Quality of Life and Affect in Older Persons: Hope, Time Frames, and Training Effects

SARA STAATS
The Ohio State University at Newark

This is a preliminary report of a project designed to increase hope and quality of life (QOL) in older persons through a series of five training sessions. The training sessions for the experimental groups are based on research on happiness, goal imagery, and time management. Data indicates that the training is effective in increasing expected QOL.

Several measures of affect and stress are examined as a function of three time frames of self-reported QOL. Daily uplifts are significantly related to present and future QOL while measures of stress and major life changes are not. Correlations of affective measures with QOL tend to increase from time frames of the past five years through the present to the next five years, indicating the relevance of hope for older persons. Training for increased hope works with older persons. Data obtained in the process is used to address theoretical models of QOL in older persons.

Perceptions of quality of life (QOL) are important to political leaders, citizens, business people, and psychologists. A better understanding of perceived QOL would facilitate interventions both at the national and at the individual level. Consequently, research on QOL has many practical ramifications as well as being of theoretical interest.

Humans are unique in that they are planning, future-oriented organisms (McGrath & Kelly, 1986; Miller, Galanter, & Pribram, 1960; Taylor & Brown, 1988). These attitudes toward the future become even more salient as one ages and begins to consider the amount of time left in one's life. As the proportion of older persons in our population increases, it becomes particularly important to increase our understanding of QOL in older persons, so that we can introduce programs that will maintain and perhaps increase QOL, both present and future-referenced, in the population of older persons. However, researchers are still puzzled by the determinants of self-reported QOL.

Initial measurements of QOL (Andrews & Withey, 1976; Campbell, Converse, & Rodgers, 1976) looked at demographic factors such as income, age, and sex, and found that such demographic factors accounted for approximately 10 percent of the variance in QOL measurements. Since actual or absolute factors are not adequate predictors of QOL, psychologists have begun to consider subjective factors. The present research extends this developing interest, and further will attempt to increase subjective perceptions of QOL through a series of training sessions aimed at increasing happiness, goal imagery, and personal effectiveness.

One's perception of present QOL is influenced, not only by the subjective present,

Current Psychology: Research & Reviews, Spring/Summer 1991, Vol. 10, Nos. 1 & 2, 21–30.

but also by future temporal comparisons: "Are things better or worse than they were in the past?" and "Will things be better or worse in the future than they are now?" Our hopes and expectations for the future are particularly important in that these expectations are the basis of actions directed toward our future (Beck, 1967; Feather, 1982; Staats, 1989). The person who is hopeful or envisions the possibility of a positive future QOL is more apt to engage in activities directed toward that future and is thus more apt to receive actual positive reinforcements in the future. In contrast, those persons who have no hope and view the future negatively are less apt to engage in positive behavior and are less likely to receive future reinforcements, and, indeed, are less likely to survive (Janis, 1980; Hill, Gallagher, Thompson, & Ishada, 1988). Thus, hope is not only intrinsically a positive, affective cognition in the subjective present, but hope also increases the likelihood of actual improvement in QOL through increasing intentions to act. Intentions are one of the last variables in a final, common pathway leading to behavior (Ajzen & Fishbein, 1977).

The present study measures self-reported QOL in three different time frames: 5 years ago, the present, and 5 years in the future. The primary purpose of the training sessions is to increase hope and expected future QOL. Additionally, the relationship of other variables such as present hope, affect, and stress to QOL, will be explored. Finally, comparisons will be made between different theoretical models of QOL.

METHOD

Subjects

The subjects were 239 persons over 50 years of age with a mean age of 64.2 years. Of these, 65 were male and 134 were female. The subjects were recruited by newspaper advertisements, by working with a Senior Citizens' Center serving all of the local county and several surrounding counties, and through students at Midwestern commuter college. Subjects were paid an honorarium of $10 for participation in each of the five sessions.

Interview, Instruments, Training Materials, and Procedures

An outline of the experimental design is presented in Table 1. All persons were given a structured interview. The first question assessed present mood using a seven-point Faces Scale. The second through fourth questions asked the respondent to indicate their QOL in past, present, and future time frames by pointing to one of nine rungs on a Cantril Ladder (Andrews & Withey, 1976) that was anchored at the bottom with "Worst life I could expect to have" and at the top with "Best life I could expect to have." Additional open-ended and closed questions were used to address hopes, goals, activities, life stresses, demographic variables, and social comparisons with friends.

A questionnaire packet was given to the respondents. At the first session, the interviewer went through the questionnaires and assisted the persons when requested.

TABLE 1
Experimental Design

	SESSION				
GROUPS	**I**	**II**	**III**	**IV**	**V**
Control	interview survey —	interview survey —	interview survey —	interview survey —	interview survey —
GII Experimental "Happy"	interview survey train 1	interview survey train 2	interview survey train 3	interview survey train 4	interview survey train 5
GIII Experimental "Goal"	interview survey train 1	interview survey train 2	interview survey train 3	interview survey train 4	interview survey train 5
GIV Experimental "Happy + Goal"	interview survey train 1	interview survey train 2	interview survey train 3	interview survey train 4	interview survey train 5

For the Experimental Groups, new concepts were introduced in each of the training sessions. Persons were given handouts and tasks to work on during the intervening time.

Subsequently, the questionnaire packet was sent home at each of the next four sessions with instructions that the respondents were to complete the packet in the evening 1 or 2 days before their next scheduled interview visit and bring the completed questionnaire to the next training session (when persons forgot, lost, or had questions, questionnaires were filled out before the interview).

The questionnaire packet began with the same single Faces Mood Scale that was used in the interview protocol, and included the PANAS (Watson, Clark, & Tellegen, 1989) as a measure of present positive and negative affect. The Hope Index and the Expected Balance Scale (EBS) served as measures of hope and expected affect (Staats, 1989). A measure of major life changes (Holmes & Rahe, 1967) and a measure of daily hassles and uplifts (Delongis, Coyne, Dakof, Folkmann, & Lazarus, 1982) were also included.

Detailed descriptions of the questionnaire instruments may be found in the literature, but some of their major features will be briefly noted. The PANAS (Watson, Clark, & Tellegen, 1988) is a check list with ten measures of positive affect (PA) and ten measures of negative affect (NA) that resulted from factor analytic studies of affect and mood. The Hope Index (Staats, 1989) is empirically derived with theoretical constraints and presents 16 conditions with the respondent indicating to what extent they want (affective component) and to what extent they expect (cognitive component) the condition to ensue. The 16 positive conditions reference self, world, and others. The EBS (Staats, 1989) is a descendent of the Bradburn (1969) Affective Balance Scale as it was modified by Warr, Barter, and Brownbridge (1983). In order to avoid the criticisms of measures based on difference scores, the positive and negative scales are considered individually. Stress is addressed by instruments reflecting two different theoretical viewpoints of the genesis of stress; one springing from the need for great

TABLE 2
Combination Happiness and Goal Training Concepts (Sessions 1 & 2)

1. Happiness is related to frequent, small moments of happiness.
2. Happiness is attainable by action.
3. Plans of action and goals must be specific.
4. Break goals and plans down into manageable pieces.
5. Imagine and visualize your goals clearly.

SESSION II

1. Social contacts (an important factor in happiness) decrease as one ages.
2. Persons over 65 are the fastest growing age group. Act to contact some of the people. Increase your pleasure and theirs.
3. Setting goal priorities (20/80% rule). Do something related to the A1, high priority goals each day.
5. Develop your helper image. Visualize this imge.

Sara's Worry Fence (condensed)

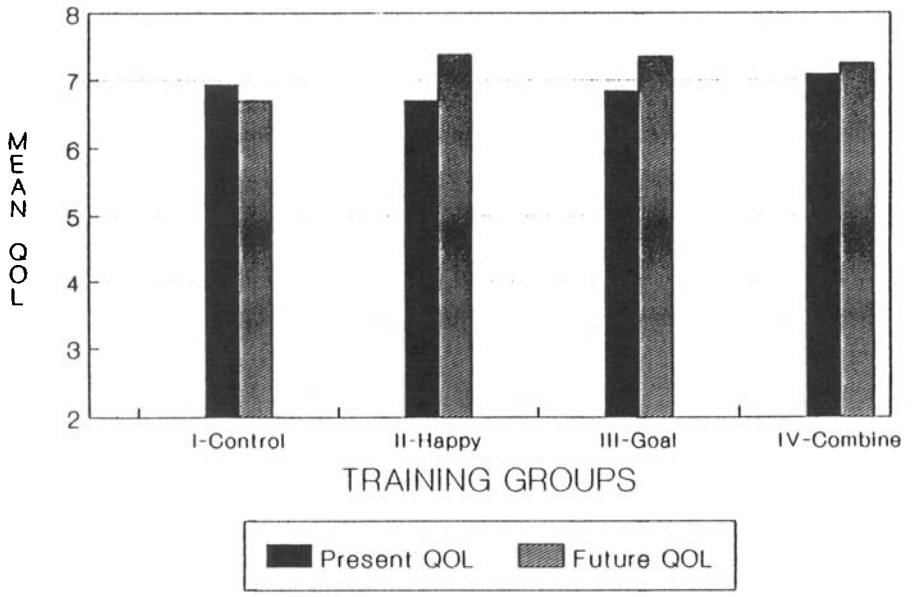
In the Worry Fence exercise, persons are asked to imagine their worries as goats with names upon their halters and that the goats are in a fence in a barnyard. Once a day, perhaps at 9 A.M., the person goes to the barn and tends to the worry goats by worrying about each one. Nothing else is done but worry while tending worry goats. At other times during the day, one does not worry, but says to one's self, "Worry, get back in the worry fence, I will tend to you later."

social readjustment (Holmes & Rahe, 1967), and one springing from the need to cope with numerous small daily hassles (Delongis et al., 1982).

Sessions were scheduled approximately 1 month apart with less than six persons per session in almost all cases. Persons were assigned randomly to one of the four treatment groups with a constraint that equal proportions of males and females be assigned to each group. The control group was interviewed and given the questionnaires only. The three experimental groups were given a brief training session following their interview and the collection of the questionnaire data and were asked to practice training exercises during the ensuing month. The first experimental group was given training in increasing happiness and positive activities. The second experimental group was given training in goal setting and in imagining achievement of goals. The third experimental group was given training that was a combination of the previous experimental procedures.

The happiness training scripts were based on Fordyce's 14 principles of happiness (1977), and on the experimental work of others such as Ed Diener (Diener, Sandvik, & Pavot, 1989) who have shown that positive affect is related to numerous, small, positive feelings rather than infrequent great joys. The goal imagery scripts were based on well-known principles of goal setting such as setting sub-goals and relied on imagery training such as that advocated by Arnold Lazarus (1982). Additional imagery exercises were created for the project, for example, The Worry Fence. See Table 2 for examples of concepts presented in the training sessions. See the Appendix for an example of one of the hand-outs that were to be used as exercises between training sessions.

FIGURE 1
Mean Increases in Self-Reported Present and Future QOL for Group I (control), Group II (happiness training), Group III (goal imagery and stress/time management) and Group IV (a combination of the procedures in Group II and Group III).



RESULTS AND DISCUSSION

The assignment of persons to groups was successful in that no significant differences between groups were obtained on any of the measures of QOL or on hope at session one.

By the time of session three, a significant difference between groups was obtained, $F\ (3, 107) = 3.47$, $p < .02$, with subsequent pairwise comparisons indicating that group four, the combination group, was superior to the control group on expected quality of life 5 years into the future (Figure 1).

Other measures of hope, although not yielding significant differences between groups, are yielding trends in the desired direction (e.g., expected success of goals, $F\ (3, 172) = 2.33$, $p < .08$). Noting that the data collected at the beginning of session three reflects the effects of training sessions one and two only, the effects of training on increasing self-perceived QOL are promising indeed.

Table 3 presents correlations of past, present, and future QOL measures with several other variables as measured in session one ($N = 239$). These descriptive data address competing theories of stress and are provocative from an intervention viewpoint. It is interesting to note that major life changes (measured both by a multi-item questionnaire (Holmes & Rahe, 1967), and by a single item interview question asking persons to list major changes in the last 5 years, are independent of self-reported QOL across the three time frames. On the other hand, "Hassles and Uplifts" (Delongis

TABLE 3
Correlations of QOL in Three Time Frames with Stress, Affect, and Hope (Session I Data)

	Uplifts	Hassles	LCU	− Life Changes	PA	NA	Expect +	Expect −	Hope
QOL past	.12	-.14	-.09	-.19	.23***	-.25***	.18**	-.21**	.29***
QOL present	.21**	-.28***	-.11	-.12	.35***	-.32***	.25***	-.30***	.34***
QOL in 5 years	.23**	-.33***	-.02	.08	.51***	-.30***	.28***	-.44***	.34***
AGE	-.13	-.15*	-.28***	-.37***	-.26***	-.17*	.08	.01	.20***
SEX	-.14	00	00	.09	.13*	-.05	.13*	.09	.12

QOL = Quality of Life
LCU = Life Change Units
PA = Positive Affect
NA = Negative Affect
Expect + = Positive Expectations
Expect − = Negative Expectations
Uplifts/Hassles = Things that have been Uplifts and/or Hassles Today

* = $p < .05$, ** = $p < .01$, *** = $p < .001$

et al., 1982) are significantly related to present QOL and even more to QOL expected in the next 5 years. This method difference supports the "Shoelace Theory of Stress" (that is it is the little daily things such as the shoelace that breaks when there is no time left that cause most stress) over the "Major Life Changes" theory of stress where stress is driven by the necessity for social readjustment to a large number of life changes. The lack of relationship between major life changes and self-reported QOL was unexpected. However, the Holmes and Rahe (1967) instrument was not designed for the older population and may not be a valid measure of stress for this age group. The present group of older persons may have outlived many of their negative life changes. This view is supported by the data presented in Table 3. Age is negatively related to major life changes for these persons over 50 years of age.

From a practical, intervention viewpoint the above finding is intriguing. One can train for uplifts and for hassle avoidance more easily than one can train for avoidance of major life changes. Since major life changes are less of a factor in QOL with the older persons than with the younger persons in the present sample, it may be that stress reduction, coping, and uplift/happiness training may be even more applicable to the older population than to the young and early middle-aged population.

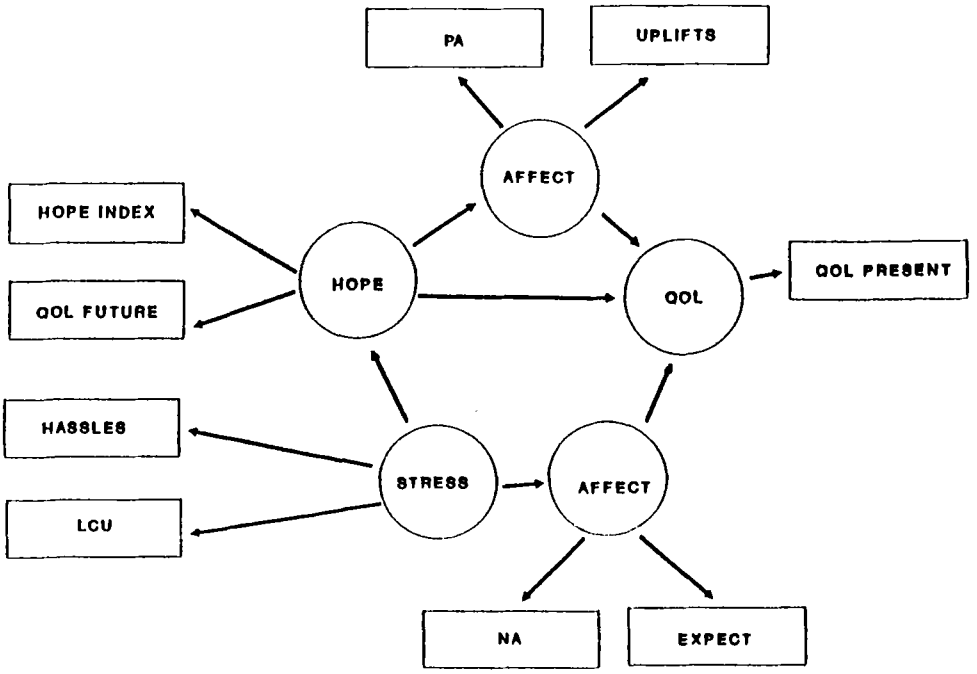
Measures of present affect, measures of expected affect, and measures of hope are significantly related to present and to future QOL self-reports. Thus, training in increasing happiness, for example, the Fordyce 14 Principles, training in imaging future goal attainment, along with training in hassle reduction and stress management, have the potential for increasing self-reported QOL. This positive bias toward the future may then lead to intentions which then lead to actions.

A final comment on Table 3 and the finding that age was negatively related to "Life Changes" for this group of persons over 50 years of age, and that age was positively related to scores on the Hope Index. While these results need further verification, they are supported in the literature. For example, Lehr (1967), at the Psychology Institute in Bonn, found great variation in attitudes toward the future in persons over 60 years of age and a peaking of positive feelings in her 70 to 75-year-old group. This further supports the view that age should not limit the effectiveness of training for positive affect and expectations in older persons.

The major purpose of the present research is to increase perceived QOL through training programs. The data indicate that this is being accomplished. The description of relationships of well-being measures across time frames has also been instructive. Finally, the data collected will allow testing of competitive models of QOL.

Using Lisrel 7, several models of QOL will be compared to determine which provides the best fit. This approach is more conservative than one based on modifications of a single model. At this stage in the longitudinal study, three models have been compared: one driven by hope and stress and the other by hope and one by activity and positive affect. Since activity theory and general folk wisdom stress the importance of remaining active, the construct of activity was assessed by one interview question asking persons to list the number of activities that they had engaged in during the past week and by another interview question asking persons to tell about the activities

FIGURE 2
A Theoretical Model of Causal Factors Involved in Perceptions of QOL.



in which they liked to engage. The initial activity model provided a notably poor fit in contrast to the first model.

Model One (Figure 2) indicates that QOL is directly influenced by hope, positive affect, and negative affect while stress influences negative affect and hope. Although the initial run of Model One does yield a significant Chi Square with the current sample size, it yielded a fit statistically (roughly) ten times better than the competing substantive activity model.

Upon completion of the project (N = 300), six competing models will run. A small number of modifications may then be considered if necessary for the most promising model. Models assessing training effects will have to wait for the analysis of the repeated measures longitudinal data. The research plan with respect to theoretical modeling is to construct several competing models and to determine which is superior. This approach is more conservative than repeated modifications of a single model—an approach likely to result in much error-fitting.

In summary, perceived QOL and positive expectations can be increased in the older population. Such increased positive feelings and cognition are intrinsically prized. Such increases are a basis for future intentions, future actions, and a future with increased possibilities of rewards. The data indicate that persons around retirement age do benefit from training aimed at increasing hope and perceptions of future QOL.

NOTES

This project was supported by a grant from the American Association of Retired Persons Andrus Foundation.

I wish to thank the following persons for their assistance in interviewing and technical support: Robin Butler, Virginia Greg, Deborah Miller, Christie Partlo, Lovinia Plimpton, Nanette Romine, Jaron Shook, and Kathy Stubbs.

Date of acceptance for publication: August, 1991. Address for correspondence: Sara Staats, The Ohio State University, University Drive, Newark, OH 43055-1797.

REFERENCES

Ajzen, I., & Fishbein, M. (1977). Attitude, behavior, relations: a theoretical analysis and review of empirical research. *Psychological Bulletin, 84*, 888–819.

Andrews, F.M., & Withey, S.B. (1976). *Social indicators of well-being: America's perception of life quality*. New York: Plenum.

Beck, A.T. (1967). *Depression: clinical, experimental, and theoretical aspects*. New York: Harper & Row.

Bradburn, N.M. (1969). *The structure of psychological well-being*. Chicago: Aldine.

Campbell, A., Converse, P.E., & Rodgers, W.L. (1976). *The quality of American life*. New York: Russell Sage Foundation.

Diener, E., Sandvik, E., & Pavot, W. (1989). Happiness is the frequency, not intensity of positive versus negative affect. In Strack, F., Argyle, M., & Schwarz, N. (Eds.), *The social psychology of subjective well-being*. New York: Pergamon.

Delongis, A., Coyne, J.C., Dakof, G., Folkmann, S., & Lazarus, R.S. (1982). Relationship of daily hassles, uplifts, and major life events to health status. *Health Psychology, 1*, 119–136.

Feather, N. (1982). *Expectations and actions: expectancy value models in psychology*. Hillsdale, NJ: LEA.

Fordyce, M.W. (1977). Development of a program to increase personal happiness. *Journal of Counseling Psychology, 24*, 511–521.

Hill, R.D., Gallager, D., Thompson, L.W., & Ishida, T. (1988). Hopelessness as a measure of suicidal intent in the depressed elderly. *Psychology and Aging, 3*, 515–532.

Holmes, T.H., & Rahe, R.H., (1967). The social readjustment rating scale. *Journal of Psychosomatic Research, 11*, 213–218.

Janis, I. (1980). Personality differences in decision making under stress. In Blankenstein, K., Pliner, P., & Polivy, J. (Eds.), *Assessment and modifications of emotional behavior*. New York: Plenum.

Lazarus, A. (1982). *Personal enrichment through imagery*. New York: BMA Audio Cassettes.

Lehr, U. (1967). Attitudes towards the future in old age. *Human Development, 10*, 230–238.

McGrath, J.E., & Kelly, J.R. (1986). *Time and human interaction*. New York: Guilford.

Miller, G.A., Galanter, E., & Pribram, K. (1960). *Plans and the structure of behavior*. New York: Hold, Rinehart, & Winston.

Staats, S.R. (1989). Hope: a comparison of two self-report measures for adults. *Journal of Personality Assessment, 53*, 366–375.

Taylor, S.E., & Brown, J. (1988). Illusions and well-being: a social psychological perspective on mental health. *Psychological Bulletin, 103*, 193–210.

Warr, P., Barter, J., & Brownbridge, G. (1983). On the independence of positive and negative affect. *Journal of Personality and Social Psychology, 52*, 644–651.

Watson, D., Clark, L.A., & Tellegen, A. (1988). Development and validation of a brief measure of positive and negative affect. *Journal of Personality and Social Psychology, 51*, 1063–1070.

APPENDIX

INCREASING SOCIALIZATION

POSITIVE ACTIVITIES II

HAPPINESS IS INCREASED BY GOOD RELATIONSHIPS WITH OTHER PEOPLE
RELATIONSHIPS WITH OTHERS DECREASE AS WE AGE: WE LOSE FRIENDS
WE NEED TO WORK ON INCREASING AND IMPROVING RELATIONSHIPS AND MAKING NEW FRIENDS

Things I can do	OBSTACLES
1. _____	_____
2. _____	_____
3. _____	
4. _____	POSITIVE FACTORS
5. _____	_____
6. _____	_____

Below you will find an area in which you can record your progress in increasing relationships. We would like you to try and spend a few minutes each day thinking about this. For each day please put a check (✓) mark for each time you think about increasing relationships with others. Put a tally (1) mark for each time you do something that increases your social activity or relationships with others.

		WEEKS 1	2	3	4
	SUN.	_____	_____	_____	_____
		_____	_____	_____	_____
		_____	_____	_____	_____
DAYS	MON.	_____	_____	_____	_____
		_____	_____	_____	_____
OF		_____	_____	_____	_____
WEEK	TUE.	_____	_____	_____	_____
		_____	_____	_____	_____
		_____	_____	_____	_____
	WED.	_____	_____	_____	_____
		_____	_____	_____	_____
		_____	_____	_____	_____
	THU.	_____	_____	_____	_____
		_____	_____	_____	_____
		_____	_____	_____	_____
	FRI.	_____	_____	_____	_____
		_____	_____	_____	_____
		_____	_____	_____	_____
	SAT.	_____	_____	_____	_____
		_____	_____	_____	_____

Please return next month - See you then.