendship forming among the elderly members which could further lead to the elderly's perceived value in their own life.¹⁹ All of these positive psychological states could help alleviate depression.²⁰ Reminiscence could be more effective if the elderly are stimulated with meaningful entities such as their favourite songs, foods, and household items which could remind of their past happiness.⁹ A study found that to reduce the influence of factors affecting depression in the elderly both biologically and psychologically, favourite music or songs that the elderly used to be fond of could help the elderly recall their happiness in the past and in turn make them happy at the present.²¹ Physiologically, the tempo, melody, tone, and harmony of the sound travel through the limbic nervous system and stimulate the synthesis of norepinephrine, dopamine and the most important substance, serotonin, which are all major neurotransmitters to adjust negative affects or moods to the positive ones. These neurotransmitters decrease in volume once getting older.²² Empirical evidence suggested that music could reduce depression as in the study of Piboon and colleagues where music therapy program alleviate depression symptoms in the elderly.¹³

From previous findings and situation, elderly in social welfare support centers have suffered from depression and that warrants the care. The study of Nitipakorn found that reminiscence program could help alleviate depression and improve satisfaction in the elderly in the social welfare support center.¹⁷ Reminiscence program in the study of Nitipakorn was developed from the concept of Burside which was based on the 8th step of the psychosocial development theory of Erikson. Reminiscence on life development based on such theory consists of three phases including the selection of past

events, determination or search of meanings of their past events, and sharing past events with others.²³ However, the study did not verify clear group process.

In our present study, we implemented the group reminiscence program based on Stinson's concept of which process and steps of group reminiscence were clearly identified. In addition, we aimed to test the use of music as the stimulus for past memory so that the elderly could recall past events faster, communicate more, and eventually alleviate their depression.^{24,25} Our present study also tried to identify ways to create activities suitable for relieving depression for the elderly living in the social welfare support centers in Thailand. We tested the music-based group reminiscence program to reduce depression for the elderly residing in social welfare support centers. Specifically, aimed to determine that the elderly receiving the music-based group reminiscence program (experimental group) (1) had depression symptom score lower than those in control group at the end of the program and at the follow-up and (2) had depression symptom score at the end of the program and at the follow-up lower than that before the program.

Methods

In this quasi-experimental two-group pre-post test study, study population was the elderly residing in the Ban Bang Lamung Social Welfare Development Center (BBLSWDC) in Chonburi province in 2018 with low or moderate level of depression. Study sample was those aged 60 – 75 years who were willing to participate in the study. To be eligible, they needed to 1) have a low or moderate level of depression symptoms based on the Thai Geriatric Depression Scale (corresponding score range of 13 – 24 points), 2) no dementia as screened by the Chula Mental Test with a score higher than 15 points, 3) be able to communicate in Thai language and have no hearing loss, 4) not be treated with antidepressants, and 5) have no severe illness, either physical or mental, that could be harmful for participation. A total of 75 elderly were found eligible for the study.

The sample size was based on an effect size of depression score before and after the reminiscence program ($\mu_1 = 18.5$, $\mu_2 = 13.83$, $SD_1 = 3.25$, $SD_2 = 2.07$) retrieved from the study of Nitipakorn.¹⁷ With a type I error of 5% (or P -value of 0.05), a power of 80%, a sample size of 11 participants per group was required. It has been

recommended a group size of 8 – 12 participants is appropriate. Larger group could jeopardize the chance of each participant to express opinion; while smaller group put the participant in a higher level of pressure and frustration.²⁶ The sample of 24 individuals meeting the eligibility criteria was selected by random selection. These 24 individuals were then assigned to the two groups (12 each) by simple randomization. The use of 24 instead of 22 participants was for drop-out compensation.

In this study, independent variable was the music-based group reminiscence program as the intervention and dependent variable was depression symptom score. The music-based group reminiscence therapy was guided by the group reminiscence concept of Stinson consisting of evaluation, planning, practicing, and outcome evaluation. The participants attend seven group sessions using music as stimuli. Depression in the elderly was defined as sadness, frustration, confusion, guilt, reduced ability to enjoy life, personality change, and physical manifestations such as loss of appetite, constipation, insomnia, lethargy, and loss of energy.

In this study, the music-based group reminiscence program BASED ON Stinson's concept consisted of four steps. First, in the pre-program evaluation step, group leader, group leader assistant, and group members were evaluated and prepared and the sessions were appointed. In the second step, planning, the group sessions were detailed including goals, venues, date and time, number of sessions, group size, group activities, and skill preparations for the group leaders. In the third step, practice, group leader led the reminiscence among the group members using music as stimuli in the seven consecutive sessions as suggested to be appropriate for reminiscence therapy.¹⁸ In each session, songs voted by the group members as impressive and happy were played for the members. After the music, each of the elderly was encouraged to share their past life to group members. The researchers used the attentive listening technique to encourage the members express their opinions and to encourage each other, to show appreciation on the elderly's participation, and to summarize the session activity. Activities in each of the seven sessions were as follows. In the first session, relationship among the members was formed with the aid of a Thai song Prom-Likit or "As Destined." In the second session, reminiscence theme of one's beloved song was applied using the Thai song Pleng-Rak-Kong-Ther or "Your Love Song." The

third session with a theme of a happy youth life was conducted using the Thai song Nah-Tee-Dek or "Kid's Duty." In the fourth session, teenage impression theme group reminiscence was conducted using the song Suay-Jin-Na-Nong or "You Beautiful Girl." In the fifth session, the Thai song Choam-Toong or "Enjoy the Rice Field" was used in the group reminiscence theme of my adulthood. The sixth session aimed to reminisce the theme of the proudest moment in my life using the Thai song Yim-Su or "Fighting Smile." In the last or seven session, reminiscence in all session was summarized. The session was organized at every Monday and Tuesday since November 5th, 2018 until November 26th, 2018.

In the third step, evaluation was carried out on group participation of the members and the group leader after the seventh session. In addition, depression was assessed three weeks after the post program evaluation.

Study instrument

The study instrument was a set of questionnaires. In the demographic section, gender, age and co-morbidity were asked since they were associated with depression.⁴ In the second section, the Thai Geriatric Depression Scale of Poungrin and colleagues was used to measure the elderly depression.²⁷ The scale of Puangrin and colleagues was modified from the Geriatric Depression Screening Scale (GDS) created by Yesavage et al.²⁸, and Leethong-In²⁹ With the GDS of Puangrin et al, the score of 0 – 12 points was for no depression in the elderly, 13 – 18 points for low depression, 19 – 24 points for moderate depression, and 25 – 30 points for severe depression. The scale was tested by the developer and found to have a high internal consistency reliability with a Kuder-Richardson (K-R) coefficient of 0.81.²⁷

At screening, mental health of the participants were assessed with the Thai Geriatric Depression Scale)²⁶ and Chula Mental Test which is for determining dementia in the elderly developed by Jitapankul.³⁰ The scale measures the perception of date, time, place, person and decision making. For quality, the scale has a 100% sensitivity, and a moderate reliability with a test-retest kappa coefficient of 0.65, and a high internal consistency reliability with a Cronbach's alpha coefficient of 0.81. The Chula Mental Test contains 13 and 9 main and minor questions, respectively. All 19 minor questions were scored with 1 point for the correct answer. With a possible total score of 19 points, those elderly with 15 points or higher are considered having no mental health problem.²⁷

Study procedure

In this study, two professional nurses were assigned as research assistants for data collection. They aided the participants in answering the Thai Geriatric Depression Scale and the Chula Mental Test questionnaires by reading the questions and filling the answers for them. Research assistants facilitated and encouraged the elderly to participate in the group sessions and prepared all materials for the sessions. They also provided the elderly with objectives, and session procedures. They were trained for the group reminiscence activities before the actual experiment.

In terms of participant protection, the study protocol was approved by the Ethics Committee for Human Study of the Faculty of Nursing, Burapha University (Approval number: 05-08-2561; approval date: September 12, 2018). All participants were informed about the voluntary nature of the study and the data collected were secured, presented as summarized, not individual participant, results, and used for the research purpose only. The participants could terminate the participation at any time point with no effect on the quality of service they received from the center. The participants were asked to provide the written informed consent once agreed to join the study.

The researchers, with the letter from the Dean of Faculty of Nursing, asked the director of the for presented the Ban Bang Lamung Social Welfare Development Center (BBLSWDC) for study permission. Once permitted, the researchers met with the potential participants to provide the study information and asked for their participation. The researchers were given advice on the group reminiscence from the experts from a psychiatric hospital and on music therapy from the experts from the College of Music of Mahidol University at the KPN Institute.

Before the first group session, the researchers and research assistants met with the elderly participants in the experiment group at the group session room of the BBLSWDC. The first questionnaire administration for demographic information and the Thai Geriatric Depression Scale was first completed on November 5, 2018. After the experiment of group reminiscence, the questionnaire was completed on November 26, 2018. For the follow-up assessment, the questionnaire was completed on December 17, 2018.

To prevent information contamination between the two groups, a private room was secured with no entrance

permission for individuals not involving in the study. For participants in the control group, they were treated similarly to those in the experimental group except the group reminiscence therapy sessions.

Data analysis

Demographic data were presented as frequency with percentage and tested for group difference by Chi-square test or Fisher's exact test, as appropriate. Mean with standard deviation of depression scores before and after the group sessions, and t the follow-up were calculated. Depression scores of the two groups before the sessions were compared using independent t-test. The differences of depressions at the end of the sessions and follow-up between the two groups using repeated measure analysis of variance.

Results

The majority of the participants in the experimental and control groups were in their 70 - 75 years of age (58.34% and 41.67%, respectively), female (66.67% in both groups), with underlying illness (66.67% in both groups). In the control group, there were also 41.67% in 66 – 70 years of age. There were no statistically significant differences between the two groups in any of these demographic characteristics.

Table 1 Demographic characteristics of the participants (N = 24).

Characteristics	Experimental group (n=12)		Control group (n=12)		P-value*
	N	%	N	%	
Age (yrs)					0.40
60 - 65	3	25	2	16.66	
66 - 70	2	16.66	5	41.67	
70 - 75	7	58.34	5	41.67	
Gender					0.67 [#]
Male	4	33.33	4	33.33	
Female	8	66.67	8	66.67	
Underlying illness					0.67 [#]
Yes	8	66.67	8	66.67	
No	4	33.33	4	33.33	

* Chi-square test.

[#] Fisher's exact test.

The scores of depression symptoms in the experimental group decreased from 14.58 points (low depression level) before sessions to 11.50 points after sessions (no depression) and 11.92 points at 3-week follow-up (no depression) (Table 2). On the other hand, scores in the control group slightly increased from 14.50 points (low level) before sessions to 15.50 points after sessions (low level) and 15.17 points at 3-week follow-up (low level).

In the repeated measure ANOVA, compound symmetry based on Mauchly's Test of Sphericity was not found indicating a violation of the repeated measure ANOV test assumption of which dependent variable variance in each group at each time point was correlated and different. The adjustment based on Greenhouse-Geisser method was used to alleviate Type I error.

Based on the overall repeated measure ANOVA test, difference in interventions (two groups with and without reminiscence) ($F = 13.19$, P -value < 0.01) and time points ($F = 6.64$, P -value < 0.01) was found statistically significant (Table 2).

Table 2 Depression scores between the two groups at each time point by repeated measure ANOVA (N = 24).

	Experimental group			Control group			Between-group test at each time point
	mean	SD	Depression level	mean	SD	Depression level	
Before sessions	14.58	2.15	Low	14.50	1.24	Low	$F = 0.13$, P -value = 0.91
After sessions	11.50*	1.51	No	15.50	1.98	Low	$F = 31.05$, P -value < 0.01
At follow-up	11.92 [#]	1.73	No	15.17	2.29	Low	$F = 15.39$, P -value < 0.01

Over all repeated measure ANOVA	Repeated measure ANOVA within experimental group	Repeated measure ANOVA within control group
Between group $F = 13.19$, P -value < 0.01	Between time points $F = 29.75$, P -value < 0.01	Between time points $F = 2.24$, P -value = 0.17
Within-group $F = 6.64$, P -value < 0.01	Mean change of depression score within experimental group (Bonferroni's adjustment)	
Group*time $F = 22.56$, P -value < 0.01	* from before to after sessions: -3.08 , P -value < 0.05 .	
	[#] from before sessions to follow-up: -2.66 , P -value < 0.05 .	

With a descending trend of depression score in the experimental group and an ascending trend in the control group, the test of interaction of groups and time points was statistically significant ($F = 22.56$, P -value < 0.01) (Table 2).

At each time point, depression scores of the two groups were not different ($F = 0.13$, P -value = 0.91). However, scores after sessions ($F = 31.05$, P -value < 0.01) and at 3-week follow-up ($F = 15.39$, P -value < 0.01) in the experimental group were significantly lower than those in the control group (Table 2).

In the experimental group, the change in depression score at each of the three time points was statistically significant ($F = 29.75$, P -value < 0.01) (Table 2). With Bonferroni' adjustment for pairwise comparisons, the decreases in scores from before to after sessions (mean decrease = -3.08 points, P -value < 0.05) and from before sessions to follow-up (mean decrease = -2.66 points, P -value < 0.05) were statistically significant (Table 2). On the other hand, the score changes in the control group were not found significant ($F = 2.24$, P -value = 0.17) (Table 2).

Discussions and Conclusion

Music-based group reminiscence program was associated with depression scores lower than those without the program immediately after sessions and at follow-up (P -value < 0.05). This finding suggested that group reminiscence allowed the elderly to interact and share their recalled past life with others.¹⁹ Such interaction and sharing encouraged the elderly to feel more valuable and motivated to continue their lives.³¹ The program could also help modify interpersonal feeling and reveal personal feeling which could further encourage more participation in the sessions and more interdependence.³² Motivation and relationship among the group members could alleviate depression.³³ Our finding was consistent with the study of Stinson and co-workers where group reminiscence could relieve depression in the female elderly.³³

Physiologically, the use of music as a stimulus in reminiscence could alleviate depression. Music could stimulate the body through limbic system where various neurotransmitters potentially alleviating depression are synthesized. For example, serotonin offers positive affect for the elderly listening to their favorite songs. Music could also stimulate the secretion of epinephrine of the sympathetic nervous system.³⁴ In addition, music promotes interaction between individuals and makes a social interaction easier.³⁵

The mutually famous music could interconnect the elderly with depression in the group activities so they could converse more and a more relaxing atmosphere could be achieved.³⁵ As a result, the elderly cultivated happiness-oriented thinking and regain hope and will to live, which in turn relieve their depression. This finding supports the study of Piboon and co-workers where music therapy reduce depression score significantly from baseline with P -value < 0.05 ¹³ and the study of Dev and colleagues of which depression in the elderly could be significantly alleviated by music therapy (P -value < 0.001).³⁶

Our finding was also consistent with the study of Mohammadi et al of which music therapy consisting of music playing, singing and reminiscence could relieve depression, stress and anxiety among the elderly.³⁶ In short, music-based group reminiscence program allowed the elderly to recall meaningful and happy memory, and to have more social interaction, positive affects, satisfaction and happiness, which in turn help relieve depression.

Music-based group reminiscence program resulted in a significance decrease of depression scores after the sessions and at follow-up from baseline. The finding could also attributable to the attributes described above. In addition, this proved that the benefit of the program was sustained even at 3 weeks after the end of the program. This relatively short sustainability could be in part due to the fact that the music could bring out the positive value and hope to live³⁷ and interdependence which could reduce depression, stress and anxiety.³⁸ Group reminiscence could also help the elderly with depression or desperation more competent in solving their frustration.²³ Group reminiscence allowed the elderly to interconnect and reinforce self-confidence and self-value.³⁹ The study of Sharif and co-workers showed that group reminiscence could sustain the depression-decreasing benefit from the end of program till the one-month follow-up.³⁹ The sustainable benefit of the group reminiscence program could be due to the long-lasting effects of warmth, understanding and help. Listening to favorite music could increase the secretion of endorphin, the happiness neurotransmitter.⁴⁰ As a result, the elderly could be happy in participating the group session. Music could also connect the elderly together and improve perceived self-meaningfulness.³⁴ A study of Ashida also showed that music-based group reminiscence program could decrease depression up to the one-week follow-up in the elderly with dementia.²⁴ All these attributes promote

sustainable benefits of the music-based group reminiscence program.

In terms of study implications, nurses responsible for the care of the elderly in social welfare support center and other places in similar nature could apply music-based group reminiscence program to help the elderly with low to moderate level of depression. In education, nursing schools could incorporate music-based group reminiscence program into their curriculum to prepare students for their future practice. Administrators of the social welfare support center could support nurses responsible for the elderly care, to attain the training of group reminiscence.

For future research, music-based group reminiscence program could be tested in other groups of the elderly or other settings such as the depressed elderly with chronic illnesses and the community-dwelling elderly. Studies with longer duration of the program and/or follow-up are needed to confirm sustainability of the program.

In conclusion, music-based group reminiscence program significantly reduced the depression scores for the elderly at the Ban Bang Lamung Social Welfare Development Center at the end of the program and 3-week follow-up. The depression scores of the elderly receiving the program were also significantly lower than those in the control group both at the end of the program and 3-week follow-up. This group reminiscence program could have helped the elderly regain their value and hope to live. The success of the program could be in part due to the songs chosen by the elderly themselves. Song choices should then be originated from the participants if the program is implemented in other settings.

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