

Garden Walking for Depression

A Research Report

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This study was designed to determine the effect of garden walking and reflective journaling on adults who are 65 years old and older with depression. The Geriatric Depression Scale measured depression. Four themes emerged from the interview data collected from each participant. **KEY WORDS:** *depression, gardens, older adults*
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Depression is a medical condition that affects 21.7 million Americans or 6.7% of the US population each year.¹ It is estimated that 15 of every 100 adults will experience a depressive episode at some point during their elderly years.² Depression in older adults not only causes distress and suffering but also leads to impairments in physical, mental, and social functioning.³ Understanding and working to change the complex patterns associated with depression in older adults from a unitary perspective may be beneficial in alleviating depression and improving the quality of life for this group.

Several types of complementary therapies have demonstrated promise in treating depression in older adults.⁴ One successful treatment of older adults' depression is reminiscence or reflective therapies, on the basis of the premise that reflection upon significant positive and negative life experiences enables the individual to overcome feelings of depression and despair.⁵ Creating opportunities for older adults to change patterns and overcome depression and feelings of sadness may assist this group to remain healthy and active in their elder years.

The idea for this study came from the Morikami Japanese Museum and Gardens in Delray Beach Florida. The garden designer, docents, and educators often receive letters and personal statements from

visitors describing how the gardens helped ease a lonely or sad time. Some letters stated that the gardens “saved” their lives and eased the pain of a personal loss or frightening medical diagnosis.

BACKGROUND AND SIGNIFICANCE

There is a long history of the therapeutic use of plants and gardens in the care of patients with both physical and mental illnesses.⁶ Exposure to sunlight has also been linked to circadian rhythms and sleep cycles.⁷ By allowing patients increased exposure to sunlight, outdoor gardens may have a positive influence on both the uptake of vitamin D and circadian rhythm cycles.⁸ Outdoor gardens have been suggested as a means of improving morale, self-confidence, cooperation, social interaction, and physical functioning for residents of a geriatric facility.⁹

In 1 study,¹⁰ visits to a garden decreased pain and emotional distress for patients on a pediatric cancer unit and their families who spent time with them. Pachana et al⁶ studied the behaviors of hospitalized older adults who were exposed to a garden within the hospital. Findings of this study were that these older adults experienced reduced aggression, improved mood, and decreased length of hospital stay. These studies provide evidence that gardens can have a positive effect on physical and psychological health, including cognitive and emotional well-being.

In addition to exposing older adults to sunshine and the peacefulness of gardens, walking through gardens provides a form of exercise for older adults. Miser¹¹ studied older adults with depression who walked

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30 minutes daily compared with others who did not. Findings of this study showed that 60% of those in the walking group were no longer depressed after 4 months whereas those in the nonwalking group were still depressed. Steinman et al¹² reviewed research literature regarding depression in older community-dwelling adults. One of the strong recommendations coming out of that review is for exercise to overcome feelings of depression and sadness. DeMoor et al⁴ found that older adults who exercised regularly were less depressed, had less anxiety, and were more extraverted than those older adults who did not exercise regularly.

Reminiscence or reflective therapy asks people to tell or think about their life story and has been shown to relieve depression. Mastel-Smith et al¹³ studied 33 older adults randomly assigned to an intervention group or a wait list control group. The intervention for this study consisted of 10 life story workshops that focused on reflection and shared life stories. The workshop group had significantly lower depression scores on the Brief Symptom Inventory at the end of the 10-week sessions than those in a control group.

An initial study¹⁴ at the Morikami Gardens was designed for 3 equal groups of depressed older adults, a group who walked the garden alone, a group who walked as a group with a guided imagery leader, and a comparison art therapy group who did not go to the garden. Although paired *t* tests demonstrated a reduction in geriatric depression scores for all participants regardless of group ($t = 8.56$, $SD = 5.56$, $P = .004$), and an analysis of variance showed little difference between the effectiveness of both groups to reduce depression ($f = 1.97$, $P = .152$), participants voiced a desire for a combination of guided walks and reflective walks alone, as well as for more flexibility as to walking day and time.

Reflection, life story telling, being in a garden, and walking have all been demonstrative as effecting in reducing depression and improving mood in older adults. This study examined a combination of walking and reflective writing to determine the effects of this combined strategy to reduce depression and improve mood.

THEORETICAL FRAMEWORK

The theoretical framework for this study was Roger's Science of Unitary Human Beings.¹⁵ Rogers¹⁵ theorized that human energy fields are in continuous

mutual process with environmental energy fields. Rogers believed that because of this continuous interaction, manifestations or patterns could be identifiable. Depression or feelings of sadness can be identified as pattern manifestations. In this study, researchers sought to determine whether garden walking and reflective journaling could change the pattern manifestation of depression and sadness. When older adults walk the garden, reflect on life, and journal about their feelings, they are demonstrating a knowing participation in the mutual process of changing the pattern of depression and sadness through interaction with garden walking and reflection.

STUDY

A walking guide and reflective journal titled *Stroll for Well-being: Garden Walks at the Morikami Museum* ("Stroll") was written for participants in this study to be used at their convenience for 12 garden walks. The *Stroll* was structured so that participants would spend about 2 hours walking the garden, stopping at 6 specified spots, reading a descriptive paragraph or 2, and reflecting on the words provided and on the garden surroundings, and then writing on journaling pages provided in the *Stroll*. Within the *Stroll* were pictures of the Morikami gardens that could be viewed between walks so that further journaling could take place even when the participant was away from the gardens.

Each of the 12 walks had a theme, which was carried out over the 6 stopping points on the journey through the garden. In order of their presentation in the *Stroll*, the themes were awareness, possibility, transition, connection, journey, trust, joy, freedom, forgiveness, reflection, gratitude, and fulfillment. The 6 stopping points along each walk were the Wisdom Ring or Circle of Life, the Zig Zag Bridge, the Gate, the Contemplation Pavilion, and the Water Fall. At each stop along the 1-mile walk, there were readings that reflected the themes for that stop (Table 1).

SAMPLE

Forty adults older than 65 years were recruited for this study by using fliers at the Morikami's gift shop, newspaper articles, and word of mouth. The number of participants was deemed adequate on the basis of prior pilot work that demonstrated significant changes in depression scores in 38 participants. This purposive

TABLE 1. Examples of Reflective Readings for Each Walk

Walk 1: Awareness	<p>Reflection at the wisdom ring: Notice the unending nature of the circle</p> <p>Thoreau said, "let us not look back in anger or forward in fear, but around in awareness"</p> <p>Put all else away for another time</p> <p>Be aware of the beauty of the earth and water around you, and the sense that you belong here, at this time, for this purpose</p>
Walk 2: Possibilities	<p>Reflection at the zig-zag bridge: Remember that the path of possibilities is not always straight</p> <p>See the lights and shadows across the bridge as possibilities unfolding as you walk; embrace them even if you cannot see them clearly at the moment</p> <p>Could you find a way to embrace unknown possibilities in your life?</p>
Walk 3: Transitions	<p>Reflection at the contemplation pavilion: As you stop to rest in the contemplation pavilion and enjoy the cool shade and seclusion of this place, remember that there is rest and recuperation after times of transition</p> <p>These times of rest should be used to reflect upon the meaning of the transition—what did it mean to become an adult?</p> <p>What does it mean to come to the end of one's life?</p>
Walk 4: Connections	<p>Reflection at the straight bridge: The straight bridge is a connection between 1 part of the walk and another, made by going over water</p> <p>Sometimes connections in our lives go over elements that are not easy to maneuver</p> <p>Are there people with whom you connect that are not easy to be with?</p> <p>How can those connections be strengthened?</p> <p>How can you preserve your sense of self in these connections?</p>
Walk 5: Journey	<p>Reflection at the ancient gate: Passing through gates to new and uncharted territory is part of life's journey</p> <p>As you pass through the gate think about times on your personal journey when gates opened for you, or perhaps were closed</p> <p>How did this affect your journey?</p>
Walk 6: Trust	<p>Reflection at the falls: At the end of today's walk the waterfall provides a view of the beauty of trust in our lives</p> <p>As we learn to trust, we see that the water continues to flow and the beauty of the waterfall never diminishes</p>
Walk 7: Joy	<p>Reflection at the wisdom ring: As you stop at the circle today, see the joy of completion and continuity in that circle</p> <p>Appreciate the joy of sun on water, where it creates plays of light and movement</p> <p>Appreciate the joy you have had in your own life</p>
Walk 8: Freedom	<p>Reflection at the ancient gate: You have the great and wonderful freedom today to walk through the gate, to leave behind all that is in the past and embrace the future with freedom and joy</p> <p>Are you ready to do this?</p> <p>You do not have to forget the past but may keep it in memory while moving forward</p> <p>Sometimes moving forward is very difficult and going through the gate can cause feelings of sadness and fear</p> <p>Today take a moment as you walk through the gate to see the freedom in this act</p> <p>You are consciously making a choice to move forward and embrace the freedom to continue with life</p>
Walk 9: Forgiveness	<p>Reflection at the beginning of the walk: Charlotte Bronte wrote, "Forgiveness is the mightiest sword, forgiveness of those you fear is the highest reward, when they bruise you with words, when they make you feel small, when it's hardest to take you must do nothing at all."</p>
Walk 10: Reflection	<p>Reflection at the straight bridge: Charles Dickens said, "Reflect upon your present blessings—of which every man has many—not on your past misfortunes, of which all men have some."</p> <p>As you go across the straight bridge today, reflect upon all of your blessings—safety, friends and family, freedom, love, peace</p>
Walk 11: Gratitude	<p>Reflection at the contemplation pavilion: As you sit in the contemplation pavilion today to enjoy the quiet and comfort it provides, reflect on the gratitude you feel for you own home—for the peace and comfort you feel there; for the safety of your roof, your walls</p> <p>Feel grateful for all of your possessions, yet without fear of losing them</p>
Walk 12: Fulfillment	<p>Reflection of the waterfall: As the water rushes over the rocks it heads in a new direction</p> <p>Think for a few minutes about new directions in your life</p> <p>Review the themes from each walk, thinking both of the circles they make, and of the new directions they offer to you</p> <p>Awareness-Possibility-Transition-Connection-Journey-Trust-Joy-Freedom-Forgiveness-Reflection-Gratitude-Fulfillment</p>

TABLE 2. Demographic Data

Characteristics	%
Marital status	
Married	45
Widowed	30
Divorced or never married	25
Ethnicity	
White	62.5
Hispanic	25
African American	12.5
Highest education level completed	
High school	60
College degree	30
Postgraduate	10
Depression diagnosed	
Diagnosed by health care provider	64
On an antidepressant	92
Self-diagnosed	36

sample was recruited until the 40 slots were filled. Inclusion criteria for this study included persons with physician diagnosed or self-diagnosed depression who could walk about 1 mile and who could get to the Morikami gardens at least 12 times during a 3-month period. Participants could be on prescribed antidepressants when the study began but were excluded from the study if they had any change in antidepressant medication during the study period, except when antidepressants were discontinued.

Because there was no designated time frame for taking the walks, all 40 participants completed the study. The participants were community-dwelling older adults who lived alone or with a spouse and had symptoms or feelings of depression. The mean age of the group was 71.3 years. Table 2 provides demographic data for the participants. All of the participants in this study stated that they volunteered in an attempt to alleviate some of these feelings and improve their quality of life. Approval by the university's institutional review board was obtained to ensure ethical treatment of participants. Each participant was provided with a free 1-year membership to the Morikami Museum and Japanese Gardens so they could enter and walk at any time, and as a token of appreciation for their participation.

METHODS

A mixed-methods research design was used for this study. The short-form, 15-question, Geriatric

Depression Scale (GDS)¹⁶ was used as a quantitative measure of depression. Each participant completed the GDS before beginning and after completing the 12 walks. The GDS was shown to have 92% sensitivity and 81% specificity in a study undertaken by Sheikh and Yesavage.¹⁷ These researchers found moderate internal consistency reliability (with a Cronbach alpha coefficient of 0.749); good construct validity, with significant associations between the GDS and measures of depressed mood and life satisfaction. In another study, Lyness et al¹⁸ found a sensitivity of 91.45% and specificity of 85.36% for the GDS when used with a group of 130 functionally impaired, cognitively intact, community-dwelling older primary care patients in the United States.

Before beginning the walks, each of the 40 participants signed informed consent and completed the first GDS. The researcher then explained the use of the *Stroll*, discussed how each of the walks was structured by theme, and talked about reflective writing and journaling. At this time, participants were asked to use the pages provided in the *Stroll* to write their story of joy and sadness, gain and loss, friends and family, health and illness, memories and dreams: their life, their images, and their words.

The *Stroll* provided a feedback form asking participants to make comments about their experience in the garden. These forms were returned to the researcher at the end of the 12 walks. After receiving the feedback form, the researcher met with the participant to complete the second GDS and to be interviewed about the experience of walking in the garden using the *Stroll*. During this interview, pieces of reflective writing within the pages of the *Stroll* were shared at the discretion of the participant.

Hermeneutic phenomenology, a method of inquiry in which the subject matter is always the structure for meaning of the lived human experience,²⁰ was the framework used to capture the lived experience of the 12 garden walks using the *Stroll*. To begin the interview, the researcher asked, "tell me about walking through the garden?" "What was the experience like each time you walked?" and "What was the total experience of walking through the garden?" The questions were constructed to begin an open-ended discussion of the participants' walking experience, and to garner the essence of that experience through discussion. The researcher guided the interviews by keeping the participants focused on the questions and asking for clarification or elaboration of points made during the interview. The interviews were

audio-recorded with participant permission and transcribed. The reflective writing examples and the transcribed interviews were read and reread by the researcher. In addition, the researcher kept notes during the interviews to assist with understanding the lived experience. While reading the transcribed interviews, the researcher also consulted notes made during the interview to better remember nonverbal communication during the interview that might provide insight into the lived experience.

DATA ANALYSIS

Data from the 40 participants in this study were collected over a 6-month period in 2008. Using the statistical program for the social sciences (SPSS version 16, 2009), mean GDS scores before the walks started and after the walks ended were used to measure changes in depression levels in participants. Mean scores on the prewalk and postwalk GDS were compared using *t* tests.

To capture the lived experience of walking through the gardens, thematic analysis of the transcribed interviews and the researcher's notes made during the interview sessions were undertaken. The goal was to extract themes that would bring an understanding of the phenomenon and compare the findings of the GDS with the participant experience. As the researcher listened to the taped interviews and read and reread the transcribed interviews and notes, words and statements that revealed something about the experience were highlighted. The researcher then read and reread the highlighted and marked sections of the interviews to determine what each sentence or cluster revealed about the phenomenon or experience of the garden walks. As this process continued, themes were identified that allowed the essence and meaning of garden walks to be expressed.

To ensure the trustworthiness of the thematic analysis, 4 steps proposed by Guba and Lincoln²¹ were applied. Credibility was established by using the direct words of the participants, extracted from the interviews and reflective writings. To ensure transferability in this study, mixed methods were used to determine the participants' experience about the walks and feelings of depression compared with a valid and reliable measure of depression, the GDS demonstrated this to be true as well. Dependability was established by asking another nursing researcher with expertise in qualitative analysis to read the transcripts and reflective writing to determine whether

TABLE 3. Results of Geriatric Depression Scale

	Pretest	Posttest
Mean	13.0	9.4
Standard deviation	1.6	1.8

the themes extracted by the researcher were truly reflective of what was said during the interviews and in the reflective writings. The second reader was in agreement with the original thematic analysis and agreed that the themes provided a glimpse into the essence of the lived experience of garden walking. The fourth criterion applied was confirmability. The researcher provided each participant with a copy of the themes extracted during data analysis. The participants unanimously agreed that the themes were appropriate and held the meaning that they were trying to portray in their interviews.

FINDINGS

To determine changes in mean depression scores, paired *t* tests compared GDS pre- and postintervention scores. The overall change in depression scores was significant, with the lower scores indicating less depression after the walks when compared with scores before the garden walking intervention ($t = 12.54$, $P = .001$). (Table 3) data from.

From the interview data, 4 themes emerged to illuminate the lived experience of garden walking. The first theme was *being forced to spend time away from pressures of the day*. Many participants indicated that they had never spent time by themselves with the sole purpose of reflection and relaxation. Participants described the walks as a gift they had learned to cherish:

- The most enjoyable thing about these walks was being able to get away from my day and spend time writing and reflecting. Just being with the quiet and beauty, the whole box of goodies.
- I loved the solitude, just time for me. I liked people watching that required no interaction on my part except as I internalized it.
- This was a gift. No matter how I felt when I started, I always left with joy.
- I am so pleased that I was able to get away and do these walks. I was able to do some much needed soul searching. Even when I was not in the mood, the gardens gave me a sense of peace.

The second theme that emerged was *a sense of the beauty of nature*:

- The beauty of the garden gave me a renewing feeling and a sense that my life was part of a great plan that was all in order.
- The overwhelming beauty and peacefulness of the garden gave me a new approach to old troubles. I hope this will carry me forward in my life. The variety of water, flowers, trees, sky and sun were exhilarating. The lakes had a tranquil effect and the waterfalls gave me a sense of cleansing.
- The gardens gave me peace. The beauty of each stop, the time spent communing with nature. This all filled me with a sense that a great plan is in place and I am a small part of that plan.

The third theme was focused on using the *Stroll* as a guide to the 12 walks, identifying it as *a guide to the gardens that provided insight and depth to the experience*:

- The book make[s] each walk make sense, it allowed me to reach within and write down my thoughts.
- By directing my thoughts to positive acceptance of losses of the past and presenting views of the present and future that gave me hope the book was a major part of my feeling better at the end of the 12 walks.
- The book pointed to feelings and thoughts that made me think differently each day. When I reread my journal, I was surprised at the depth of my thoughts.
- The book is beautiful both in pictures and in words and it was helpful in focusing my attention, observations, and thoughts. I would recommend that everyone do these walks using the book as a guide as a means for stress reduction and heightened awareness of the meaning of one's life.

The fourth theme that emerged from the interviews and feedback forms was *gratitude for the beauty of nature and the life I have led*. Participant statements that were used to extract this theme include the following:

- I feel as though my life has meaning now, I am part of something so much larger—nature, the grandness of being alive, it is exciting and I see it as a new beginning.
- These walks have opened my eyes about the beauty that surrounds me and puts my problems and fears into a perspective that is easier to live with.
- The gardens provided me with a feeling of being secure and safe. It was almost a feeling of being in paradise.

- As I sat in the contemplation pavilion I thought about when Walt Whitman walked across America and saw the beauty that was our country and wrote a poem called *I Hear America Sing*. I looked up that poem and it talks about all of the different types of people in America and I felt part of a great idea that has been made real for so many.
- During the walk where the theme was freedom, I thought about the many types of freedoms there are—with freedom comes joy—contemplation is freeing and a joy in life.
- Joy helps you to open your mind and clear out negative and confusing thoughts. This whole experience helped me to focus on the goodness and joy and freedom I have in life. The Zig Zag bridge reminded me of the difficulty of forgiveness but how necessary it is.

Table 1 presents some of the reflective readings in the *Stroll*.

DISCUSSION

Using a mixed-methods design to integrate quantitative findings with those from interview data on the effect of garden walking established the progression participants made during the garden walks. Using the quantitative GDS to demonstrate improvement in depressive symptoms and uncovering themes in the interview data that describe reduced depressive feelings firmly establish the improvement in depression in this group of older adults.

The framework for this study was Roger's Science of Unitary Human Beings, in particular, the aspect of integrality within the framework of the theory. Experiencing and interacting with the Morikami gardens and writing about the reflections gathered from the garden walks present examples of integrality, where the human and environmental energy fields are integrated, inseparable, and affect each other. The open-ended questions used in the study were developed to uncover the meaning of garden walking and determine the sense of connectedness or integrality that each participant felt to the gardens as well as how these experiences affected the reflective writing. The reflective writings often identified human patterns and pattern changes on the basis of the connectedness of the participant to the garden. Beauty, peacefulness, a sense of the wholeness of the world, and the sense of being a small part of a larger whole were examples of patterns identified and changed during the participant's garden walks and reflective writing.

One limitation of the study is the use of a formal Japanese healing garden rather than a community park or other less formal setting for the walks. It is possible that the findings may not be generalized to all garden settings. Other limitations include having participants from only 1 locale, the inability to obtain a more diverse sample, and having only 1 interview rather than several interviews during the 12-week study.

Despite the limitations, this study demonstrates that a garden walking intervention involving reflective writing had a beneficial effect on the elders experiencing depression. The components of garden walking and reflections in combination with time spent in the context of the beauty of nature in garden helped participants feel part of a larger picture and bring a fuller sense of how one fits into that picture. The findings of this study show that the experience of reflection and garden walking may bring a kind of peace that helps to lift the feelings of depression.

Having a tangible way to organize and encourage the process of writing/reflecting/retelling/re-reflecting was an important component of this self-help program. Using the *Stroll*, with its guided reflection, beautiful pictures, and pages for journaling meant that there was a structure to the program, even though in the second study there was no appointed time to go to the gardens or to meet with a therapist. The *Stroll* also allowed participants to retain the experience and the ability to read their journals over again anytime they wished, both during and after the study.

Several implications for holistic nursing care are revealed in this study. Reflection is an important aspect of depression therapy that may assist older adults in overcoming this common problem. Although medication and counseling are effective therapies for depression, self-work in garden walking and reflection may be more acceptable to older adults and fulfill the desire to maintain independence common to this age group.

Writing one's personal story helps older adults to begin the journey of life review, to see themselves as whole beings connected in mind, heart, soul, and physical being, and as complete at any given moment. This process of reflection cannot take place in a few minutes but must be encouraged over time so that a full feeling of wholeness can be achieved. In this study, journaling was very effective in tying 1-walking session with another. Many of the participants stated that they read and reread their journal writings as they

spent time in the garden and progressed through the 12 walks.

Implications for nurses are also found in this study. When assessing older adults and their behaviors, depression is one diagnosis that must be considered. Depression can cause fatigue, loss of appetite, and, in extreme cases, lead to dementia.²⁰ If depression appears to be the underlying problem, encouraging older adults to write stories of joy and sadness from their lives, and arranging or encouraging programmed walks structured to trigger reflection and self-examination, may assist in overcoming the depression and its accompanying symptoms. Nurses who work in nursing homes, assisted living facilities, and other settings where older adults are treated can use the findings from this study to more fully attend to the needs of older adults with depression.

CONCLUSION

The study presented here demonstrates the ability of garden walking and reflective journaling to decrease depression in older adults. This is important because the incidence of depression in this group can be as high as 15% and the outcomes of depression can increase morbidity and mortality. Walking out of doors in pleasant surroundings accompanied with reflective journaling about the experiences and the thoughts it provokes are safe and easy-to-use interventions that can be used to decrease depression and improve mood in older adults.

REFERENCES

1. National Institutes of Mental Health. The numbers count: mental disorders in the United States. <http://www.nimh.nih.gov/health/publications/the-numbers-count-mental-disorders-in-america/index.shtml#MajorDepressive>. Published 2008. Accessed October 5, 2009.
2. National Institutes of Mental Health. Older adults and mental health.. <http://www.nimh.nih.gov/health/topics/older-adults-and-mental-health/index.shtml>. Published 2008. Accessed October 5, 2009.
3. Ciechanowski P, Wagner E, Schmaling K, et al. Community-integrated home-based depression treatment in older adults: a randomized controlled trial. *J Am.* 2004;291(13):1569-1577.
4. DeMoor A, Beem L, Stubbe D, Boomsma D, De Geus E. Regular exercise, anxiety, depression and personality: a population based study. *Prev Med.* 2006;42(4):273-279.
5. American Psychological Association. Facts about depression in older adults. 2008. <http://www.apa.org/ppo/issues/olderdepressfact.html>. Accessed October 5, 2009.
6. Pachana N, McWha JL, Arathoon M. Passive therapeutic gardens: a study on an inpatient geriatric ward. *J Gerontol Nurs.* 2003;29(5):4-10.
7. O'Connor PJ, Youngstedt SD. Sleep quality in older adults: effects of exercise training and influences of sunlight exposures. *JAMA.* 1997;277(13):1034-1035.

8. Refinetti R. *Circadian Physiology*. Boca Raton, FL: CRC Press; 1999.
9. Hill CO, Relf PO. Gardening as an outdoor activity in geriatric institutions. *Activities Adapt Aging*. 1982;31(1):47-54.
10. Sherman S, Varni J, Ulrich R, Malcarne V. Post-occupancy evaluation of healing gardens in a pediatric cancer center. *Landscape Urban Plan*. 2005;73(2/3):167-183.
11. Miser W. Exercise as an effective treatment option for major depression in older adults. *J Fam Pract*. 2000;49(2):109-110.
12. Steinman L, Frederick J, Prohaska T, et al. Recommendations for treating depression in community-based older adults. *Am J Prev Med*. 2007;33(3):175-181.
13. Mastel-Smith B, McFarland J, Sierpina M, Melecha A, Haile B. Improving depressive symptoms in community-dwelling older adults: a psychosocial intervention using life review and writing: workshop participants experienced reduced depressive symptoms, supporting further use of and research on this easy-to-implement intervention. *J Gerontol Nurs*. 2007;33(5):13-19.
14. Author.
15. Rogers ME. Nursing: a science of unitary man. In: Reihl JP, Roy C, eds. *Conceptual Models for Nursing Practice*. 2nd ed. New York, NY: Appleton-Century-Crofts; 1980:329-337.
16. Yesavage JA, Brink TL, Rose TL, et al. Development and validation of a Geriatric Depression Screening Scale: a preliminary report. *J Psychol Res*. 1983;17:37-49.
17. Sheikh JL, Yesavage JA. Geriatric Depression Scale (GDS): recent evidence and development of a shorter version. In: Sheikh JL, ed. *Clinical Gerontology: A Guide to Assessment and Intervention*. New York, NY: Haworth Press; 1986:165-173.
18. Lyness JM, Noes TK, Cox C, King DA, Conwell Y, Caine ED. Screening for depression in elderly primary care patients: a comparison of the Center for Epidemiologic Studies-Depression Scale and the Geriatric Depression Scale. *Arch Intern Med*. 1997;157(4):449-454.
19. Van Manen M. *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy*. Albany, NY: SUNY Press; 1990.
20. Guba EG, Lincoln YS. *Effective Evaluation*. San Francisco, CA: Jossey-Bass Publishers; 1981.
21. Alexopoulos G, Katz L, Reynolds C, Ross R. Depression in older adults. *J Psychol Pract*. 2005;7(6):441-446.