

DETERMINANTS OF PERCEIVED LIFE SATISFACTION IN THE INSTITUTIONALIZED ELDERLY

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An understanding of the variables that affect life satisfaction of the institutionalized elderly can assist health professionals to assess individual needs, and to identify and implement appropriate interventions to meet these needs. The question of which variables best predict high life satisfaction among the elderly has been a focus of much investigation in gerontological research. Studies have measured overall satisfaction levels for the institutionalized and non-institutionalized elderly, and have determined internal and external variables which influence life satisfaction. There is, however, a lack of studies that examine the relative contribution of predictor variables to the improved life satisfaction of the institutionalized elderly.

Literature Review

Life satisfaction has been investigated under indices of morale, happiness, and adjustment (Tesch, Whitbourne, & Nehrke, 1981). Two major approaches have been used to study the subject: an investigation of the overt behaviours of the individual, such as range of activities and social participation; and the person's subjective evaluation of his present and past life (Neugarten, Havighurst, & Tobin, 1961). Three general areas are relevant to the life satisfaction of the institutionalized elderly: the characteristics of the elderly person, the relocation process, and the characteristics of the institutional environment. Many researchers believe that the personal characteristics of the elderly person who relocates to an institution are the primary factors contributing to low levels of life satisfaction. Fawcett, Stonner, and Zeplin (1980) found that the life satisfaction scores of 56 institutionalized elderly women related significantly to a belief in personal influence, and that they related inversely to perceived institutional restraint. Reid, Haas, and Hawkings (1977) found that elderly persons, whether institutionalized or non-institutionalized, who had a low sense of control had a more negative self image and reported themselves to be less happy and content than did those with a high sense of control. Felton and Kahana (1974) found that an external locus of control was significantly related to successful adjustment among institutionalized elderly. Chang (1978) found, however, that residents had higher morale when they perceived they had control over daily activities, regardless of

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whether or not they had external or internal locus of control. Noelker and Harel (1978) identified the primary predictors of personal well-being for residents in a long term facility as being subjective factors relating to resident perceptions of the facility and staff.

The relationship of demographic characteristics to life satisfaction has also been investigated. For example, Edwards and Klemmack (1973) found that the best predictors of life satisfaction in the age group 45 years and over were socio-economic status, perceived health status, and informal participation with nonkinsmen. Perceived health status appears to be a more important determinant of life satisfaction than actual health status (Medley, 1976).

Some researchers consider the process of relocating from one's home to an institution to be the primary contributor to the decline noted in the institutionalized elderly (Blenker, 1967; Miller & Lieberman, 1965). Blenkner (1967) noted a markedly increased mortality rate during the first year after admission to an institution. Miller and Lieberman (1965) noted that negative effects are reduced when the elderly are prepared for a move from home to an institution. Coffman (1983) suggests that relocation is neither inherently beneficial nor inherently harmful to survival among the institutionalized elderly. Rather, he concludes that most of the relocations involving significant changes in mortality rates have involved major alterations in caretaking and support systems, and hence do not indicate effect of relocation per se on survival.

The impact of the institutional environment on life satisfaction is not fully understood. Kahana and Harel (1971) suggested that negative behaviours, such as depression and physical decline, are precipitated by the process interaction between staff and residents. Schultz (1976) attributes the negative effects of institutionalization to loss of control.

Tesch et al. (1981) found a positive correlation between morale and the frequency of social interaction with persons who live outside the institution, but found no significance between morale and friendship within the institution. In contrast, Walsh and Kiracofe (1981) concluded that a shift in relationships from the family to friends may assist adjustment to institutional living. Smith and Bengtson (1979) describe positive effects of institutionalization on family relationships. They noted that alleviation of acute strains on the family may be related to the improved family relations described in 70 per cent of the 100 parent-child interviews they conducted. No analysis of the relationship between improved relations and the life satisfaction of the institutionalized elderly was made.

From among the many factors that appear to influence perceived life satisfaction of the institutionalized elderly, we focused, in this

study, on characteristics of the individual and the institutional environment.

We sought to ascertain the relationship between the perceived life satisfaction levels of the institutionalized elderly and perceived health status, as well as selected demographic and psycho-social variables.

Method

The respondents

Subjects selected through the use of tables of random numbers met the following eligibility criteria: 65 years of age and over; able to read, understand and write English; institutionalized for more than one year; semi- to fully-ambulatory; aware of time, place, and person; and able to give informed consent for participation in the study. Group I contained 26 women and 2 men, (mean age 78 years and mean period of institutionalization 3 years), who resided in nursing home care units where professional nursing care and medical attention was provided as needed. Group II contained 18 women and 3 men, (mean age 75 years and mean period of institutionalization 3 years), who resided in domiciliary or personal care units where a nurse provided assistance with and supervision of daily living activities as needed. The majority of subjects were widowed (88%), and in the lower to middle socio-economic bracket (80%). Eighty per cent of the subjects reported having an average intensity of religious belief, and 14% reported high intensity. Fifty-one per cent of the subjects reported having a high school education or better. This unusually high education level for this segment of the general elderly population may be related to subjects responding in a socially desirable manner.

The setting

The study took place in a large, modern complex in a metropolitan area of atlantic Canada. It included independent apartment living and skilled nursing facilities that were geographically connected by spacious and attractive solariums and walk throughs. The physical environment of the facility reflected current concepts in the care of the institutionalized elderly: encouragement of the use of furnishings from the resident's home, use of bright contrasting colours, home-like dining areas, handrails in the hallways, hand supports on toilets and tubs, and wheelchair accessibility to all areas including the lounges, bar, and games room.

Measures

Data on perceived life satisfaction were obtained using Life Satisfaction Index Z (LSIZ) (Wood, Wylie, & Sheaffer, 1969); a modification of the Life Satisfaction Index A developed by Neugarten et al. (1961). It is a thirteen-item questionnaire that reflects the respondent's zest for living, congruence between desired and achieved life goals, positive self-concept, resolution and fortitude, and optimistic mood tone (Adams, 1969). Scores are determined by allotting two points for agreement with a positive item or for disagreement with a negative item. Uncertain responses are given one point. The potential score is 26. The LSIZ has a split-half reliability coefficient of .79 (Wood et al., 1969), and a validity correlation of .94 with the LSIA and .792 with the Philadelphia Geriatric Center Morale Scale (Lohmann, 1977). Both the LSIA and the LSIZ were developed for use with the elderly and each has a substantial amount of empirical support. (Neugarten et al., 1961).

The interview schedule "Situational Control Over Activities of Daily Living" (SCDA) (Chang, 1978) was used to measure subject perception of situational control. It consists of twenty-two items, reflecting eight categories of daily activities; (ambulating, dressing, eating, grooming, toileting, group participation, one-to-one inter-actions, or solitary activities) and an "other" category. The scoring results in an overall self-determined category, or other-determined category, and a total score. In the case of a tie, the overall scores are designated as self-determined (Chang, 1978). Inter-rater reliability has been reported at .98, and retest reliability at .96. Content validity has been determined by a panel of judges (Chang, 1978). The subjects were also asked to list their first, second, and third priorities in terms of activities of daily living outlined in the SCDA tool that they would most want to control.

We collected information on selected psycho-social characteristics: age; sex; marital status; years in an institution; education; income level; perceived intensity of religious belief; perceived health status; number and length of contacts (≥ 5 minutes) in two consecutive weekdays (Monday to Friday) with staff, volunteers, family and friends; and the weather. These variables, with the exception of weather, had been included in the studies reported in our literature review; weather, (as coded by interviewers), was added because we felt it might affect the resident's psychological state on the day of the interview. We also attempted to quantify contact time, by obtaining information on all contacts that lasted longer than five minutes, on two days. This meant that data were not collected on Monday, since staffing is usually reduced on week-ends.

Locus of control was not included as a variable in this study as it was not found to influence SCDA scores in Chang's study, and we were building on her method.

Perceived health status was elicited by asking the residents to rate their health as excellent, good, fair, poor, or very poor.

Procedures

Subject eligibility was decided by the researchers by means of review of patient kardexes, in consultation with the head nurse of the respective units. Using the inclusion criteria, 84 nursing care residents and 64 personal care residents were identified. Randomly selected subjects, who met the inclusion criteria, were approached individually, and were explained the purpose of the study. They were informed that they were being asked to volunteer for the study, and that if they should decide not to participate, or to withdraw from the study, this would in no way affect their care. Anonymity was ensured.

Proportional random sampling of this population secured 56 residents who were invited to participate in the study. Of these, less than five per cent refused to participate. The number of subjects was less than anticipated, primarily because potential subjects were unable to meet the inclusion criteria of awareness of time, place, and person, and were unable to give informed consent for participation in the study.

The interview schedules SCDA, LSIZ, and the questionnaire to collect selected psycho-social and demographic data were administered individually, in the subjects' rooms. All interviews were conducted using the same sequence of interview schedules, requiring approximately one hour to administer. (Using simulated client interviews, we had established decision rules for coding responses before data collection).

To determine the relative contribution of the predictor variables to the criterion variable of perceived life satisfaction scores, we computed linear, step-wise, and hierarchical multiple regressions using the Statistical Package for the Social sciences (SPSS) (Nie, Hall, Jenkins, Steinbrenner, & Bent, 1975). Data were analyzed for each group separately and for the groups together.

Results

The split-half reliability coefficient for LSIZ in the study sample was calculated to be .60 using SPSS. Subjects in Group I reported their self-assessed health status as follows: 2 excellent; 10 good; 9 fair; 5 poor; and 2 very poor. The mean LSIZ score was 13.5, with a range of 4-22. The majority of subjects were categorized overall as self-determined for activities of daily living.

Subjects in Group II reported their self-assessed health status as follows: 1 excellent; 7 good; 9 fair; 1 poor; and 3 very poor. The mean LSIZ score was 13.2, with a range of 2-21, and the

majority of subjects were categorized overall as self-determined for activities of daily living.

Multiple regression analysis on the combined data of Group I and Group II yielded an R^2 less than the mean R^2 of the groups computed separately. This may most likely be explained because the linear slopes of the two groups were too dissimilar, and therefore all subsequent data analysis was done separately for each group.

Predictor variables, which were statistically significant ($\alpha = 0.001$) in accounting for the variance in the criterion variable scores, were determined by initial step-wise and hierarchical multiple regression analyses. Subsequently, these selected predictor variables were entered into separate step-wise multiple regression analysis. (Tables 1 and 2).

The proportion of variance in LSIZ scores that was accounted for by each of the predictor variables is indicated by the R^2 change statistic. A comparison of total R^2 statistics in Tables 1 and 2 indicates that the select predictor variables accounted for 79% and 47% of the variance in the LSIZ scores of Groups I and II, respectively.

It is known that the relative magnitude of contribution of each predictor variable may, to some degree, be influenced by its order of entry into a multiple regression. Therefore, perceived health status and SCDA scores were entered first and secondly into separate hierarchical regressions. Results indicated that perceived health status accounted for 32-46% of the variance, and that SCDA scores accounted for 6-13% of the variance in Groups I and II, depending on the order of entry ($p < 0.001$).

The simple r statistic (see Tables 1 and 2) indicate correlation between each of the predictor variables and the LSIZ scores. There was a strong to moderately positive correlation between perceived health status and LSIZ scores for Groups I and II respectively ($r = .67$, $r = .53$, $p < 0.001$). SCDA scores were positively correlated to LSIZ scores ($r = .36$, $r = .26$, $p < 0.001$) for Groups I and II, respectively, as were contact times with family and friends ($r = .33$, $p < 0.001$), and weather ($r = .22$, $p < 0.001$) for Group II. There was no systematic relationship evident between LSIZ scores and either financial status, or priorities of daily living, or contact time with CNA's, for Group I; and financial status, or number of letters, or religious intensity of belief for Group II (Tables 1 and 2).

Respondents in Group I generally selected either dressing, ambulating, or eating as one of their first three priorities for the activities of daily living. Respondents in Group II generally selected either solitary activities, ambulating, or dressing as one of their first three priorities (Table 3). Forty-eight per cent of the subjects in Group II and 18 per cent in Group I chose solitary

Table 1

Summary of Stepwise Regression Analysis for Predictor Variables on Perceived Life Satisfaction for Group I

Variable	Beta	R ²	R ² Change	r	F
Health Status	.743	.455	.455	.674	20.842*
SCDA	.306	.517	.063	.362	12.853*
Financial Status	.419	.564	.047	.112	9.908*
Priority A.D.L. (2nd choice)	.478	.646	.083	.076	10.047*
Religion	.465	.736	.089	-.149	11.686*
Age	.266	.753	.017	.190	10.143*
Contact Time	.248	.782	.029	-.040	9.724*
C.N.A.					

*p.< 0.001 N=28 Constant=23.265

Table 2

Summary of Stepwise Regression Analysis for Predictor Variables on Perceived Life Satisfaction for Group II

Variable	Beta	R ²	R ² Change	r	F
Health Status	.549	.285	.285	.533	17.902*
Weather	.307	.342	.057	.215	11.424*
Contact Time Family/Friends (Phone Calls)	.107	.381	.040	.333	8.317*
SCDA	.346	.407	.026	.263	7.192*
Financial Status	.273	.435	.028	.041	6.313*
Letters	.248	.457	.022	.096	5.614*
Religion	.149	.474	.020	-.001	5.021*

*p.<0.001 N=221 Constant=30.724

Table 3

Ranking by Importance of Activities of Daily Living
by Group I and Group II

Activities	Group	First Importance		Second Importance		Third Importance		Total	
		N	%	N	%	N	%	N	%
Ambulating	I	10	(35.7)	5	(17.9)	4	(14.3)	19	(67.9)
	II	6	(28.6)	4	(19.9)	2	(9.5)	12	(57.1)
Dressing	I	4	(14.3)	10	(35.7)	6	(21.4)	20	(71.4)
	II	1	(4.8)	5	(32.8)	4	(19.0)	10	(47.6)
Eating	I	4	(14.3)	3	(10.7)	4	(14.3)	11	(39.3)
	II	2	(9.5)	1	(4.8)	3	(14.3)	6	(28.6)
Grooming	I	0	(0)	2	(7.1)	2	(7.1)	4	(14.3)
	II)	(0)	3	(14.3)	2	(9.5)	5	(23.8)
Toileting	I	2	(7.1)	3	(10.7)	3	(10.7)	8	(28.6)
	II	1	(4.8)	1	(4.8)	4	(19.0)	16	(28.6)
Group Participation	I	1	(3.6)	0	(0)	3	(10.7)	4	(14.3)
	II	0	(0)	1	(4.8)	0	(0)	1	(4.8)
Interaction (one-to-one)	I	5	(17.9)	1	(3.6)	2	(7.1)	8	(28.6)
	II	1	(4.8)	1	(4.8)	1	(4.8)	3	(14.3)
Solitary Activity (T.V., reading)	I	4	(17.9)	1	(3.6)	2	(7.1)	8	(18.6)
	II	10	(47.6)	2	(9.5)	1	(4.8)	13	(61.9)
Other	I	0	(0)	0	(0)	0	(0)	0	(0)
	II	0	(0)	0	(0)	0	(0)	0	(0)
No Response	I	2	(7.1)	3	(10.7)	3	(10.7)	8	(28.6)
	II	0	(0)	3	(14.3)	4	(19.0)	7	(33.3)
Total		49	100	49	100	49	100		

activities as their primary interest in daily living. Sixty-two per cent of the subjects in Group I and 29% of those in Group II selected solitary activities as one of their first three priorities of ADL; however, priorities of ADL was not indicated as a statistically significant predictor of LSIZ scores for either group.

Discussion and Recommendations

We found perceived health status to be the principal factor accounting for variance in perceived life satisfaction scores (Tables 1 and 2); a finding consistent with those of Edwards and Klemmack (1973) and of Medley (1976). Although most health problems associated with aging are chronic in nature, rather than acute, and generally can not be cured, only controlled, an elderly person's perception of these health problems may be altered by appropriate interventions.

SCDA scores were not found to be strong predictors of life satisfaction. This result differed from that of Chang (1979) who found that SCDA was a strong predictor of morale, using the revised Philadelphia geriatric Center morale scale. We found that the SCDA schedule had strong potential as an assessment tool for determining the elderly institutionalized person's perception of his control over his activities of daily living. Further, it was useful for identifying possibilities for activities of daily living that the elderly person may have previously been unaware of.

The amount of time in contact with registered nurses was too small to be included in the regression analyses. This is probably explained by the high numbers of administrative duties associated with the role of the nurse in the study setting. Data collected with respect to time in contact with care givers were affected by the accuracy of reports by the subjects, over a two-day period. Possibly future studies should include observers or participant observers who would collect quantitative and qualitative data that could be related to contact time.

The nursing staff working with subjects in Group II expressed concern about the amount of time this group spent in solitary activities. In the opinion of the nurses, the large proportion of solitary activity time contributed to social isolation, depression, and general unhappiness. Nonetheless, 62% of the respondents in this study considered solitary activities to be the most important aspect of their daily lives (see Table 3).

One limitation of this study concerned the small sample size that resulted from our inability to collapse the two groups, and from the difficulty we had in finding potential subjects who met all of the inclusion criteria. We suggest further qualitative study to examine the origins of the elderly individuals perceptions of their health status and life satisfaction in order to develop more insight in these areas. In addition, staffing policies and the roles and

functions of the registered nurse in homes for special care of the elderly should be examined in order to determine optimal use of staff.

REFERENCES

- Adams, D. (1969). Analysis of a life satisfaction index. **Journal of Gerontology**, 24, 470-474.
- Blenker, M. (1967). Environmental change and the aging individual. **The Gerontologist**, 7, 101-105.
- Chang, B. (1978). Generalized expectancy, situational perception and morale among institutionalized elderly. **Nursing Research**, 27, 316-324.
- Chang, B. (1979). Locus of control, trust, situational control and morale of the elderly. **International Journal of Nursing Studies**, 16, 169-181.
- Coffman, T.L. (1983). Toward an understanding of geriatric relocation. **The Gerontologist**, 23, 453-459. *the Gerontologist* 23
- Edwards, J.N., & Klemmack, D.L. (1973). Correlates of life satisfaction: re-examination. **Journal of Gerontology**, 28, 297-502.
- Fawcett, G., Stonner, D., & Zepelin, H. (1980). Locus of control, perceived constraint, and morale among institutionalized aged. **International Journal of Aging and Human Development**, 11, 13-23.
- Felton, B., & Kahana, E. (1974). Adjustment and situationally-bound locus of control among institutionalized aged. **Journal of Gerontology**, 29, 295-301.
- Kahana, E., & Harel, Z. (1971, October). Social psychological milieu in residential care facilities for the aged. Paper presented at the Annual Meeting of the Gerontological Society, Houston, Texas.
- Lohman, N. (1977). Correlations of life satisfaction, morale and adjustment measures. **Journal of Gerontology**, 32, 73-75.
- Medley, M.L. (1976). Satisfaction with life among persons sixty-five years of age and older: a causal model. **Journal of Gerontology**, 31, 448-455.

- Miller, D., & Lieberman, M. (1965). The relationship of affective state and adaptive capacity to reactions to stress. *Journal of Gerontology*, 20, 492-497.
- Neugarten, B.L., Havighurst, R.J., & Tobin, S.S. (1961). The measurement of life satisfaction. *Journal of Gerontology*, 16, 134-143.
- Nie, N., Hull, C., Jenkins, J., Steinbrenner, K., & Bent, D. (1975) *Statistical package for the social sciences*; 2nd ed. New York: McGraw-Hill.
- Noelker, L., & Harel, Z. (1978). Predictors of well-being and survival among institutionalized elderly. *The Gerontologist*, 18, 562-567.
- Reid, W., Haas, & Hawkins, D. (1977). Locus of desired control and positive self-concept of the elderly. *Journal of Gerontology*, 32, 441-450.
- Schultz, R. (1976). Effects of control and predictability on the physical and psychological well-being of the institutionalized aged. *Journal of Personality and Social Psychology*, 33, 563-573.
- Smith, K., & Bengtson, V. (1979). Positive consequences of institutionalization: Solidarity between elderly parents and their middle-aged children. *The Gerontologist*, 19, 438-446.
- Tesch, S., Whitbourne, S., & Nehrke, M. (1981). Friendship, social interaction and subjective well being of older men in an institutional setting. *International Journal of Aging and Human Development*, 13, 317-327.
- Walsh, J.A., & Kiracofe, N., (1981). Changes in significant other relationships and life satisfaction in the aged. *International Journal of Aging and Human Development*, 10, 273-281.
- Wood, V., Wylie, M., & Sheafer, B. (1969). An analysis of a short self-report measure of life satisfaction: Correlation with rater judgements. *Journal of Gerontology*, 14, 465-469.

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RÉSUMÉ

Déterminants de la satisfaction de vie perçue chez les personnes du troisième âge vivant en établissement

Il s'agit d'une étude à corrélations multiples de 49 personnes du troisième âge réalisée pour approfondir la relation entre la satisfaction de vie perçue et la santé perçue, la maîtrise de la situation ainsi que certaines variables psychosociales et démographiques choisies. La perception qu'a le sujet de sa santé est apparue comme l'indice de satisfaction de vie le plus fort. La maîtrise de la situation dans le cas des activités quotidiennes n'est pas apparue comme un indice fort, mais l'outil utilisé a permis d'aider les résidents à identifier des choix dont ils n'avaient pas pris conscience auparavant.