

THE EFFECT OF HORTICULTURAL THERAPY IN MAINTAINING
THE LIFE SATISFACTION OF GERIATRICS

by

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B.S., Kansas State University, 1968

A MASTER'S THESIS

submitted in partial fulfillment of

requirements for the degree

MASTER OF SCIENCE


Department of Horticulture and Forestry

KANSAS STATE UNIVERSITY

Manhattan, Kansas

1974

Approved by:


Major Professor

ACKNOWLEDGEMENTS

The author wishes to acknowledge Dr. Richard Mattson for the assistance and encouragement given throughout the course of study. Sincere appreciation is extended to Dr. William Griffitt, Associate Professor of Psychology, for advice given on the study and analysis of data. Special thanks are extended to Dr. Ronald Campbell and Dr. Neil Miles for suggestions.

Sincere appreciation is extended to the administration and residents of Presbyterian Manor, Topeka, Kansas, for their cooperation, without which this research could not have been conducted.

INTRODUCTION

Horticultural therapy has been used for centuries. In form it has varied from farm labor to its present status as an activity therapy to aid in a person's rehabilitation or therapy program.

Horticulture has proven to be therapeutic to many people, and has the advantage of bringing people closer to the soil, the beauty of plants, and the process of growth and development. Horticultural therapy is utilizing plants as "tools" for an activity therapy to improve or expand a person's physical and/or mental well-being.

Horticultural therapy has been used in many types of institutions, including psychiatric, penal, geriatric, and rehabilitation centers for the mentally retarded or physically handicapped. However, limited research has been conducted to ascertain that change does indeed take place when an individual is involved in horticultural therapy.

Thus, the purpose of this research was to attempt to measure change in an individual's life satisfaction level. When it is known what changes can occur through participation in an activity therapy, the therapist will be better able to tailor the program to the needs of the individual and gauge the effectiveness of a program.

The results of this research are being submitted for publication to HortScience, a publication of the American Society for Horticultural Science, and in non-technical form to Plants Alive, an indoor plant and greenhouse journal.

HORTICULTURAL THERAPY MAINTAINS
LIFE SATISFACTION OF GERIATRICS¹

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ABSTRACT

Involvement in either horticultural therapy or a discussion group was shown to maintain the level of life satisfaction of test groups of residents in a geriatric home. Geriatrics that were not involved in these activities showed a significant decline in their level of life satisfaction over an eight-week period. Employment of activity therapy for geriatrics was shown to be necessary for maintenance of the psychological, and to some degree, the physical well-being of the older citizen in an institutional setting.

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INTRODUCTION

Horticultural therapy is the utilization of horticulture and related activities to bring about a desired change in an individual. Usually this change is associated with a person's physical and/or mental health. In the case of geriatrics, or older citizens, the goal may not be so much to change existing patterns developed over a lifetime, but rather to maintain those that the individual brings with him to an institution and expand them in a desirable manner. The possibility of maintaining desirable characteristics in geriatrics through involvement in a horticultural therapy activity was explored in this research.

The purpose of this research was to attempt to measure change in an individual's life satisfaction level. When it is known what changes can occur through participation in an activity therapy, the therapist will be better able to tailor the program to individual needs and gauge the effectiveness of a program.

LITERATURE REVIEW

Horticulture has been used as an activity therapy for centuries in many institutional settings, including psychiatric, penal, geriatric, and rehabilitation centers for the mentally retarded or physically handicapped (1,2,3,7,10,12). Hefley (2) observed that the mentally retarded developed an improved self-concept, a greater degree of social interaction, an increased level of physical activity, and a deeper understanding of the interdependency between plants, man, and animals through involvement in a horticultural therapy program. Floyd (1) reported that horticultural therapy generated interest in learning plant taxonomy in blind students at the South Carolina School for the Deaf and Blind. However, no research has been reported that measured specific changes in individuals through involvement in horticultural therapy.

Watson and Burlingame (12) stated that establishing a successful horticultural therapy program requires a thorough understanding of the individuals involved in the program, and tailoring the program to their needs. In relation to the aged in today's society, Rynerson(8) noted that Social Security and pension programs have insured a greater degree of financial security, Medicare has increased the availability of services to meet health needs, and the upgrading of homes for the aged has assisted in adequately providing living accommodations. However, meeting the higher level needs of the aged--those being the need for attention, social recognition, and a role in society in which they can maintain dignity, a sense of self-worth and self-satisfaction--is many times neglected.

Research has shown that these needs are important to the aged. Silverman (9) states that a sense of uselessness and rejection caused by society's attitude of disregard for the aged and its orientation toward youth contributes to deterioration of mental and physical functioning. Conversely, the work of Maslow (5) indicates that enhancing self-esteem would mean generating attitudes that lead to one's feeling of being useful and necessary in the world. Other researchers (4,11) have shown that self-esteem, and the expanded term of life satisfaction, are not only a function of one's age, but also of his level of activity and degree of social interaction.

Since self-esteem, or the feeling one has about himself, seems to be a factor in both the physical and emotional well-being of an individual, it would appear that anything that could be done to increase an institutionalized person's self-esteem would be a valuable tool. Horticultural therapy, substituting gardening activity for work or job responsibilities, should not only help maintain the self-esteem level of geriatrics but also help them maintain a feeling of overall satisfaction with their lives in an institutional setting. These factors contribute toward maintaining both mental and physical functioning of the aged (8).

MATERIALS AND METHODS

A denominational geriatric home was selected with approximately 200 residents generally from a white, mid-western, middle-class socioeconomic background. Residents have regularly scheduled activities including exercise classes, chapel, reality orientation classes, trips to shopping centers in town via an institutional bus, bingo, and films from the library. Special programs occur on holidays besides periodic entertainment by outside groups such as recitals and teas. Participation by the residents in the programs varies from a few to nearly everyone depending on the appeal of the activity.

Four levels of care exist in the institution: (1) apartment living, where the individual couple is totally independent, including cooking their own meals, etc.; (2) residential living where the person eats in the dining room, but has a private room, bath, and some medical assistance; (3) inter-care where the individual is usually confused mentally or has some physical handicap and has nursing care; and (4) medical care where the resident is completely bedridden.

Residents were selected from the apartment living or residential sections and divided into three groups: gardening, discussion, and control. The experimental groups, gardening and discussion, were chosen for two reasons. First, the effect of horticulture as an activity therapy was to be measured. Secondly, the effect of an activity on an individual versus the effect of someone simply being with geriatrics on a regular basis needed to be determined to get a true picture of the influence of horticultural therapy. The control group was established to have a basis

for comparison of the experimental groups.

The process of group member selection began with a list compiled by an occupational therapist at the institution. It consisted of approximately sixty persons who were thought to be capable mentally and physically of doing garden work. Informal meetings to explain the project were conducted with small groups of the residents. Nine residents volunteered for the garden group, twelve for the discussion group, and six for the control group. However, due to illness, vacations away from the institution, or loss of interest only five members in each group completed the entire study.

The life satisfaction level of each group member was tested using the indexes developed by Neugarten, Havighurst, and Tobin (6). There were two indexes, Life Satisfaction Index A (LSIA) and Life Satisfaction Index B (LSIB). The group members were tested at the beginning of the project, June, 1974, and at the end, eight weeks later, August, 1974. The control group did nothing in connection with the research except take the two questionnaires. For general information on the make-up of all three groups see Table 1.

Analysis of variance of LSI scores was conducted on an IBM 360/70, using the ANOVAT program developed by Clark University and revised at Kansas State University. The program is a harmonic N analysis of variance/trends, with t-tests being used to determine the statistical significance of between-group and within-group differences.

The garden group began by selecting a 15' x 30' plot, then preparing the soil by plowing, roto-tilling, and incorporating peat moss and

Table 1. General information describing group members.

Group	Age Range	Mean Age of Group	Percent Attendance in Group Activity	Overall Activity Level ^z	Mean No. of Months Residing in Institution	Overall Health ^y	Socio-Economic Level ^x	Ratio of Males to Females in Group
Garden	74-80	77.0	77	2.6	25.4	2.4	2.2	2:3
Discussion	75-84	79.4	73	2.0	38.4	2.2	2.4	1:4
Control	77-87	82.2	--	1.4	41.8	2.4	2.0	1:4

^zRated by administration of institution as high=3, average=2, and low=1.

^yRated by administration of institution as very good=3, good=2, and poor=1.

^xRated by administration of institution on present monthly income as above average (greater than \$500)=3, average (\$500)=2, and below average (less than \$500)=1.

14-14-14 fertilizer. The group members chose plant materials and prepared a planting plan including a variety of vegetables and flowers. The garden was planted, watered, weeded, and cared for by the residents during hourly sessions held twice a week. Garden group members were free to work individually in the garden, and most of them took advantage of this throughout the summer. Once the seedlings were established, a six-inch mulch of straw and rotted prairie hay was applied between the rows and in some cases between plants within the row to reduce maintenance labor. For the remainder of the summer, the activity consisted of watering, occasional weeding, some thinning and transplanting, replenishing the mulch where needed, and enjoying the produce.

The discussion group was set up to meet twice a week for one hour. After completing the questionnaire, the members were allowed to conduct discussions of an informal and varied nature. Topics ranged from the pros and cons of pets to the latest grandchild or family problem. In general, therapist participation diminished as the group developed and were more confident of carrying on meaningful conversations on their own.

RESULTS AND DISCUSSION

Although the garden and discussion groups both improved slightly over the eight-week period according to their combined LSI scores, the changes were not statistically significant (Table 2). The combined LSI scores of the control group decreased significantly during the same period.

As can be seen in Table 3, the correlation coefficient for LSIA and LSIB at Time-1 (0.43) was not significant, so the scores are reported separately as LSIA, LSIB, and the combined score for each group. At Time-2 this correlation value proved to be significant (0.69*), and was similar to the LSIA and LSIB correlation value (0.73*) reported by Neugarten, Havighurst, and Tobin (6), based on a sample of 91 subjects.

The number of subjects studied in this research was limited due to the number of residents who volunteered to participate and the availability of only one person to do the research. It was felt that a therapist to resident ratio of 1:10 would be optimum.

Although a smaller number of subjects was researched in this study, results (see Table 4) were similar to those reported by Neugarten, Havighurst, and Tobin (6). They reported a mean score for LSIA of 12.4, with the standard deviation 4.4. Their mean score for LSIB was 15.1 and the standard deviation was 4.7. Their mean score for the combined scores was 27.6, and the standard deviation was 6.7.

In general, the garden group scored higher than the discussion or control groups. The garden group LSIA scores were significantly higher than the discussion group at both Time-1 and Time-2. The garden group combined scores were significantly higher than the discussion group at Time-1 and the control group at Time-2. The LSIB scores were similar

Table 2. Change of within-group means of LSI^z scores at two testing times.

Section of LSI	Garden	Discussion	Control
LSIA--T-1 ^y	15.8a ^x	11.6a	13.0a
LSIA--T-2	16.2a	12.6a	8.6a
LSIB--T-1	18.2a	13.6a	18.0a
LSIB--T-2	18.0a	13.8a	12.6b
Combined Score--T-1	34.0a	25.2a	31.0a
Combined Score--T-2	34.2a	26.4a	21.2b

^zLSI=Life Satisfaction Index. Maximum scores were LSIA=20, LSIB=23.

^yT-1=Initial Score, T-2=Final Score.

^xMeans followed by the same small case letter in any one section of a column are not significantly different at 0.05 level (LSD).

Table 3. Correlation between sections and combined scores of LSI at two testing times.

Sections of LSI	Time-1	Time-2
LSIA and LSIB	0.43 n.s.	0.69 *
LSIA and combined scores	0.75 *	0.91 *
LSIB and combined scores	0.92 *	0.92 *

* Significant at the 0.01 level.

Table 4. Between-group means and variance of LSI^z scores at two testing times.

Group	Time-1			Time-2		
	LSIA	LSIB	Combined Score	LSIA	LSIB	Combined Score
Garden	\bar{x} 15.8a ^y S.D. 1.5	18.2a 2.9	34.0a 3.8	16.2a 2.3	18.0a 3.6	34.2a 5.3
Discussion	\bar{x} 11.6b S.D. 1.6	13.6a 4.2	25.2b 3.6	12.6b 1.3	13.8a 3.3	26.4ab 3.9
Control	\bar{x} 13.0ab S.D. 2.8	18.0a 4.8	31.0ab 7.0	8.6b 4.8	12.6a 4.8	21.2b 8.8
Overall	\bar{x} 13.5 S.D. 2.7	16.6 4.5	30.1 6.2	12.5 4.4	14.8 4.6	27.3 8.3

^zLSI=Life Satisfaction Index. Maximum scores were LSIA=20, LSIB=23.

^yMeans followed by the same small case letter in any one column are not significantly different at the 0.05 level (LSD).

for all three groups studied at both Time-1 and Time-2.

The fact that the garden group combined score for Time-1 was similar to that of the control group, but significantly higher at Time-2 demonstrates the need for activity therapy in the maintenance of the life satisfaction level of geriatrics in an institutional setting. All discussion group scores remained similar to the control group at both Time-1 and Time-2.

Although Time-2 garden and discussion group combined scores were similar, observations made throughout the eight-week period would indicate that the garden group had a greater influence on the individuals involved.

Several skeptics when the garden was planted in June were proudly sharing radishes, zucchini, and tomatoes with fellow residents in August. Interest and participation increased markedly throughout the summer. One lady who stated the first meeting that she simply could not do any physical work was raking grass clippings to replenish the mulch in July. Another lady who showed no interest in the garden at first, became very involved when castor beans were added to the planting plan to shade the Chinese cabbage, as she had always grown them in her garden at home. Another member was excited when a row of sunflowers was added. She enjoys feeding birds and thought it would be fun to attempt growing her own sunflower seeds for this purpose.

The garden group planned a party at the end of July and served garden refreshments including squash sweet rolls, vegetable relish tarts, and mint punch. A sense of pride in their work as the "gardeners" developed. By the end of July, several of the garden group members were planning to

repeat the project next year and form a garden club.

The size of the garden appeared to have been in line with the capabilities of the garden group members, as each seemed to have enough room to plant what they wanted and still be able to maintain the garden throughout the growing season. The space averaged ninety square feet per person in the garden group. However, this could be misleading on an individual basis as they often worked as a group to complete difficult tasks.

The discussion group did not display the same degree of enthusiasm. After meeting for four weeks, they chose to meet only once a week for one and one-half hours instead of the originally scheduled one hour meetings twice a week. When asked how many would like to be involved in similar group meetings at a later time, none of them indicated they would like to repeat the experience. It appeared that the experience of having someone there to talk to on a regular basis had not been gratifying to them. Perhaps another type of activity therapy would have been more beneficial, and created enthusiasm similar to that observed in the garden group members, but it seems just being with others is not necessarily what is important.

The control group's drop in LSI level over the eight-week period demonstrates the need for activity for geriatrics. If all the geriatrics in institutions today who are not involved in any activity are feeling less satisfied with life as these people demonstrated, it appears research should be conducted to determine the effect of different forms of activity therapy and ways to get people motivated to participate in activities offered by an institution. The latter was shown to be a problem when

volunteers were sought for this research. The number of people who would commit themselves to participating in a project regularly was relatively small.

Table 1 suggests a relationship between the age of a resident and his desire to participate in an activity. The mean age of the garden group was 77.0, while that of the control group was 82.2. It is also interesting to note that the control group, having a lower overall activity level in the institution, decreased the greatest amount, according to their LSI scores, over the eight-week period. However, it does not appear that this relationship of age and inactivity is an unavoidable situation. One member of the garden group was 77 years old, rated as very active and in good health, in spite of being in the process of recovering from a broken hip. Horticultural therapy could be beneficial for even those geriatrics who are handicapped or ambulatory. Specialized gardens could be built for these residents (13), and could perhaps postpone the physical and mental deterioration so often associated with aging and inactivity.

In summary, activity therapy was shown to be important in maintaining the life satisfaction level of geriatrics. Many activities could offer an opportunity for social interaction as shown by the discussion group. However, the enthusiasm that was generated, the pride developed in the activity, and the physical exercise obtained through gardening were not duplicated by the discussion group. Horticultural therapy would appear to be particularly appropriate for geriatrics as it can be tailored to the individual's abilities and interests, provide a sense of usefulness necessary for maintenance of self-esteem, and provide a meaningful activity that serves as a work substitute for institutionalized geriatrics.

**THIS BOOK
CONTAINS
NUMEROUS PAGES
THAT WERE
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RECEIVED FROM
CUSTOMER.**

Plate 1. Members of horticultural therapy
group harvesting tomatoes in garden.



Plate 2. Garden group members discussing
optimum size to harvest zucchini squash.



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HORTICULTURAL THERAPY: GERIATRICS GARDEN AND GROW

Gardening is often thought to be an activity solely for the youthful with an abundance of energy and the ability to do "all the hard work" necessary to produce attractive flowers and fresh vegetables. The gardeners at a geriatric home in Topeka, Kansas, ranging from 74 to 87 years in age, showed this was not the case.

During the summer of 1974, a Kansas State University research project was conducted to measure the effect of horticultural therapy on institutionalized geriatrics. Life satisfaction--satisfaction with one's life, accomplishments, and how one feels about themselves in general--of the geriatrics was measured using a questionnaire at the beginning and end of the research project. The results showed that those who gardened maintained their level of life satisfaction, while those who were not involved in an activity decreased significantly, according to their test scores. The gardeners developed a sense of pride in their work, enthusiasm increased markedly throughout the summer, and they had the added benefit of fresh air, good food, and exercise.

PLANNING THE GARDEN

Deciding what to plant in the garden was no problem. Everyone sat down together, listed their choice of flowers and/or vegetables, and fitted them into the 15' x 30' plot chosen for the garden. The plant materials were indeed varied. The group planted vegetables including corn, beans, radishes, lettuce, tomatoes, zucchini, yellow squash, pumpkins, cucumbers, turnips, and Chinese cabbage. The flower

favorites included zinnias, marigolds, globe amaranth, celosia, sunflowers, and castor beans. Although Chinese cabbage is not commonly grown in Kansas, it did quite well thanks to a little shade from the castor beans and sunflowers.

Maintenance was kept at a minimum by using a six-inch mulch of straw and rotted prairie hay. These materials were obtained free of charge from a farmer who no longer needed them, so the largest expense was purchasing the seeds. The mulch was beneficial as these older gardeners could not bend down and hand weed easily; but their garden was nearly weed-free. The mulch also kept watering and cultivation needs at a minimum.

NEED TO BE NEEDED

In today's society, when it appears the needs of our older citizens are met by Social Security, Medicare, and adequate institutionalized care, it is easy to forget that all of us need to feel we have a place in the world. When one is young, this need is usually fulfilled by school, work, and a role as a member of a family, but in an institution this need is too often neglected. Horticultural therapy, serving as a work substitute, can help fulfill these needs for institutionalized geriatrics. Through involvement in gardening, the results of this research showed that the people had a better mental attitude as reflected by their life satisfaction level, as well as gaining physical exercise, fresh air, a sense of usefulness, and a positive image of themselves and their abilities.

Research with geriatrics has indicated that the process of deterioration of physical and mental functioning usually associated with aging, is slowed by maintaining a high level of activity and social interaction. With this fact in mind, it appears geriatrics should be encouraged not only to garden for health, but for life.

GARDENING IS FOR EVERYONE

Gardening is becoming an increasingly popular backyard activity as concern increases about food additives and prices. If gardening helps maintain good physical and mental health in geriatrics, shouldn't it apply to all ages as well? Horticulture is the one activity therapy that not only provides us with food for satisfying our physical needs, but also generously supplies beauty that soothes and relaxes, thus fulfilling our psychological needs. Let us all garden and grow--physically and psychologically.

Plate 3. Adequate mulch enables geriatrics
to maintain weed-free garden.



Plate 4. Successful garden produces smiling
faces, satisfaction, and pride.



APPENDIX

LSIA with Scoring Key

	Agree	Disagree	?
1. As I grow older, things seem better than I thought they would be.	<u>X</u>	<u> </u>	<u> </u>
2. I have gotten more of the breaks in life than most of the people I know.	<u>X</u>	<u> </u>	<u> </u>
3. This is the dreariest time of my life.	<u> </u>	<u>X</u>	<u> </u>
4. I am just as happy as when I was younger.	<u>X</u>	<u> </u>	<u> </u>
5. My life could be happier than it is now.	<u> </u>	<u>X</u>	<u> </u>
6. These are the best years of my life.	<u>X</u>	<u> </u>	<u> </u>
7. Most of the things I do are boring or monotonous.	<u> </u>	<u>X</u>	<u> </u>
8. I expect some interesting and pleasant things to happen to me in the future.	<u>X</u>	<u> </u>	<u> </u>
9. The things I do are as interesting to me as they ever were.	<u>X</u>	<u> </u>	<u> </u>
10. I feel old and somewhat tired.	<u> </u>	<u>X</u>	<u> </u>
11. I feel my age, but it does not bother me.	<u>X</u>	<u> </u>	<u> </u>
12. As I look back on my life, I am fairly well satisfied.	<u>X</u>	<u> </u>	<u> </u>
13. I would not change my past life even if I could.	<u>X</u>	<u> </u>	<u> </u>
14. Compared to other people my age, I've made a lot of foolish decisions in my life.	<u> </u>	<u>X</u>	<u> </u>
15. Compared to other people my age, I make a good appearance.	<u>X</u>	<u> </u>	<u> </u>
16. I have made plans for things I'll be doing a month or a year from now.	<u>X</u>	<u> </u>	<u> </u>
17. When I think back over my life, I didn't get most of the important things I wanted.	<u> </u>	<u>X</u>	<u> </u>

	Agree	Disagree	?
18. Compared to other people, I get down in the dumps too often.	_____	_____	_____
19. I've gotten pretty much what I expected out of life.	_____	_____	_____
20. In spite of what people say, the lot of the average man is getting worse, not better.	_____	_____	_____

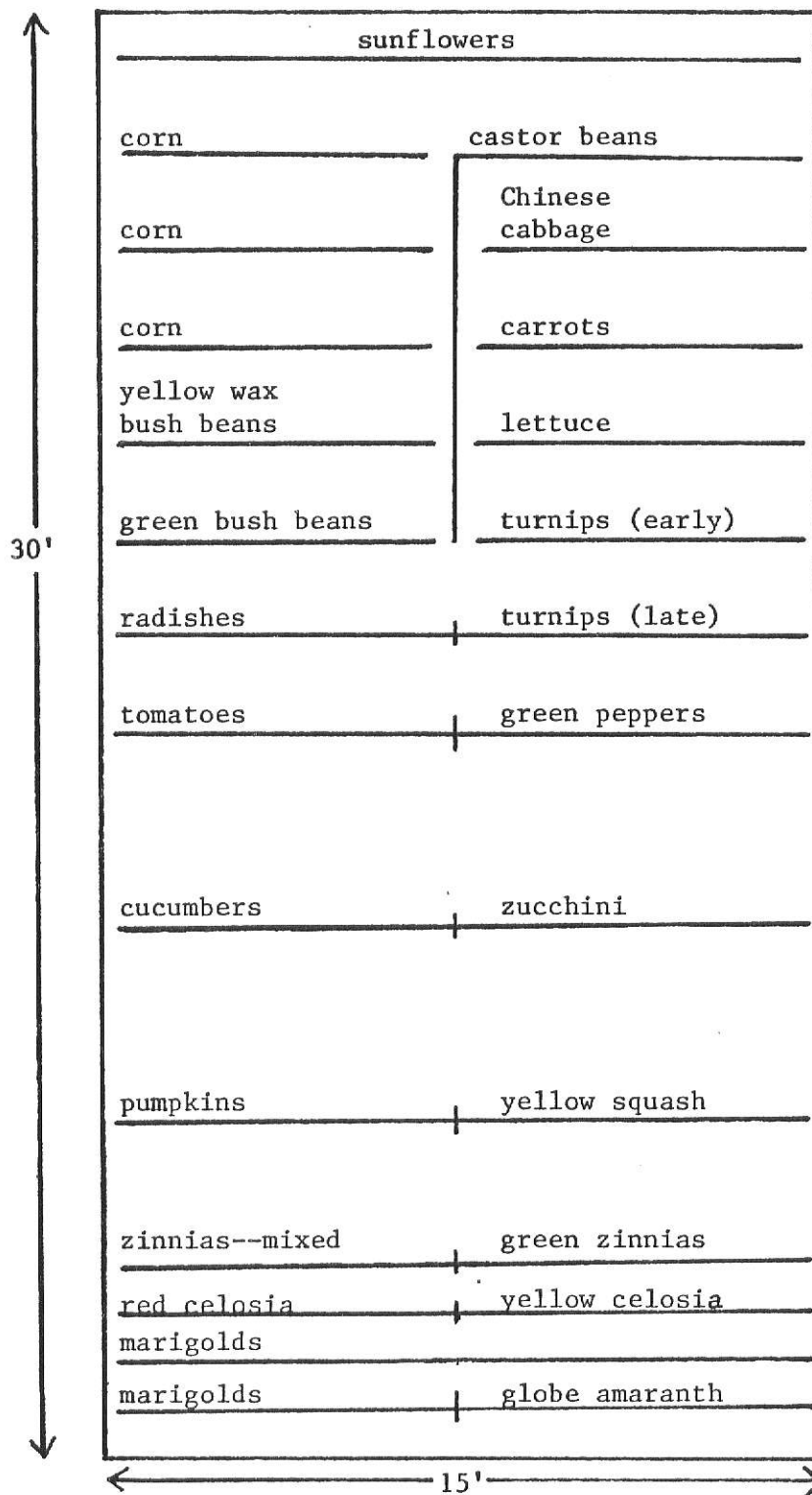
LSIB with Scoring Key

Would you please comment freely in answer to the following questions?

- What are the best things about being the age you are now?
1-positive answer
0-nothing good about it
- What do you think you will be doing five years from now? How do you expect things will be different from the way they are now, in your life?
2-better, or no change
1-contingent--"it depends"
0-worse
- What is the most important thing in your life right now?
2-anything outside of self; pleasant interpretation of future;
1-"Hanging on"; keeping health, or job;
0-getting out of present difficulty, or "nothing now" or reference to the past;
- How happy would you say you are right now, compared with the earlier periods in your life?
2-happiest time; all have been happy; or hard to make a choice;
1-some decrease in recent years;
0-earlier periods were better, this is a bad time;
- Do you ever worry about your ability to do what people expect of you--to meet demands that people make on you?
2-No
1-qualified yes or no
0-Yes
- If you could do anything you pleased, in what part of Topeka would you most like to live?
2-present location
0-any other location

7. How often do you find yourself feeling lonely?
2-never, hardly ever
1-sometimes
0-fairly often, very often
8. How often do you feel there is no point in living?
2-never, hardly ever
1-sometimes
0-fairly often, very often
9. Do you wish you could see more of your close friends than you do,
or would you like to have more time to yourself?
2-O.K. as is
1-friends
0-self
10. How much unhappiness would you say you find in your life today?
2-almost none
1-some
0-a great deal
11. As you get older, would you say things seem to be better or worse
than you thought they would be?
2-better
1-about as expected
0-worse
12. How satisfied would you say you are with your way of life?
2-very satisfied
1-fairly satisfied
0-not very satisfied

GARDEN PLAN



NORTH →

Scale: 1"=4'

Table 1A. Analysis of variance of LSIA scores.

Source of Variance	Degrees of Freedom	Sum of Squares	Mean Square	F
Total	29	411.0	14.2	
Between Groups	14	307.5	22.0	
Group	2	146.5	73.2	5.458 *
Pooled Ind. (error term)	12	161.0	13.4	
Within Group	15	103.5	6.9	
Pre x Post	1	7.5	7.5	1.724 n.s.
Group x (Pre x Post)	2	43.8	21.9	5.034 *
Error	12	52.2	4.4	

* Significant at the 0.05 level (LSD).

T-TEST FORMULAS USED

BETWEEN-GROUP T-SCORES

$$\sigma = \sqrt{\frac{N_1 S_1^2 + N_2 S_2^2}{N_1 + N_2 - 2}}$$

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sigma \sqrt{\frac{1}{N_1} + \frac{1}{N_2}}}$$

WITHIN-GROUP T-SCORES

$$t = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{\sum D^2 - \frac{(\sum D)^2}{N}}{N(N-1)}}$$

GARDENERS MEET¹

The Manor gardeners--earth worms--"met and et" in the Zeigler apartment with their sponsor Rena Train.

Garden produce was incorporated into the refreshments--squash tea ring and mint punch. The sponsor expected some work in the garden because of the cool evening but sitting on the deck was too inviting.

More gardening news--

Rena Train left the gardening group Friday, August 23 to finish her Master's degree at K-State on this gardening project. The Manor weed pullers thank her for her help and will try to carry on and raise enough pumpkins for the Manor's Hallowe'en.

¹Excerpt from the "Manor Chatter", Topeka Presbyterian Manor, September 1, 1974.

THE EFFECT OF HORTICULTURAL THERAPY IN MAINTAINING
THE LIFE SATISFACTION OF GERIATRICS

by

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B.S., Kansas State University, 1968

AN ABSTRACT OF A MASTER'S THESIS

submitted in partial fulfillment of

requirements for the degree

MASTER OF SCIENCE

Department of Horticulture and Forestry

KANSAS STATE UNIVERSITY

Manhattan, Kansas

1974

The effect of involvement in horticultural therapy on the life satisfaction level of test groups of geriatrics in an institutional setting was researched. The subjects ranged from 74 to 87 years in age.

The results showed that participation in horticultural therapy or a discussion group activity maintained the life satisfaction level of geriatrics. Those that were not involved in these activities showed a significant decrease in their level of life satisfaction over an eight-week period.

Enthusiasm increased markedly throughout the summer in the garden group, and they developed interest and a sense of pride in their work. These results were not evident in the discussion group.

Employment of activity therapy for geriatrics was shown to be necessary for maintenance of the psychological, and to some degree, the physical well-being of the older citizen in an institutional setting.