

Summer 8-12-2017

Intergenerational Programs' Effect on the Mental Health of the Elderly

Alysia Hagert

Follow this and additional works at: <http://commons.pacificu.edu/pa>



Part of the [Medicine and Health Sciences Commons](#)

Recommended Citation

Hagert, Alysia, "Intergenerational Programs' Effect on the Mental Health of the Elderly" (2017). *School of Physician Assistant Studies*. 621.

<http://commons.pacificu.edu/pa/621>

This Capstone Project is brought to you for free and open access by the College of Health Professions at CommonKnowledge. It has been accepted for inclusion in School of Physician Assistant Studies by an authorized administrator of CommonKnowledge. For more information, please contact CommonKnowledge@pacificu.edu.

Intergenerational Programs' Effect on the Mental Health of the Elderly

Abstract

Background: Mental health disorders, such as late-life depression and dementia, are a growing problem the aging population faces. Common treatment medications carry with them many negative aspects. Intergenerational programs are being sought out as an alternative or additional therapy to medication. These programs are focused on strengthening intergenerational relationships, improving health and quality of life, and restoring generational roles. This review looks at the effect intergenerational programs have on the mental health of the aged population.

Methods: An exhaustive search of available medical literature was performed using MEDLINE-Ovid, Web of Knowledge, and CINAHL. Keywords included: intergenerational relations, aged or elderly, and mental health. The quality of evidence was assessed using GRADE.

Results: Two observational qualitative studies remained after duplicates were eliminated and eligibility criteria were applied. Both studies evaluated elderly exposed to intergenerational programs watching for trends as exposure rates increased. One study showed a decrease in depressive symptoms in a depressed subgroup of older adults and an increase in self-rated mental health. The other study showed a decrease in vitality of the elderly. Both studies showed positive attitudes towards the program via participant interviews. Overall quality of the studies was very low and additional research is needed.

Conclusion: Intergenerational programs may be beneficial to the mental health of the aged population and provide an alternative resource for families and clinicians. These programs carry virtually no harm, are low cost, and may possess the capability to improve mental health of the elderly. Until more research is completed this therapy should be used as alternative or adjunctive to common medications and practices.

Degree Type

Capstone Project

Degree Name

Master of Science in Physician Assistant Studies

Keywords

Intergenerational relations, aged, elderly, mental health, depression, late-life depression, dementia

Subject Categories

Medicine and Health Sciences

Rights

[Terms of use for work posted in CommonKnowledge.](#)

Copyright and terms of use

If you have downloaded this document directly from the web or from CommonKnowledge, see the “Rights” section on the previous page for the terms of use.

If you have received this document through an interlibrary loan/document delivery service, the following terms of use apply:

Copyright in this work is held by the author(s). You may download or print any portion of this document for personal use only, or for any use that is allowed by fair use (Title 17, §107 U.S.C.). Except for personal or fair use, you or your borrowing library may not reproduce, remix, republish, post, transmit, or distribute this document, or any portion thereof, without the permission of the copyright owner. [Note: If this document is licensed under a Creative Commons license (see “Rights” on the previous page) which allows broader usage rights, your use is governed by the terms of that license.]

Inquiries regarding further use of these materials should be addressed to: CommonKnowledge Rights, Pacific University Library, 2043 College Way, Forest Grove, OR 97116, (503) 352-7209. Email inquiries may be directed to: copyright@pacificu.edu

Intergenerational Programs' Effect on the Mental Health of the Elderly

Alysia Hagert

**Pacific
University
Oregon**



***A Clinical Graduate Project Submitted to the Faculty of the
School of Physician Assistant Studies***

Pacific University

Hillsboro, OR

For the Masters of Science Degree, 08/12/17

Clinical Graduate Project Coordinator: Annjanette Sommers, PA-C, MS

Abstract

Background: Mental health disorders, such as late-life depression and dementia, are a growing problem the aging population faces. Common treatment medications carry with them many negative aspects. Intergenerational programs are being sought out as an alternative or additional therapy to medication. These programs are focused on strengthening intergenerational relationships, improving health and quality of life, and restoring generational roles. This review looks at the effect intergenerational programs have on the mental health of the aged population.

Methods: An exhaustive search of available medical literature was performed using MEDLINE-Ovid, Web of Knowledge, and CINAHL. Keywords included: intergenerational relations, aged or elderly, and mental health. The quality of evidence was assessed using GRADE.

Results: Two observational qualitative studies remained after duplicates were eliminated and eligibility criteria were applied. Both studies evaluated elderly exposed to intergenerational programs watching for trends as exposure rates increased. One study showed a decrease in depressive symptoms in a depressed subgroup of older adults and an increase in self-rated mental health. The other study showed a decrease in vitality of the elderly. Both studies showed positive attitudes towards the program via participant interviews. Overall quality of the studies was very low and additional research is needed.

Conclusion: Intergenerational programs may be beneficial to the mental health of the aged population and provide an alternative resource for families and clinicians. These programs carry virtually no harm, are low cost, and may possess the capability to improve mental health of the elderly. Until more research is completed this therapy should be used as alternative or adjunctive to common medications and practices.

Keywords: Intergenerational relations, aged, elderly, mental health, depression, late-life depression, dementia

Acknowledgements

[Redacted for privacy]

Table of Contents

Abstract	2
Acknowledgements	3
Table of Contents	4
List of Tables	4
List of Abbreviations	4
BACKGROUND	5
METHODS	8
RESULTS	8
DISCUSSION	14
CONCLUSION	20
References	22
Table I: Characteristics of Reviewed Studies	24
Table II: Skropeta et al Interview Themes	24
Table III: Kamie et al Interview Categories	25

List of Tables

Table I:	Quality Assessment of Reviewed Studies
Table II:	Skropeta et al Interview Themes
Table III:	Kamei et al Interview Categories

List of Abbreviations

ADRs	Adverse drug reactions
SSRIs	Selective serotonin reuptake inhibitors
GRADE	Grading of Recommendations, Assessment, Development, and Evaluation
SF-36	36-question short form health survey
HRQOL	Health related quality of life
GDS	Geriatric Depression Scale
SF-8	8-item short form health survey
NM-Scale	N-Mental Status for the Elderly Scale
ANOVA	Analysis of variance

Intergenerational Programs Effect on the Mental Health of the Elderly

BACKGROUND

Mental health of the elderly is an important aspect of clinical care, especially as the population ages. As mental health diminishes in the older population, medical and advanced care resources become scarce and overcrowded. Families are emotionally and financially strained, and worst of all, the patient suffers. Unfortunately, the elderly are often times removed from society in response to their increasing physical and mental health needs. This not only negatively impacts their self-worth and relationships, often times worsening their mental health, but also distances society from interacting with, learning from, and connecting with this generation as a whole. If a way could be found to protect the mental health of the older population, the effects would be exponential for all generations.

The most common neuropsychiatric disorders in this age group are dementia and late-life depression.¹ Although these diseases are physiologically distinct, they often coexist,^{2,3} making both symptom recognition and treatment all the more difficult. Depression is associated with an increased long-term risk of dementia and suicide, especially in the elderly.^{2,3} Mental health can greatly impact physical health and vice

versa.¹ Depression is also associated with worse outcomes for cardiac disease patients,^{2,3} and older adults with heart disease have higher rates of depression.^{1,3} Being able to treat depressive symptoms early in the process of late-life depression may in turn decrease dementia prevalence, suicide rates, and cardiac outcomes, therefore enhancing quality of life, improving mental health, and decreasing mental health related mortality in this population.

Pharmacotherapy is considered one of the first-line treatment options for late-life depression.^{2,3} Although antidepressants have some positive effect on depressive symptoms, they have been shown to be less efficacious in older patients when compared to the general population.³ This can result in higher dosing or the addition of other medications in attempt to obtain symptom relief. Concern then increases for polypharmacy, adverse drug reactions (ADRs), and increased rate of medication errors. One of the largest concerns for elderly patients using antidepressants is the side effect profile.³ The preferred antidepressant medication is selective serotonin reuptake inhibitors (SSRIs), which carry concern for Parkinsonism, akathisia, anorexia, sinus bradycardia, and hyponatremia.⁴ Other types of antidepressants caution patients concerning effects such as sedation, constipation, hepatotoxicity, orthostatic hypotension, and confusion.³ It is clear that any of these side

effects are undesirable, but in the elderly they could be detrimental to their health.

Alternative treatments for late-life depression, such as electroconvulsive therapy, exercise, bright light therapy, collaborative and home-based care, and family support have shown positive outcomes and are still being researched.³ Another alternative therapy on the rise for improving the mental health of the elderly is implementation of intergenerational programs. These social programs offer opportunities to both young and old for interaction and new relationships. They often incorporate collaboration and learning opportunities for both generations along with encouraging cultural exchange.⁵ Many benefits have been seen with intergenerational programs from improved academic performance of children to improving the health of the elderly to strengthening the community as a whole.⁵ Cost of these programs is often not a factor for participants and programs often utilize volunteers and funding included in the facilities' budget.^{5,6,7} Since the 1960s there have also been various grants and funding for intergenerational programs, along with local donations and supporters.^{6,7} These programs, in addition to other alternative therapies, focus on the problem at hand and not solely on symptom relief as many medications do. By integrating the elderly back into society and providing meaningful activity and

relationships, their social, mental, and physical needs are met. This review looks at the effect intergenerational programs have on the mental health of the aged population.

METHODS

An exhaustive literature search was performed using MEDLINE-Ovid, Web of Knowledge and CINAHL. The following search terms were used: intergenerational relations, aged or elderly, and mental health. Study populations were required to include older adults (65 years and older). Only completed studies with results available utilizing an intergenerational program were included as opposed to other alternative therapies. Effect on mental health or specific aspects of mental health was a necessary outcome of interest for inclusion criteria. Studies that were not considered were those targeting troubled youth, exclusive familial studies, and those requiring training prior to program participation. Articles were evaluated using Grading of Recommendations, Assessment, Development, and Evaluation (GRADE).⁸

RESULTS

The literature search generated a total of 239 articles, which were assessed for relevance. Two articles^{9,10} remained after duplicates were eliminated and inclusion and exclusion criteria were applied. Both articles^{9,10} include studies that are observational longitudinal studies in

which the participants volunteered. One study⁹ took place in an aged care facility, included both cognitively healthy aged adults and those with various levels of dementia, and implied a tri-generational program. The setting of the other study¹⁰ was at a college campus, included older adults who were able to arrive and depart without assistance, and utilized a bi-generational program. See Table I.

Kamei et al

The objective of this study¹⁰ was to evaluate the aged adults' HRQOL (Health-Related Quality of Life) and depressive symptoms compared to the volunteers' during the first 6 months of an intergenerational program. The children's perspectives of the older adults were also measured throughout the program. The population for this study came from an urban city in Tokyo, Japan and included 14 older adults (14 women, 0 men), 8 volunteers, and 7 school-aged children. This intergenerational program included 2 generations (older adults and children) and was held weekly for 3 hours.¹⁰

The program was aimed at encouraging the seniors to share their wisdom, culture, and history while allowing the children to deepen their understanding and relationships with the elderly and their culture. During the first half of the program the elderly participants would meet to socialize and reminisce, then during the second half the children were

introduced. Nursing faculty and students along with community volunteers conducted group activities that included communication games, handicrafts, and cultural activities such as calligraphy and traditional card games for the older adults and children to engage in together.¹⁰

Participant and volunteer interviews were gathered over the 6-month duration of the study and surveys were answered at 0,3, and 6 months. The surveys included a Japanese version of an 8-item short form health survey (SF-8) to determine Health Related Quality of Life (HRQOL), the Geriatric Depression Scale (GDS) to measure depressive symptoms, a Japanese N-Mental Status for the Elderly Scale (NM-Scale) to determine mental status of older people, and a Falls Risk Assessment. The views of the children were collected via interview and self-reporting. Observations and field notes of situations, interactions, and facial expressions were also recorded of both generations by 6 gerontological nurse researchers (i.e., the authors). At each interview session 2 researchers were present in order to minimize bias.¹⁰

The researchers analyzed their notes and interview records multiple times to arrive at an understanding of the context. They then assigned a code to reference each session and grouped similar codes together into a category. These categories were then related to a core

component of interaction that was agreed upon by consensus of the researchers. Using this classification method, 87 codes were grouped into 13 categories.¹⁰

Analysis of variance (ANOVA) was applied to each participant's data along with each generational group in order to determine the statistical importance. Statistically significant differences between the older adults and the volunteers were noted on the NM-Scale, fall risk assessment, and participation frequency. The older adults had a significantly lower NM score than the volunteers and scored higher in fall risk and participation frequency.¹⁰

The SF-8 and GDS-15 showed a statistically significant change concerning the older adults over time. Data from the SF-8 reflected an increase in the following areas at 3 and 6 months when compared to the initial session: general health, physical and social functioning, physical and emotional role, bodily pain, vitality, and mental health. The statistically significant data calculated from the SF-8 involved the self-rated satisfaction of the elderly's mental/emotional health, in which the mean scores were as follows: 48.3 at 0 months, 50.9 at 3 months, and 53.3 at 6 months. With the recognized schema of Kurlowicz and Greenberg applied to the GDS (cut off score of ≥ 5 for depression and ≤ 4 for no depression) the longitudinal data showed a subgroup of depressed

older adults whose symptoms significantly decreased within the first 3 months of attending the intergenerational program. In the depressed subgroup, the mean score of depressive symptoms were as follows: 8.2 at 0 months, 4.8 at 3 months, and 5.2 at 6 months. There was no significant change in the volunteer group or non-depressed group of seniors.¹⁰

Interview data were analyzed and revealed positive remarks regarding the program and participants. The data were organized into 13 categories, which are shown in Table III in longitudinal order.¹⁰

Skropeta et al

The objective of this study⁹ was to explore the benefits for older adults with participation in an intergenerational program in an aged care facility. The population for this study came from 3 aged care sites in Australia, and involved 48 aged care residents including those both cognitively intact and those with various severities of dementia. The intergenerational program implemented in this study included 3 generations (children, caregivers, and older adults) and was offered for half an hour once a week. Involved were 43 women residents, 5 men residents, 41 child caregivers, and 50 children ages 0-4 years.⁹

This intergenerational program was defined as a diversional therapy/leisure lifestyle program that introduced intergenerational

socialization and interaction. Contact between generations was facilitated to ensure therapeutic value of the activities, which included structured and unstructured play and learning experiences such as making cupcakes and finger painting. The program duration differed between the 3 sites in the study, which were as follows: >4 years at site 1, 18 months at site 2, and 6 months at site 3.⁹

Semi-structured interviews of the older adults and the child caregivers occurred during select sessions and surveys were answered on a 6-month basis, which included: a 36-question short form health survey (SF-36) to measure HRQOL and the GDS to determine depressive symptoms. For the 9 participants with severe dementia, assistance was provided via the primary caregiver or therapist with completing each survey. Interviews lasted about 30 minutes and questions were asked about participant experiences, why they attended the sessions, friendships made, and events happening in their lives.⁹

Recorded interviews were analyzed multiple times by 2 researchers for context and themes. For each question, themes and meanings from interviews of participants (elderly and child caregivers) were combined to characterize all of the participants of the study, (this was done in attempt to increase reliability of the data interpretations). Five themes and 19 subthemes were attributed to the interviews to assist with

understanding of the data.⁹

Results from the surveys did not include statistically significant data to support improvement of mental health in the elderly. When comparing the pre- and post-survey results of the SF-36, there was a non-statistically significant decrease in physical functioning, role limitations, general health, social functioning, and emotional well-being, and an increase in bodily pain. The only SF-36 statistically significant finding ($p < .05$) was a decrease in energy level. The results from the GDS show no statistically significant changes; however, the detailed results were not provided within the article so further analysis of these results was not possible.⁹

Interview themes were analyzed and displayed positive comments and attitudes toward the program and the participants. The 5 themes displayed are seen in Table II.

DISCUSSION

The older generation faces many struggles on a daily basis. If their mental health could be preserved or even improved, many aspects of their lives could be enhanced, thus improving their quality of life. To correct the underlying cause for many mental health conditions and address symptoms with as little risk for harm as possible, most medications are not the best choice. Intergenerational programs not only

fulfill social, mental, and physical needs of the elderly but also enhance quality of life, create a sense of community, improve health of the elderly, benefit the youth, and much more with virtually no risk for harm.⁵ Along with these many benefits, intergenerational programs are often cost-free for participants and can be low in cost for facilities, especially with the support of local organizations, donations, and grants.

Data Interpretation

Data from the two studies^{9,10} reviewed shows an overall positive trend when looking at the effects of intergenerational programs on mental health of aged adults. The qualitative evidence from the interviews displays positive attitudes toward the participants and the program. There were no negative comments or attitudes noted in either studies' interview sessions.^{9,10}

Survey results from both studies^{9,10} show mixed positive and negative findings for participants throughout time.^{9,10} Survey data from Kamei et al¹⁰ reflects a positive correlation regarding HRQOL with statistically significant improvement in mental health ratings. The data also reveals statistically significant decrease in depressive symptoms in participants with depression within the first 3 months of the intergenerational program. The Skropeta et al⁹ data from the SF-36 showed non-statistically negative outcomes in multiple areas and a

statistically significant finding of decreased energy level, while noting no statistically significant results from the GDS surveys.

The negative outcome data from Skropeta et al⁹ can be misleading because this study did not have a control group to compare the rate of decline that can be associated with the aging process. When including the positive interview results, one cannot rule out that the negative outcomes are due to the aging process and not specifically the intergenerational program. To be sure of this more research including control groups would be necessary.

The inclusion of depressed participants in the Kamei et al¹⁰ study is an important aspect in particular because it allowed collection of quantifiable data regarding depressive symptoms. The lack of evidence for depressive symptom relief in the Skropeta et al⁹ study may be due to the absence of depressed participants within their population. Another reason for this result may be due to the lack of a control group in the Skropeta et al⁹ study. An inclusion of a control group may have shown that the no change in depressive symptoms of the intervention group was truly a preservation of mental health when compared to a control group.

Clinical Application

Intergenerational programs provide many benefits and can be a

useful tool to clinicians working with the aged population. For patients with mental health concerns or those desiring more socialization these programs are a great choice as they may decrease depressive symptoms, increase quality of life and social connectedness, and provide meaningful activities for all participants.^{5,9,10} From a clinical standpoint, intergenerational programs are an attractive option if they are found to decrease or eliminate the need for medication, which in turn decreases ADRs, medication errors, polypharmacy, and cost, all with very low risk for patient harm. The effects will also give clinicians more time to address other issues and provide another resource for patients. For the older adults suffering from late-life depression, these programs may decrease suicide rates by reducing depressive symptoms. Because the current research is of low quality and inconclusive, it is important that providers carry on with the first-line treatments for depression until further research is completed.

Limitations

Across studies there were many inconsistencies which may have effected interpretation which include: duration of study, length of individual sessions, age of children, activities performed, number of generations included, and population variances. Of these the duration of study and population variances are of most concern. The Skropeta et al⁹

study's timeframe ranged from 18 months – 4 years, which greatly differs from the 6 month study by Kamei et al.¹⁰ Due to the short study length and variability it is difficult to see if any positive results would decrease after initial exposure or if with added length of involvement relationships would grow stronger thus improving outcomes. The Kamei et al¹⁰ intergenerational program included time for the aged adults to socialize in the absence of children as well as with the children. The effect of time set apart for socialization between the elderly cannot be separated from the intergenerational aspect when looking at the results of the study. Population differences include size, mental and physical health status, and culture. Inclusion of participants with depressive symptoms was previously discussed as it allowed for symptom relief to be measured. This shows the importance for inclusion of other mental health disorders, such as dementia or anxiety disorders.

Both studies^{9,10} had small sample sizes, which were largely female, met weekly, were volunteer based, did not include a control group, and were at risk for observation bias. Inclusion of a control group would benefit the validity of the studies and make result interpretation more dependable. The volunteer aspect and large female population may have made results more favorable than if applied to a randomly selected diverse population due to cultural female roles and willingness to

participate. The small population size is of concern when interpreting results, as both studies had less than 50 older adult participants, which may cause results to be less established. Both of the intergenerational programs met on a weekly basis and allowed for some but not ample opportunity to form relationships and participate in the activities. Research comparing weekly to daily involvement may be worth investigation. Researchers were involved with data collection in these studies,^{9,10} which may have allowed for observation bias. Both studies did not discuss specifics of cost, which is an important aspect for facilities to consider.

Limitations within each study exist although many were acknowledged and documented within each study. The Skropeta et al⁹ study included 3 programs ranging from 18 months – 4 years, however, the data were not separated, prohibiting assessment of time correlations. There was also incomplete follow-up at one of the program sites.⁹ The Kamei et al¹⁰ study had a very limited population in terms of size, culture, location, and health status. All participants were Japanese women from the same urban city who were able to arrive to and return from the program location without assistance. This population is very select and must be taken into consideration when interpreting the data results.

The quality of each article was assessed using the GRADE criteria⁸ giving both articles^{9,10} a quality of very low. See Table I for further rationale.

Recommendations

In order to accurately form a conclusion about intergenerational programs and their effect on mental health of the elderly there needs to be more research. Future studies should include control groups, longer durations, information on cost, and larger and more diverse populations including elderly with various mental health disorders. These four factors alone would increase the credibility of data collected. Other aspects to take into consideration are frequency of program sessions, age range of children, and incorporating the program at different stages of life such as with adults living at home, in nursing facilities, in transition care, or hospitals. Research on this topic should have relatively low cost and risk, which hopefully will attract researchers and funding.

CONCLUSION

With the prominence of mental health complaints in the aged population and the many downfalls and risks of common treatment medications, effective alternative treatments are needed.

Intergenerational programs carry virtually no risk of harm and are capable of treating the root cause of many depressive symptoms

associated with late age. The relationships built through intergenerational socialization not only improve health, quality of life, and dignity, but provide meaningful activity for older adults and children. Intergenerational programs may also serve as a step towards integration of the elderly back into communities and society as a whole. These programs provide clinicians and families with an additional resource at essentially little to no cost. If these programs were routinely incorporated as preventative and treatment therapies, late-life depression, suicide, and dementia rates may decline. This would improve the health of the aged generation and may change the views many have of the elderly and of growing older.

REFERENCES

- ¹ WHO. Mental health and older adults
Fact sheet Available at:
<http://www.who.int/mediacentre/factsheets/fs381/en/>. Accessed 07/19, 2016.
- ² Taylor WD. Depression in the Elderly. *N Engl J Med*. 2014;371:1228-1236.
- ³ Espinoza RT, Unnützer J. Diagnosis and management of late-life unipolar depression. Available at:
http://www.uptodate.com.proxy.lib.pacificu.edu:2048/contents/diagnosis-and-management-of-late-life-unipolar-depression?source=search_result&search=depression+elderly&selectedTitle=1%7E150#H23. Accessed 07/19, 2016.
- ⁴ Fabian TJ, FAU AJ, FAU KP, et al. Paroxetine-induced hyponatremia in older adults: a 12-week prospective study. *Archives of internal medicine JID - 0372440*. 0312.
- ⁵ Generations United. Fact sheet: The benefits of intergenerational Programs
Available at:
<http://www.gu.org/LinkClick.aspx?fileticket=71wHEwUd0KA%3D&tabid=157&mid=6>. Accessed 07/21, 2016.
- ⁶ Newman S, Ward C, Smith T, et al. ***Intergenerational Programs: Past, Present and Future***. Washington D.C.: Taylor and Francis; 1997.
- ⁷ Sub-Committee of the Civic Engagement Committee Multnomah County Task Force on Vital Aging.
Intergenerational Programs Available at:
<https://multco.us/file/28539/download>. Accessed Sept 16, 2016.
- ⁸ GRADE working group. Available at: <http://gradeworkinggroup.org/>. Accessed 07/21, 2016.
- ⁹ Skropeta CM, Colvin A, Sladen S. An evaluative study of the benefits of participating in intergenerational playgroups in aged care for older people. *BMC Geriatr*. 2014;14:109-2318-14-109.

¹⁰ Kamei T, Itoi W, Kajii F, Kawakami C, Hasegawa M, Sugimoto T. Six month outcomes of an innovative weekly intergenerational day program with older adults and school-aged children in a Japanese urban community. *JAPAN J NURS SCI*. 2011;8:95-107 13p.

TABLES

Table I: Quality Assessment of Reviewed Articles							
Study	Design	Downgrade Criteria					Quality
		Limitations	Indirectness	Inconsistency	Imprecision	Publication bias	
Skropeta et al ⁹	Qualitative	Very serious ^{a,b,c}	Not Serious	Not Serious	Not Serious	Unlikely	Very Low
Kamei et al ¹⁰	Qualitative	Very serious ^{a,b,d,e}	Not Serious	Not Serious	Not Serious	Unlikely	Very Low

^a Lack of a meaningful control group.
^b Limited generalizability due to sampling issues (eg, female dominance in both studies and urban Japanese population of high functioning participants in the Kamei et al study).
 No subgroup analysis of depressed and non-depressed participants. (Skropeta et al)
 No comparison of study locations - each location had varying program durations. (Skropeta et al)
^c No report of participation rate for each session when attendance was optional.
^d Short study duration and small sample size.
^e High risk confounding due to intergenerational socialization of participants prior to child interactions.

GRADE⁸

Table II: Skropeta et al Interview Themes	
Themes	Meanings
1) Intergenerational experiences	Making connections, intergenerational exchange, sense of community, enjoyment, and helping others
2) Two-way contributions	Seeking intergeneration program due to lack of family support or connection, providing a routine activity
3) Friendship work	Friendships formed, supportive relationships strengthened, displays of affection
4) Personal growth	Opportunities for learning for all participants, new perspectives, changing previous biases
5) Environmental considerations	Provides activities indoors and out, safe environment

Skropeta et al⁹

Table III: Kamei et al Interview Categories

Categories	Comments
1) Becoming acquainted	Communication gradually became less awkward and hesitant
2) Welcoming and making room for the children	Seniors awaited the children, children were at ease and relaxed when participating
3) Looked forward to the coming session	Seniors anticipating next session
4) Older adults repeatedly reminisced	Conversations with children provided opportunity to reminisce
5) Handing down the regional culture and learning together	Seniors taught traditional card games and children listened intently to stories
6) Asserting their opinions	Older adults and children were confident in participation of activities
7) Each generation enjoys some activities among themselves	Intragenerational connections made
8) Teaching each other	Seniors taught sewing, children taught origami
9) Children express positive feelings	Children ask the elderly to teach them and express positive feeling towards the elderly
10) Mutually creating a harmonized space and working together	Both generations listen, joke, and laugh together while participating in activities
11) Spontaneous carrying out of role-related tasks	Older adults watched out for and taught the children, the children helped serve the adults
12) Social interactions expand outside of the program	Some seniors continued to socialize together outside of the program
13) Sharing a meaningful sense of place	Both children and older adults expressed positive feelings toward the program and each other, seniors felt dignified and important

Kamei et al¹⁰