

## Relationship Between Art Activities and Older Adult Depression

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**ABSTRACT.** Erik Erikson's psychosocial development model proposes that older adults need to maintain intergenerational relationships to limit feelings of depression, and research has suggested that art activities improve the well-being of older adults. Thus, the aim of the current study was to evaluate the correlations between depressive symptomology among older adults who engage and do not engage in activities that involve interactions with peers and children. Using a survey method of 52 adults over the age of 65, the study included an Analysis of Variance to assess whether there was a difference in scores on the short form of the Geriatric Depression Scale and the duration and type of art class participation. The results indicated that there was a significant effect of art engagement on depressive symptomology at the  $p = .003$  level for 3 types of art engagement. The mean score for the no art group ( $M = 3.84$ ,  $SD = 2.59$ ) was significantly higher than the adult art group ( $M = 1.50$ ,  $SD = 1.51$ ) and marginally different than the intergenerational art group ( $M = 2.09$ ,  $SD = 1.64$ ). The results of the between-subjects effect analysis demonstrated a significant main effect of condition on the affective states of older adults at the .05 level,  $F(2, 49) = 4.54$ ,  $p = .003$ . Furthermore, a Pearson product-moment correlation coefficient was computed and suggested that the longer a participant engages in art classes the fewer depressive symptoms the participant reports,  $r(52) = -.359$ ,  $p = .009$ . Thus, the study suggested that, among older adults, there is correlation between lower reported depressive symptomology and participation in art activities.

**Keywords:** art, geriatric depression, intergenerational relationships

Erikson (1982) posited that feelings of loneliness and abandonment affect older adults' final stage of psychosocial development. He asserted, "the future of these long-lived generations will depend on the vital involvement made possible through life, if old people are somehow to crown the whole sequence of experiencing the preceding life stages" (Erikson, Erikson, & Kivnick, 1986, p. 14). Older adults can and need to maintain a "grand-generative function," and if these individuals have a deficiency in vital involvement, overt symptoms arrive bringing older adults to psychotherapy (Erikson, 1982).

Depression is among the overt symptoms

that bring older adults to therapy (Heo, Murphy, Fontaine, Bruce, & Alexopoulos, 2008). Globally, depression is the most common mental disorder among older adults, affecting approximately 7% of the older adult population (World Health Organization, 2015). The rates of depressive symptomology among community-dwelling older adults ranges from approximately 8 to 16% of the U.S. population according to a review of epidemiological studies of older adults (Blazer, 2003). Furthermore, research has suggested that, for adults 18–64 years of age, the rate of depressive disorder will increase by 25.3% from 30.1 to 37.7 million people. However, the rate of depressive disorder among adults over age 65

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years will increase by 116.8% from 3.8 to 8.2 million people (Heo et al., 2008). The growth parallels the increase in older adults as baby boomers enter older adulthood (Heo et al., 2008).

Older adults with depression often experience distress and suffering, which is correlated with physical, mental, and social functioning impairments (U.S. Department of Health and Human Services, 2006). Furthermore, research asserted that adults who experience depression later in life generated higher rates of outpatient health care costs (Fischer et al., 2002). Specifically, using the Geriatric Depression Scale (GDS), researchers screened patients ( $n = 516$ ) for depressive symptomology. The study found that geriatric participants with depressive symptoms reported more outpatient healthcare needs and generated higher healthcare charges (Fischer et al., 2002).

Thus, given the depression rates and the impact of depression among older adults, there is an opportunity to identify approaches that address the psychosocial needs of this aging population. Blazer (2003) asserted that, to decrease the burden associated with late-life depression, it may become increasingly important to explore nonpharmaceutical interventions.

### Art Therapy for Older Adults With Depression

Several previous researchers have examined the impact of art programs on the mental health of older adults. For example, a research team conducted a pilot study to examine the difference in depression levels among older adults who walked in gardens compared to older adults who participated in art therapy interventions during a 6-week period (McCaffery, Liehr, Gregersen, & Nishioka, 2011). Researchers found decreases in depression among participants in the investigation. Specific to the art therapy group, the preintervention depression score was 27.00 ( $SD = 9.65$ ), and the postintervention depression score was 11.60 ( $SD = 6.11$ ). Participants in the study noted that the art therapy helped to reveal strengths that they did not know they possessed (McCaffery et al., 2011).

Likewise, a program in the Philippines invited seniors in an institutionalized group home to perform traditional Filipino art (de Guzman et al., 2011). Prior to the intervention, participants reported feelings of deterioration in their capability to play active roles in family and societal affairs. At postintervention, participants reported changes in their self-perception, noting that they never knew that they were capable of doing the art challenge.

The researchers asserted that, when the participants had the opportunity to overcome the challenges of depression with art activities, they gained a positive view of themselves and of their lives (de Guzman et al., 2011).

A study from France demonstrated that art therapy could assist geriatric inpatients in becoming more aware of their abilities, which led to improved emotional well-being and a reduction in their hospitalization time (Beauchet et al., 2012). Through a pilot case study, researchers compared 93 older adult participants to a control group of 95 older adult participants. The 93 participants in the test group joined one, 90-minute art session, which was associated with improved recovery time. The overall duration of the hospital stay was shorter for the participants in the art session versus the participants in the control group who did not engage in the art session (Beauchet et al., 2012). The researchers suggested that the art engagement enhanced the participants' emotional well-being, improved their positive affective state, and increased their awareness of their capabilities.

The highlighted research asserts that, when older adults engage in art activities, observed or measured rates of depressive symptomology decrease. In general, the three research groups asserted positive outcomes related to depressive symptomology suggesting that, for older adults, engaging in varied levels of art activities was beneficial for emotional functioning. (Beauchet et al., 2012; de Guzman et al., 2011; McCaffery et al., 2011).

### Impact of Intergenerational Relationships

According to Erikson (1982), in adulthood individuals face a crisis of generativity versus stagnation in which people strive to develop a sense of care by engaging with and guiding the next generations. Erikson asserted that those individuals who struggle through developmental milestones such as generativity versus stagnation are more vulnerable to emotional distress such as depression. Eriksonian theory would also suggest that acts of generativity encourage individuals to reflect on and convey their personal achievements to future generations, engage in sophisticated communication, and develop emotional capacities.

To validate assumptions from Erikson, researchers assessed 159 male participants from an over-75-year longitudinal study of adult development (Malone, Liu, Vaillant, Rentz, & Waldinger, 2016). Through neurological assessments and the GDS,

the results of the investigation suggested that those who embraced principles of Eriksonian psychosocial development demonstrated higher cognitive functioning, higher executive functioning, and lower levels of depression 30 to 40 years later. The researchers asserted that older adults who report satisfying career engagement, positive intimate relationships, and nurture others through generativity can experience improved emotional and cognitive health later in life (Malone et al., 2016).

Building on the premise that intergenerational interactions are important to psychosocial development, several researchers have examined how intergenerational programs involving older and younger generations can develop a sense of generativity among older adults (Fujiwara et al., 2009). Researchers conducted a study involving 32 older adults and 114 students in a within-subject repeated-measures design (Gaggioli et al., 2014). The researchers divided participants into 16 groups, with each group involving two older adults and six to eight students. Each group met three times, totaling six hours of reminiscing activities. The researchers utilized pre- and posttest assessments of the older adults' levels of loneliness, self-esteem, and quality of life. The pre- and posttest measurements of the older adults indicated that, following the intergenerational reminiscence therapy, the older adults' levels of loneliness showed a significant decrease, and their quality of life assessments increased by a statistically significant degree. These results led the researchers to conclude that intergenerational group reminiscence can be an effective approach focused on advancing the psychosocial well-being and quality of life for older adults who are generally healthy (Gaggioli et al., 2014).

Davis, Larkin, and Graves (2002) explained that intergenerational therapy provides opportunities for older adults to engage in nurturing, renew positive emotions, and bring meaning to their lives via play with young children. Moreover, the researchers noted that the emotional benefits for older adults include the ability to interact with others and express feelings, review life (integrity vs. despair), imagine new roles for the self, express empathy, and build self-esteem (Davis et al., 2002). The researchers noted that the positive perceptions that participants have for each other reinforce self-esteem, which is important to both younger and older generations (Davis et al., 2002).

Furthermore, art is becoming an emerging intergenerational activity between older adults

and children. To date, a qualitative analysis of 300 journals written by 59 students participating in an intergenerational art program focused on measuring the positive gains for college students (Lokon, Kinney, & Kunkel, 2012). In particular, the experience increased college students' learning, created feelings of making a positive impact, and improved their attitudes toward the seniors. However, the research illuminated a gap in that further studies are needed to assess the impact of intergenerational art programs from the perspective of older adults, not only the perspective of college students (Lokon et al., 2012).

### Research Opportunities

Research has suggested that there is a positive impact of visual art activities on geriatric symptomatology, demonstrating that art therapy holds promise in reducing depressive symptomatology and improving the emotional well-being of older adults. Separately, researchers suggested that intergenerational reminiscence and play have a positive impact on older adults' well-being and quality of life. Together, outcomes may be improved if the art therapy intervention is enhanced with intergenerational relationships. Lokon and colleagues (2012) outlined the positive impact of intergenerational art for younger generations. However, they did not assess the impact for older adults. Thus, there is a gap in research that assesses the effect of intergenerational art activities on older adults. Furthermore, limited research has investigated the potential impact of intergenerational activities on emotional well-being or depression.

Thus, the aim of the current study was to evaluate the relationship between participation in intergenerational art activities and depressive symptomatology among older adults. The independent variable under investigation was art class participation. Specifically, the three conditions included (a) a control group that did not participate in art classes, (b) a group that participated in adult-only art classes, and (c) a group that participated in intergenerational art classes with children. The dependent variable was depressive symptomatology as measured by the GDS, short form. The null hypothesis ( $H_0$ ) of the current research study was that no correlation would be found between depressive symptomatology and participation in intergenerational and adult-only art activities. The alternative hypothesis ( $H_1$ ) was that depressive symptomatology scores would be significantly associated with participation in art activities. Specifically,

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lower depressive symptomology was expected to correlate with higher attendance at art activities.

## Method

To determine the correlation between depressive symptomology and participation in intergenerational and adult-only art activities, the study involved a survey design that measured both depression scale rates and the type and duration of participation in art activities. This model provides a rapid turnaround in data collection and is cost effective. Using a questionnaire, the method aimed to collect the data at one setting and did not collect data through a longitudinal approach.

## Participants

This present study involved a nonrandom sample of adults over the age of 65 at a senior center in the greater Seattle area. Specifically, the study targeted sites that offer intergenerational art classes, adult-only art classes, and no art classes. The aim of the investigation was to reach a minimum of 25 adults who attend intergenerational art classes, 25 adults who attend adult-only art classes, and 25 adults who do not attend art classes.

In researching intergenerational art classes, the investigator was able to locate one residential facility with regular intergenerational art classes and one nonprofit organization with intergenerational acting classes. As a result, the study involved participants from one facility that conducted intergenerational art classes.

## Instrumentation

**Demographic and art participation questions.** To confirm that participants were among the target population, the survey included a question about participants' ages. Sex was also queried. The questionnaire was anonymous, and the researcher did not ask participants for their names, race, ethnicity, or religious affiliation. The survey did not screen for individuals with geriatric related illnesses or physical and cognitive impairments. The questionnaire included three items related to art participation, frequency, and duration. Sample questions included "When did you start taking art classes?" "How many adult-only art classes have you attended in the last 12 months?" and "How many art classes with children present have you attended in the last 12 months?" See Appendices A and B.

Aside from the question related to age, all remaining questions were close-ended questions in which the respondents selected from a

predetermined list of response options. To accommodate potential vision impairment, the survey format was a larger 16-point font size.

**Geriatric Depression Scale.** To assess depressive symptomology, the survey incorporated the GDS short form. Developed by Yesavage et al. (1982), the GDS is designed to measure depression among older adults. It has evidence of validity and reliability for screening major depressive disorder across different ages, genders, ethnicities, and chronic illnesses, including older adults (Nyunt, Fones, Niti & Ng, 2009). The GDS is sensitive to psychological symptoms of depression rather than somatic references (Yesavage, et al., 1982). Partly the result of federal support, the GDS is in the public domain (Yesavage et al., 1982).

The 15-item short form has been found to be an effective screening instrument for depression among older adults (Herrmann et al., 1996). To assess the validity of the short form screening, the study compared the scores of the GDS short form with the scores from the validated Montgomery Asberg Depression Rating Scale (MADRS; Herrmann, et al., 1996). For comparison, the MADRS is a depression rating scale developed by Montgomery and Åsberg (1979) based on a 65-item comprehensive psychopathology scale and sensitive to change. The researchers concluded that the GDS short form provides acceptable sensitivity and specificity, and therefore, they recommended the GDS short form as a screening tool for older adults (Herrmann et al, 1996). Furthermore, because the GDS short form takes 6 minutes to administer, the researchers asserted that it potentially signifies an important advancement in depression screening for older adults (Herrmann et al, 1996).

Thus, the current study incorporated the 15-question GDS short form. Participants indicated "Yes" or "No" to each question, and each response correlates with a predesignated score of 1 or 0. The researcher totaled the respondents' scores and assigned a score to each questionnaire. An overall index is computed by summing all items, with a total range from 0 to 15. A score greater than 5 suggests depression. Sample GDS questions include "Do you feel like you have more problems with memory than most people?" "Do you think it is wonderful to be alive?" and "Do you feel pretty worthless the way you are now?"

## Procedures

Prior to engaging in research, the investigator received approval from Northwest University's

institutional review board and conducted research in a manner consistent with the academic institution's guidelines for ethical research. The researcher secured advanced approval from the senior facilities where the questionnaires were distributed. The timeline for conducting the study was May 2017 through July 2017.

The researcher provided respondents with an in-person informed consent overview, which highlighted the study's purpose, content, duration, and potential risks and benefits. Participants received a copy of the consent form to read and keep for their records. To protect participants, the study procedures involved providing respondents with an informed consent overview, which highlighted the study's purpose, content, duration, and potential risks and benefits. Respondents were instructed that they did not have to answer all the survey questions and they could choose to stop participating in the study at any point. Participation in the study was voluntary and without compensation. The questionnaire took approximately 15 to 20 minutes to complete. All participants requested that the researcher read the questions aloud and circle the answer indicated by the participant. Participants completed the questionnaires onsite and immediately returned the questionnaires to the researcher.

The questionnaires were anonymous and thus it is not possible to identify the specific respondents. In the event that taking the questionnaire created a disturbing emotional response, the participants received a crisis number on each consent form. The researcher is not aware that any participants experienced a disturbing response.

## Results

The study was designed to examine if there was a difference in effectiveness of art class type and lower reported depressive symptoms, and more broadly to understand the relationship between art participation and depressive symptoms. Using SPSS (IBM, 2016), the study included an Analysis of Variance (ANOVA) to assess whether there was a statistically significant difference in reported GDS short form scores by group condition (i.e., art class type). A second correlational analysis was conducted to assess differences in reported GDS short form scores by duration of art class participation. The analytics evaluated if the intergenerational art class participants reported significantly lower GDS scores on average compared to the adult-only or no-class participants.

## Sample Characteristics

Descriptive statistics of the sample size and survey results are highlighted in Table 1. In total, 54 participants answered the survey. However, two surveys were invalid as a result of participants not completing all questions. Thus, the sample size was 52 participants, and the mean age was 80.21 ( $SD = 8.78$ ). Most of the participants in the study were women (69.2%). Of the 52 participants, 25 people reported that they did not participate in any art classes, 16 participated only in adult classes, and 11 participated in intergenerational art classes. Of the 11 who participated in intergenerational art classes, nine participants also attended an adult art class in addition to being involved in a class with children.

## Measured GDS Scores

Depressive symptomology as reported by the GDS short form for the sample averaged 2.75 ( $SD = 2.35$ ). Overall, men reported a slightly higher score on the GDS short form ( $M = 2.94$ ,  $SD = 1.91$ ) than women ( $M = 2.67$ ,  $SD = 2.54$ ). The mean GDS short form score for individuals who did not participate in art classes was higher ( $M = 3.84$ ,  $SD = 2.59$ ) than the mean for individuals who participated in adult-only art class ( $M = 1.50$ ,  $SD = 1.51$ ), and marginally different than individuals who participated in intergenerational art classes ( $M = 2.09$ ,  $SD = 1.64$ ).

The ANOVA compared GDS short form scores in conditions in which the participants (a) did not participate in art (control group), (b) participated in adult art class, and (c) participated in intergenerational art class. The results of the between-subjects effect analysis demonstrated a significant main effect of condition on the affective states of older adults at the .05 level,  $F(2, 49) = 4.54$ ,  $p = .003$ . Regarding effect size, there was a small effect of condition with a partial Eta squared score of .211.

Post-hoc comparisons using the Tukey HSD test indicated that the mean score for the adult

**TABLE 1**

**Measured GDS Short Form Score by Condition**

Condition	<i>M</i> GDS SF	<i>SD</i>	<i>N</i>
No Art	3.84	2.59	25
Adult Art	1.50	1.51	16
Intergenerational Art	2.09	1.64	11
Totals	2.75	2.35	52

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art condition was significantly different than the control condition. The mean score for the intergenerational art condition was marginally different than the control condition but did not reach significance. Further comparisons between conditions are described in Table 2.

### GDS by Length of Art Class Participation

To assess the relationships between duration of art classes and depressive symptomology, a Pearson product-moment correlation coefficient was computed. There was a negative correlation between the two variables,  $r(52) = -.359$ ,  $p = .009$ , suggesting that the longer a participant engaged in art classes the fewer depressive symptoms the participant reported. Using Levene's test, one can assume homogeneity of variance because the observed  $p$  value of .633 is greater than .05., as detailed in Table 3. Overall, there was a significant negative correlation between lower participation in art classes and higher depressive symptomology, suggesting that people who spent more time in art classes reported less depression.

Taken together, these results suggested that art engagement has an effect on depressive

symptomology for adults over the age of 65. The results indicated that participants who engaged in the adult art condition report lower depressive symptomology on the GDS compared to those participants in the control condition who do not participate in art classes. The mean score for the intergenerational art condition was marginally lower than the mean score for participants in the control condition. Furthermore, the results indicated that the longer a participant engaged in art classes the less depressive symptomology the participant reported. Thus, the findings supported the hypotheses that art engagement is correlated with lower reported depressive symptomology, and the study supported the finding that the more time older adults spent in art activities the fewer depressive symptoms they reported.

## Discussion

The present study suggested that, when older adults engage in art activities, they report less depressive symptomology. In particular, the research findings propose that older adults who participated in art activities for a longer period of time reported less depressive symptomology than those individuals who attended art classes only a short period of time. With a small sample size, the study was unable to distinguish if older adults who participate in art classes with children report less depressive symptomology than adults who participate in art classes with their peers. Within the current results, many of the older adults who participated in art classes with children also participated in art classes with their peers, and thus it is unclear which type of art class is more correlated with reduced depressive symptomology. However, this study suggested that, in general as people age, both participating in art activities with other people and the duration of art engagement both correlate with less reported depressive symptoms.

With depressive rates among older adults anticipated to increase (Heo et al., 2008), identifying interventions to reduce distress and suffering could serve to help the physical, mental and social function of this growing population becomes increasingly important. Previous studies have suggested that art interventions can help older adults reveal new strengths, improve self-perceptions, and improve depressive symptomology (Beauchet et al., 2012; de Guzman et al., 2011; McCaffery et al., 2011). When research has measured the effect of art engagement on the affective state of older adults, results have suggested that the engagement

**TABLE 2**

### Comparison Between Conditions

Condition	Comparative Condition	<i>M</i> diff	<i>SE</i>	<i>p</i>	95% CI	
					Lower bound	Upper bound
No Art	Adult Art	2.34	0.68	.003	0.69	3.99
	IntrGen Art	1.75	0.77	.070	-0.11	3.61
Adult Art	No Art	-2.34	0.69	.003	-3.99	-0.69
	IntrGen Art	-0.59	0.83	.760	-2.61	1.43
IntrGen Art	No Art	-1.75	0.77	.070	-3.61	0.11
	Adult Art	0.59	0.83	.760	-1.43	2.61

Note. IntrGen Art = Intergenerational Art

**TABLE 3**

### GDS and Art Duration Correlation

		Duration
GDS	Pearson Correlation	-.359**
	Sig. (2-tailed)	.009
	<i>N</i>	52

Note. GDS = Geriatric Depression Scale.

\*\* Correlation is significant at the 0.01 level (2-tailed).

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provides improvements to emotional functioning.

One possible explanation is that, through art work, older adults are able to reflect on achievements and share those accomplishments with other generations or peers in a vitally engaged manner. Through art classes, older adults remain involved with peers and multiple generations, which helps sustain psychosocial well-being in older adulthood (Erikson et al., 1986). Erikson and colleagues (1986) have advocated for the opening of the arts to older adults to stimulate intellectual creativity. Through an immersion in sensory awareness, art activities offer older adults creativity and stimulation that enrich this population intellectually and aesthetically (Erikson et al., 1986). By activating the senses, art activities help older adults remain alert and actively involved instead of leaving older adults to focus on the deterioration associated with aging (Erikson et al., 1986). Specifically, “for the aging, participation in these expressions of artistic form can be a welcome source of vital involvement and exhilaration” (Erikson et al., 1986, p. 318). In this way, the older adults who engaged in art for a longer duration may benefit from continuing to activate their sensory system and remaining involved.

These assertions align with conclusions from a phenomenological study that examined how art activities helped older adults manage difficulties associated with depression (de Guzman et al., 2011). Themes that emerged from the phenomenological study suggested that older adults are able to derive meaning in becoming successful with simple art activities, use art to demonstrate adaptability, and gain motivation to be more engaged, which the study suggested contributes to an ability to overcome depressive symptomology (de Guzman et al., 2011). Older adults in the present study who participated in art activities reported fewer depressive symptoms and are possibly benefiting from similar experiences as reported by de Guzman et al. (2011).

The present art study demonstrated that participants who engaged in intergenerational art class reported a marginal effect on depressive symptomology. Participants in the intergenerational condition possibly gained benefits from working side by side with younger participants. Erikson and colleagues (1986) noted that older adults derive pleasure from the spontaneity of children and become stultified when constantly in the presence of older adults. Research suggested that, when older adults engage with younger art students, they develop a sense of generativity through positive

and nurturing relationships (Malone et al., 2016). In this way, the intergenerational classes could help foster generativity and reinforce self-esteem (Davis et al., 2002). Given the present study had a small group for intergenerational art participants, continuing to explore opportunities and conduct research focused on older adults’ engagement with younger children could further research on geriatric psychosocial development. As noted by Erikson and colleagues, “when young people—or any other generation, especially children—are also involved [in the arts], the change in the mood of elders can be unmistakably vitalizing” (1986, p. 319).

Through art engagement with peers and children, the current study explored the lifespan development needs of generativity and vital involvement outlined by Erikson (1982). Previous research has examined the impact of art engagement on the affective state of older adults, and research has reviewed the effect of intergenerational relationships on the affective state of older adults. The present study examined the effect of art on older adults’ depressive symptomology when engaging in art activities with peers and/or children. Most notably, the present study built upon existing research that art engagement is beneficial for older adults and suggested that longer duration of art engagement is correlated with less depressive symptomology.

### Limitations

Limitations of this study were the sample size of older adults who only participated in art classes with children. With a marginal difference in the reported depressive symptomology of participants who engaged in art with children relative to the control group, the study did not significantly advance the understanding of the implications of intergenerational relationships on the depressive symptomology of older adults. Further limitations included the factor of causality. Specifically, it is not clear if older adults who reported less depressive symptomology participate in art classes or if attendance in the art classes leads to a reduction in depressive symptomology. The study demonstrated a correlation but not directionality of the relationship between art engagement and GDS scores.

Additional limitations are related to the measurement tools. Specifically, the survey did not screen for other aging-related disorders such as Alzheimer’s disease, dementia, or Parkinson’s disease, or life changes such as loss of a spouse or moving into a residential facility, all of which have

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depression as a side effect. The survey also focuses on depressive symptomology and did not assess quality of life or sense of belonging, which could be correlated with art class participation.

### Future Research

The present study demonstrated the positive impact of art participation on geriatric depressive symptomology and also illuminated opportunities for future research. Most notably, research could further explore the causality of intergenerational art classes on geriatric depressive symptomology by conducting pre- and posttest assessments among geriatric participants prior to participation in an art class with children and following a sequence of art classes with children. Additionally, incorporating different measurement tools such as quality of life scales or sense of belonging scales could explore additional correlations between art engagement and the overall mood of older adults.

The final stages in Erik Erikson's psychosocial development model assert that older adults can and need to maintain intergenerational relationships, and the lack of engagement with younger generations can lead to depressive symptomology or a decreased sense of well-being. The present study suggested that, when older adults are active in art, both with and without children, they report lower depression rates. As a result, creating more opportunities for older adults to engage in art could prove helpful to improving depressive symptoms experienced by the aging population.

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**APPENDIX A****Survey Distributed to Participants**

Survey # \_\_\_\_\_ Date \_\_\_\_\_

Please provide one answer for each question.

What is your age?

With what sex do you identify?

☐ Female ☐ Male

When did you start taking art classes?

☐ I do not take art classes ☐ 6–12 months ago  
☐ less than 1 month ago ☐ 1–5 years ago  
☐ 1–6 months ago ☐ more than 5 years ago

How many ADULT ONLY art classes have you attended in the last 12 months?

☐ none ☐ 6 to 12  
☐ less than 6 ☐ more than 12

How many art classes WITH CHILDREN have you attended in the last 12 months?

☐ none ☐ 6 to 12  
☐ less than 6 ☐ more than 12

Are you basically satisfied with your life?

☐ Yes ☐ No

Have you dropped many of your activities and interests?

☐ Yes ☐ No

Do you feel that your life is empty?

☐ Yes ☐ No

Do you often get bored?

☐ Yes ☐ No

Are you in good spirits most of the time?

☐ Yes ☐ No

Are you afraid that something bad is going to happen to you?

☐ Yes ☐ No

Do you feel happy most of the time?

☐ Yes ☐ No

Do you often feel helpless?

☐ Yes ☐ No

Do you prefer to stay at home, rather than going out and doing new things?

☐ Yes ☐ No

Do you feel like you have more problems with memory than most people?

☐ Yes ☐ No

Do you think it is wonderful to be alive?

☐ Yes ☐ No

Do you feel pretty worthless the way you are now?

☐ Yes ☐ No

Do you feel full of energy?

☐ Yes ☐ No

Do you feel that your situation is helpless?

☐ Yes ☐ No

Do you think that most people are better off than you?

☐ Yes ☐ No**APPENDIX B****Scoring Sheet for Questions 6–20**

Geriatric Depression Scale (GDS) Scoring Instructions

Score 1 point for each bolded answer. A score of 5 or more suggests depression.

1. Are you basically satisfied with your life? **yes** no
2. Have you dropped many of your activities and interests? **yes** no
3. Do you feel that your life is empty? **yes** no
4. Do you often get bored? **yes** no
5. Are you in good spirits most of the time? **yes** no
6. Are you afraid that something bad is going to happen to you? **yes** no
7. Do you feel happy most of the time? **yes** no
8. Do you often feel helpless? **yes** no
9. Do you prefer to stay at home, rather than going out and doing things? **yes** no
10. Do you feel that you have more problems with memory than most? **yes** no
11. Do you think it is wonderful to be alive now? **yes** no
12. Do you feel worthless the way you are now? **yes** no
13. Do you feel full of energy? **yes** no
14. Do you feel that your situation is hopeless? **yes** no
15. Do you think that most people are better off than you are? **yes** no

A score of > 5 suggests depression  
(Yesavage et al., 1982)**Total Score** \_\_\_\_\_

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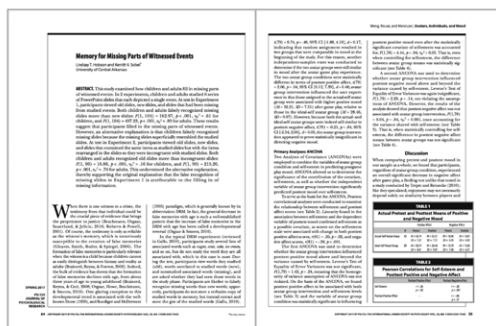
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