

SHORT TERM CHANGES IN HEALTH BEHAVIOURS OF OLDER ADULTS

Patricia Higgins

According to Giocella and Bevil (1985) the lifestyle that one chooses has a direct impact on the quality and quantity of life. Eating, exercise, substance use and abuse, stress, and environmental factors are the major known modifiable causes of illness today (Orlandi 1987). Others may argue that socio-economic factors are a stronger influence on health behaviours and life style than any other set of variables.

There is a common attitude about people over 65, shared by the public and most health professionals, that it is too late to think seriously about prevention in this group because they already have many chronic diseases. The older adult has from one to eight chronic diseases (Filner & Williams, 1979). According to the U.S. Department of Health, Education, and Welfare, heart disease, cancer and stroke are the lifestyle diseases that are responsible for 75% of all deaths among the elderly. In very recent years however, attitudes have begun to change. Preventive services for the elderly, even those in their seventies and eighties, are available.

This study was designed to determine the effect of a health promotion program on health behaviours of 34 elderly adults. The two hypotheses were tested at the .05 level of significance.

1. A significant, positive difference will occur between the pretest and the posttest scores on the Survey of Health Practices for the older adults in the experimental group (E1) compared to the control groups (C1 and C2).
2. A significant positive difference will occur between the pretest and the posttest scores on the *Growing Younger Questionnaire* for the older adults in the experimental group (E1) compared to the control groups (C1 and C2).

Patricia Grant Higgins, R.N., Ph.D. is Associate Professor in The University of New Mexico College of Nursing, in Albuquerque, New Mexico.

Review of the Literature

Chronic conditions and functional disabilities

Aging does not "cause" any disease, but certain conditions, especially chronic ones, are more prevalent among the elderly. For the individual, the major inconvenience of health problems is limitation of activities. When asked about the impact of health problems, people tend to complain about activities they can no longer perform, such as sleeping, working, thinking clearly or eating, rather than socio-economic security (Yurick, Robb, Spier & Ebert, 1984). According to O'Neal (1982), most older adults have ten days or less per year of decreased activity because of chronic illnesses per year.

Elderly clients are more immediately concerned about the impact of chronic conditions on functional status than about money. Information on functional impairment has been limited to the areas of sensory impairment and mobility. The prevalence of chronic conditions and functional impairments among the elderly living in the community is higher than among younger people but lower than among people in nursing homes (Yurick et al. 1984).

Self-health assessment

An individual's self-assessment of health may be as important as one's actual medical status in predicting general emotional state and behaviour (Yurick et al., 1984). Despite high levels of chronic disease and functional impairment, most elderly people view themselves as being in good health when compared to other people their own age. Self-health ratings by the non-institutionalized elderly of the United States, in 1985, showed approximately two-thirds (60%) of this group rated their health as good or excellent. Poor health was reported by only 9% of this population and was more common among men, and those over 75 years of age. Elderly non-whites viewed their health as poor almost twice as often (16%) as elderly whites (8%). The proportion of the elderly who reported poor health increased as level of income decreased (Yurick et al. 1984).

The widespread view of older adults as frail and sick is not accurate. There is, in fact, wide variability in health status. Only 5% of the United States population 65 years and over is in a long-term facility at any one time (Yurick et al. 1984). However, as a person ages, the likelihood of experiencing illness does increase and improving the quality of life for the old and old-old is a complex task.

Method

Design

The pretest-posttest two control groups design was used in this study. Two groups of subjects (E1 and C1) lived in two senior housing apartments managed by the same company in the east and west parts of the city. They were exposed to the same food, activities and living areas.

A second control group (C2), from a senior citizens' center exercise class, was also used to help assess if E1 and C1 were representative of the well senior population.

E1 received the experimental treatment of a health promotion program consisting of eight classes. The health promotion content is described in Figures 1 and 2. Formal classes were held each Monday and Wednesday, for approximately two hours each day, for one month. The classes were taught at E1 housing complex using lecture, discussion, small group activities and active participation. The facilitator was enthusiastic, supportive and used self-responsibility, decision-making strategies and social support networks. Subjects in C1 and C2 did not receive the health promotion program. Subjects were pretested and posttested using the *Survey of Health Practices* and the *Growing Younger Questionnaire*.

Sample

The sample for this study was recruited from two senior housing sites and a senior citizens' center exercise class in New Mexico. The criteria for selection was that each subject be 60 years of age or older, able to care for themselves, and well.

Ninety-one participants met the criteria for selection. The older adults were not randomly assigned to the experimental or control groups because cross contamination would have occurred between the groups. It was felt that if the groups were randomized that their housing and social settings, activities and food services provided by the facility would allow the sharing of class content and thus contaminate the findings. The experimental site was selected by a flip of a coin. The experimental (E1) group had 34 participants who were randomly selected from their housing site. The residents from another housing site were randomly selected for the first control (C1) group ($n = 33$) and the older adults from the exercise class at a senior citizens' center ($n = 24$) were selected for the second control group (C2). True randomization did not occur, this is a crucial limitation of this study and generalization of the results.

Procedure

Prior to the initiation of the health promotion program, all 91 older adults completed a demographic and health problem information sheet, the *Survey of Health Practices* and the *Growing Younger Questionnaire*. Six weeks after the program was completed all participants were posttested.

Instruments

The *Survey of Health Practices* developed by Belloc and Breslow, (1972) was used to assess health practices pertaining to six health behaviours: sleep, weight, eating patterns, exercise, alcohol and tobacco use. This instrument of 17 questions was selected for its readability and short length.

-
- I. Medical self-care activities and decisions: cardiac assessment, pulse and blood pressure and the wellness concept.
Nutrition: The basic four and the magic elixir (water).
Fitness: Stretching to music and group walking.
Relaxation: Massage, breathing and relaxation.
 - II. Medical self-care activities and decisions: eye and pupil assessment, temperature taking and training the doctor you have.
Nutrition: Nutrition density and real foods.
Fitness: Stretching to music and walking.
Relaxation: Massage, stress and tense-relax exercise.
 - III. Medical self-care activities and decisions: hot and cold packs, common injuries, use of ice, the wise use of medications and the saving on hospital costs.
Nutrition: 24-hour recall and high-low density foods.
Fitness: Back exercises.
Relaxation: Massage and mind relaxation.
 - IV. Medical self-care activities and decisions: foot care, footsie rollers, sun screen products in relation to walking and sharing how to save hospital costs.
Nutrition: Starch, protein and fiber.
Fitness: Stretchies.
Relaxation: "AUM" and the relaxation response.
-

Figure 1
Overview of the Course Content for the Four Formal Class Sessions

-
- | | |
|------|--|
| I. | Daily Stress Log |
| | Practice of Relaxation |
| | Water Refreshment |
| | Go for a Walk |
| II. | How Customs Affect Eating Habits |
| | Eating Changes Desire |
| | Practice of Breathing and Progressive Relaxation |
| | Walk in Pairs |
| III. | Causes of Tension and Use of Relaxation Skills |
| | Discussion on Hospital Costs |
| | "AUM" in Relaxation with Practice |
| | Walk in a Group |
| IV. | Time for Health |
| | Tall-Tale and Joke Swap |
| | Nutrition Self-Assessment |
| | Go for a Walk |
-

Figure 2
Overview of the Content Areas for the Four Informal Sessions

According to Moyer (1981), content validity is assured because "an association between good health habits and physical health status has been established." Criterion validity appears to be "excellent" because health practices as measured by the *Survey of Health Practices* have been positively correlated ($r = 0.76$) with physical health status and with mortality statistics.

This instrument is considered an excellent tool to measure health behaviours and is highly reliable. It was also reported that self-administered questionnaires on physical health status, such as the *Survey of Health Practices*, have a 96% reliability index (Meltzer & Hochstim, 1970).

The *Growing Younger Questionnaire* determines health behaviours in relation to: eating patterns, medical care and treatments, sleep and relaxation, social habits and exercise. This self-reported questionnaire of 31 questions uses an ordinal series of responses which can be checked off quickly (Kemper, Deneen & Giuffre, 1982).

It has been reported that self-administered health behaviour surveys have high reliability (95%) in a test-retest protocol (Meltzer & Hochstim, 1970).

Data analysis

The Wilcoxon paired-sample nonparametric test was used to determine whether there are statistically-significant differences between the three groups from pretest to posttest changes on the two instruments (Zar, 1974). Significance was set at the 0.05 level. The analysis of covariance (ANCOVA) was also used to determine whether the experimental group outperformed the control groups on the posttest more than should be expected, based on selection differences. ANCOVA was used to support behavioural changes made.

Findings

The major demographics of this study are that 88% were women ($n = 80$), 58% were widowed ($n = 67$), 88% had high school or college educations ($n = 80$). Most were white ($n = 74$, 81%) with a low income of <\$9,000 ($n = 65$, 71.5%). The two major health concerns of the older adults were arthritis ($n = 45$, 49.5%) and hypertension ($n = 42$, 46.2%). There were no significant differences between the groups on demographic variables.

Short term changes in health behaviours on the *Survey of Health Practices* for the older adults can be found in Table 1. E1 made eight behavioural changes after the health promotion program. C1 made one change and C2 made no changes. Significantly more subjects in E1 were eating less between meals, more people were eating breakfast and more participants were involved in walking and physical exercise in the posttest period as compared to the pretest period.

C1 showed one significant change from pretest to posttest questioning, more older adults were swimming and taking more walks in the posttest period. C2 had no significant changes in any of the responses (Table 1).

The analysis of covariance was used to control statistically any initial differences in the experimental and the control groups that might have been present and that might confound differences between the groups. The posttest variables were analyzed with the pretest as a covariate in each analysis. Table 2 shows the analysis of covariance summary table for posttest mean differences on the *Survey of Health Practices* that were adjusted for the groups. Only the eight variables in Table 1 that were significant on the Wilcoxon Matched-Pairs for E1 were analyzed. The analysis of covariance also indicated and supported significant changes ($p = .001$) in seven health behaviours of sleep, eating habits, aerobic activities, gardening and taking more weekend automobile trips.

Table 1***Results of the Survey of Health Practices Questionnaire Using Pretest and Posttest Data for the Wilcoxon Matched-Pairs for Groups E1, C1 & C2***

Description of Question Asked	E (n=34)				C (n=33)				C (n=24)			
	-	+	T	p=	-	+	T	p=	-	+	T	p=
Usual Sleep/Hrs	0	26	8	.00*	11	4	18	.09	4	3	17	.74
Eat Between Meals	29	0	5	.00*	1	3	29	.36	1	4	19	.50
Eat Breakfast	0	30	4	.00*	1	0	32	.31	0	2	22	.18
Weight for Height	12	0	22	.002*	4	2	27	.91	4	6	14	.65
Active Sports	0	2	32	.18	0	2	31	.17	0	1	23	.32
Swimming/Walks	0	33	1	.00*	1	7	25	.05*	3	2	19	.50
Gardening	0	6	28	.03*	0	2	31	.18	3	0	21	.11
Physical Exercise	0	31	3	.00*	3	10	20	.06	1	2	21	1.00
Weekend Trips	1	16	17	.001*	1	7	25	.16	2	4	18	.75
Hunt or Fish	0	1	33	.32	0	0	33	1.00	1	0	23	.32
Alcohol Use	0	0	34	1.000	2	0	31	.18	0	0	24	1.00
Alcohol Drinks	1	2	31	.29	0	1	32	.32	1	2	21	.59
Smoke Cigarettes	0	0	34	1.000	0	0	33	1.00	0	0	24	1.00
Smoked Daily	0	0	10	1.000	0	0	8	1.00	0	1	7	.32
Inhaled	0	0	10	1.000	0	0	8	1.00	0	0	8	1.00
Years Smoked	0	0	10	1.000	0	0	8	1.00	0	0	8	1.00
Smoke Cigars/Pipe	0	0	34	1.000	0	0	33	1.00	0	0	24	1.00

- = posttest score is less than the pretest score

+ = posttest score is greater than the pretest score

T = posttest score is the same as the pretest score

* = significant finding <.05 and change is in the "correct" direction

The responses to the *Growing Younger Questionnaire* of 31 questions, for pretest and posttest answers were analyzed using the Wilcoxon Matched-Pairs. The results are presented in Table 3. E1 showed positive behaviour changes for 24 items. It should be noted from this table that some variables (eating, activities to lower blood pressure and visitations) received a negative ranking. This does not mean that the behaviour was less in posttesting, but that the answer had a lower ranking or score on the questionnaire. Seven health behaviours showed no significant change from pretest to posttest responses. Those people who had their blood pressure checked continued to do so. Those with diagnosed hypertension still took their antihypertensive medications. The older adults with paying jobs kept them, and worked the same number of hours as in pretesting. There was no increase or decrease in the number of pets. Those who lived alone still lived alone.

Table 2

ANCOVA Summary Table Comparing the Adjusted Posttest Means on the Survey Of Health Practices Between Groups E1, C1 and C2

Description of Questions Asked	Source of Variation	SS	Adjusted df	MS	F
Usual Sleep/Hrs.	Covariate	9.448	1	9.448	28.08
	Main Effects	11.277	2	5.638	16.76*
Eat Between Meals	Covariate	10.479	1	10.479	43.98
	Main Effects	20.461	2	10.230	42.93*
Eat Breakfast	Covariate	2.596	1	2.569	18.92
	Main Effects	7.461	2	3.730	27.47
Weight for Height	Covariate	152.975	1	152.975	322.60
	Main Effects	2.342	2	1.171	2.47NS
Swimming/Walks	Covariate	3.744	1	3.744	20.73
	Main Effects	40.678	2	20.339	112.63*
Gardening	Covariate	27.418	1	27.418	204.85
	Main Effects	1.377	2	0.688	5.14*
Physical Exercise	Covariate	3.804	1	3.804	21.65
	Main Effects	40.668	2	20.334	115.73*
Weekend Trips	Covariate	7.156	1	7.156	23.10
	Main Effects	5.438	2	2.719	8.78*

* = $p < .001$

It can be noted from Table 3 that C1 made significant changes in seven behaviours. These behavioural changes, although significant, revealed that their scores on the posttest were lower than their pretest scores. Twenty-four questions, in relation to other health behaviours on the *Growing Younger Questionnaire*, showed no significant change from pretest to posttest responses for C1.

C2 showed one significant change in behaviour. As noted in Table 3, the older adults in this group visited their doctor more in the posttest than the pretest. This change, though significant, is in the negative direction. All other responses made on the *Growing Younger Questionnaire* showed that there was no significant change between pretest and posttest responses for the 30 other questions on health behaviours.

Table 3

Results of the Growing Younger Questionnaire Using the Wilcoxon Matched-Pairs for Groups E1, C1 and C2

Description of Question Asked	E1(n=34)				C1(n=33)				C2(n=24)			
	-	+	T	p=	-	+	T	p=	-	+	T	p=
Breakfast	0	30	4	.00*	1	0	32	.32	3	3	18	.53
Lunch	0	19	15	.001*	0	4	29	.07	2	3	19	.89
Dinner	0	10	24	.005*	0	3	30	.11	0	3	21	.11
Eat Alone	31	0	3	.00*	6	2	25	.09	3	4	17	1.00
Salts Food	19	1	14	.0003*	6	1	26	.09	1	1	22	1.00
Salty Snacks	28	0	6	.00*	5	1	27	.11	4	3	17	.55
Desserts/Candy	25	2	7	.0001*	8	3	22	.18	2	2	20	1.00
BP Checked	0	4	30	.07	7	0	26	.02**	1	3	20	.36
High BP	1	0	33	.32	1	0	32	.32	0	0	24	1.00
Take Medication	0	0	18	1.000	0	0	17	1.00	0	0	11	1.00
Salt-Free Diet	0	8	10	.01*	0	0	17	1.00	0	0	11	1.00
Lost Weight	0	11	7	.003*	0	1	16	.32	2	0	9	.18
Exercise More	0	17	1	.0003*	0	0	17	1.00	0	0	11	1.00
Slow Down to Relax	0	11	7	.003*	0	1	16	.32	0	0	11	1.00
Breath to Relax	0	18	0	.0002*	0	0	17	1.00	0	0	11	1.00
Trouble Sleeping	14	0	20	.001*	4	1	28	.22	1	1	22	1.00
Sleeping/Amount	13	0	0	.002*	2	2	18	.72	3	2	11	.69
Meditation/Prayer	0	34	0	.00*	1	7	25	.14	2	5	17	.24
Prescription Drugs	10	1	23	.008*	2	6	25	.36	3	5	16	.67
Doctor Visits	17	0	1	.0003*	6	6	21	.46	7	1	16	.03**
Paying Job	0	1	33	.32	0	0	33	1.00	0	0	24	1.00
Hours Work	0	0	3	1.00	0	0	2	1.00	0	0	24	1.00
Go Out to Visit	0	31	3	.00*	0	5	28	.04**	1	4	19	.23
Have Visitors In	0	34	0	.00*	0	8	25	.01**	1	7	16	.14
Out Not Visiting	0	31	3	.00*	0	6	27	.03**	0	1	23	.32
Pet	0	4	30	.07	0	0	33	1.00	0	0	24	1.00
Live Alone	2	1	31	.60	0	0	33	1.00	0	0	24	1.00
Exercise	0	34	0	.00*	0	7	26	.02**	2	6	16	.40
Blocks/Day Walk	0	34	0	.00*	8	1	24	.03**	9	1	14	.06
Seat Belts	0	30	4	.00*	6	2	25	.21	1	1	22	1.00
Water/Day	0	34	0	.00*	7	1	25	.05**	4	4	16	1.00

- = posttest score is less than the pretest score.

+ = posttest score is greater than the pretest score.

T = posttest score is the same as the pretest score.

* = significant finding <.05 and change is in the "correct" direction.

** = significant finding <.05 however, the change is in the "wrong" direction.

The 24 variables that were significant in Table 3 for E1 on the Wilcoxon Matched-Pairs were analyzed using analysis of covariance. This analysis also supports statistically significant changes in 23 health behaviours. The differences in daily prescription drugs that the subjects took was not statistically significant.

Discussion and Nursing Implications

When the three groups were compared individually between pretest and posttest results, E1 made positive changes in their health practices. The *Survey of Health Practices* showed that the older adults who participated in the health promotion program showed an increase in sleep hours, took longer walks and exercised at least three times per week. Because of their age, they rarely participated in active sports. Most females usually did not hunt or fish. Those in E1 and C1 had limited access to gardening areas because they lived in a high-rise building complex. However, those in the experimental group increased their gardening activities by caring for the flowers, plants and roses around the apartment complex. As a group, they increased weekend trips by automobile. It should be noted that all participants scheduled summer vacations after posttesting, and many had to rely on relatives or bus transportation for trips. Members of the experimental group also decreased eating between meals and perceived a weight loss that was real. All health practices that changed were included in course content in the health promotion program.

Alcohol and tobacco use were not included as part of the program because no one drank more than two drinks per month; all were reformed smokers and no one smoked at the time of testing.

C1 had one significant behaviour change; they were taking long walks or swimming. Daylight saving time and warmer weather may have prompted a positive change in this activity to change positively. C2 made no changes in health practices between pretest and posttest.

The data indicate that the experimental group made short term positive changes in health practices, as evidenced by the *Survey of Health Practices*. The hypothesis of a significant difference between pretest and posttest scores on the *Survey of Health Practices* for the older adults in the experimental group (E1) compared to the control groups (C1 and C2) is accepted as stated.

When the three groups were compared individually between pretest and posttest results, E1 members made significant short term behaviour changes for 24 items on the *Growing Younger Questionnaire*. Nutritional status improved because they ate breakfast, lunch and dinner on a daily basis. The 34 subjects were eating their meals with others and were decreasing the salting of foods and eating less salty snacks and sweets. They were also drinking more water on a daily basis. As a result of the health promotion classes, those with hypertension were using strategies to lower their blood pressure. They were restricting their salt intake, losing weight, exercising, slowing down and relaxing to avoid stress and using deep breathing techniques and progressive muscle relaxation. The older adults used these techniques to

improve sleep, and they had less trouble sleeping. If they had some difficulty sleeping, this also decreased. One woman stated, "By breathing I can go back to sleep in 20 minutes." The practice of meditation and progressive muscle relaxation increased. They learned and practised self-care physical assessment skills and, as a result of the classes, they took fewer prescription drugs and made less visits to the physician. Their social activities increased: they ate together, visited each other and got out of the home on a regular basis. The participants were walking individually or in small groups, on a regular basis, from four to ten city blocks. These health behaviours that the older adults changed were all taught and supported in the eight classes of the health promotion program.

C1 made negative health changes. The 33 older adults were eating more sweets; visiting with friends and leaving their apartments decreased; they were exercising less and their consumption of water also decreased in the posttest phase. No sound rationale can be presented for these negative changes in behaviour. They may have given the expected answer on the pretest and the right response on the posttest. C2 had one change in behaviour between pretest and posttest on the *Growing Younger Questionnaire*: they made more visits to their physicians. This is interpreted as a negative change in health status.

The health practice that did not change was the taking of antihypertensive medication for high blood pressure. Presumably, if subjects had controlled hypertension in the pretesting phase, they would also have controlled hypertension in the posttesting phase. Also, if they were taking prescription drugs, they would likely continue with this practice. No changes were made by the older adults in visits to the physician, job and work hours and pets and living alone.

The data indicate that the experimental group made significant changes in behavioural health practices as evidenced by the *Growing Younger Questionnaire*. The hypothesis that there would be a significant difference between pretest and posttest scores on the *Growing Younger Questionnaire* for the older adults in the experimental group (E1) compared to the control groups (C1 and C2) is accepted as stated.

The health promotion program (eight classes presented to the 34 older adults in the experimental group by the researcher and a R.N. with a Master's degree in health education) had a positive effect on physical health status. The teachers of the program enthusiastically believed in the concept of wellness for older adults, and the participants may have been influenced by the Hawthorne effect. However, because of nurses' efforts, there were significant positive changes in stated health practices of sleep, nutrition status, medical management, social habits, stress, exercise patterns and

safety. The residents stated, that they "learned a lot from the classes and hated to see the program end."

As a direct result of the health promotion program, a daily exercise program is conducted by one of the women who attended classes. A swimming therapy program has also been implemented. The daily lunch that is provided by the housing site is more nutritionally sound because program participants made numerous suggestions to the manager of their building.

Nurses, as agents of change, can motivate and influence behaviour through community health promotion programs. The nurse must first be an advocator for wellness and, when teaching, should be open, frank, available and supportive (Hames & Joseph, 1980).

This study showed that older adults are able to make behavioural changes on a short term basis. They were interested in improving their health when they actively participated and took responsibility for learning. By changing patterns of eating, exercise and coping with stress, older adults can improve their quality of life (Best & Cameron, 1986; Clemen-Stone, Eigsti & McGuire, 1986; Orlandi, 1987).

There is a need to determine whether or not long term behavioural changes in older adults have an impact on mortality and morbidity. Longitudinal follow-up is necessary in order to assess permanent change in health behaviours, and to determine whether health promotion programs improve or decrease the risk factors for serious disease that occur in senior citizens.

REFERENCES

- Belloc, N.B. & Breslow, L. (1972). Relationship of physical health status and health practices. *Preventive Medicine*, 1972; 409-421.
- Best, J.A. & Cameron, R. (1986). Health behaviour and health promotion: *American Journal of Orthopsychiatry*, (2):48-56.
- Clemen-Stone, S., Eigsti, D.G. & McGuire, S.L. (1986). *Comprehensive family and community health nursing*. New York, Springer Publishing Co.
- Filner, B. & Williams, T.F. (1979). *Health Promotion for the Elderly: Reducing Functional Dependency*. The Surgeon General's Report on Health Promotion and Disease Prevention Background Papers. Washington, D.C., U.S. Government Printing Office (HEW Publication No. 79-55071A), p. 367.
- Giocella, E.C. & Bevil C.W. (1985) *Nursing Care of the Aging Client Promoting Healthy Adaptation*. Norwalk: Connecticut. Appleton-Century-Crofts, p.12, 162.
- Hames, C.C. & Joseph, D.H. (1980). *Basic concept of helping*. New York: Appleton-Century-Crofts
- Kemper, D., Deneen, E.J. & Giuffre, J. (1982). *Organization, promotion and evaluation guide*. Boise, Idaho, Healthwise.
- Meltzer, J. & Hochstim, J. (1970). *Reliability and validity of survey data on physical health*. Public Health Reports, (85):1075-1086.
- Moyer, R. (1981). *Health promotion and the assessment of health habits in the elderly*. Topics in Clinical Nursing, (3):53.
- O'Neal, D.J. (1982). Promotion of health for the aged in the family. *Journal of Gerontology Nursing*, 8(3), 146-147.
- Orlandi, M.A. (1987). Promoting health and preventing disease in health care settings: An analyses of barriers. *Preventive Medicine*, (16):119-130.
- U.S. Dept. of Health, Education & Welfare. (1979). Public Health Service, Health Resources Administration, National Center for Health Statistics.
- Yurick, A., Robb, S., Spier, B. & Ebert, N. (1984). *The aged person and the nursing process*. (2nd ed.). New York: Appleton-Century Crofts.
- Zar, J. (1974). *Biostatistical analysis*. Englewood Cliff: New Jersey, Prentice-Hall.

This research was supported by a grant from General Clinical Research Centers Program DRR, NIH, 5M01 RR00997.

The author would like to thank Dr. Richard Papenfuss for his support during the research process.

RÉSUMÉ

Changements de comportement à court terme face aux questions de santé chez les personnes âgées

Une étude portant sur deux groupes-témoin non randomisés avec pré-test et post-test a permis de déterminer l'influence qu'un programme de promotion de la santé pouvait exercer sur le comportement des personnes âgées en la matière. Deux questionnaires ont été administrés à 91 personnes âgées avant le programme (pré-test) et six semaines après la fin de ce dernier. Les résultats du *Survey of Health Practices* révèlent que dans le groupe expérimental (n = 34), 8 changements de comportement ont été opérés, C1 (n = 33) n'affichant qu'un changement et C2 (n = 24) aucun. Les résultats du *Growing Younger Questionnaire* indiquent que le groupe testé a effectué des changements positifs de comportement dans 24 cas, C1 dans 7 cas et C2 dans un cas, quoique tous dans la mauvaise direction.