DAVID EFRATY, Ph.D. AND M. JOSEPH SIRGY, Ph.D.

THE EFFECTS OF QUALITY OF WORKING LIFE (QWL) ON EMPLOYEE BEHAVIORAL RESPONSES

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ABSTRACT. Quality of work life (QWL) was conceptualized in terms of need satisfaction stemming from an interaction of workers' needs (survival, social, ego, and selfactualization needs) and those organizational resources relevant for meeting them. It was hypothesized that need satisfaction (or QWL) is positively related to organizational identification, job satisfaction, job involvement, job effort, job performance; and negatively related to personal alienation. A survey study was conducted based on a sample of 219 service deliverers to the elderly in a large midwestern city. The results were consistent with the hypotheses. Managerial implications were also discussed.

THE EFFECTS OF QUALITY OF WORKING LIFE (QWL) ON EMPLOYEE BEHAVIORAL RESPONSES

The psychological contracts of individuals with their organizations seem to have changed in congruence with changes in employee's needs in recent years. As reported by Jackson and Mindell (1980), today's employees want more control over their environment and a chance to feel a sense of meaning in performing their jobs. Similarly, today's managers are less interested in direct control of their subordinates and are willing to work in an unstructured environment and develop personal relationships with their subordinates. That is, both workers and managers express a strong interest in higher-level need satisfaction. Self-improvement and quality of life are assuming increasing importance (Yankelovich, 1981).

In spite of growth in efforts to study the quality of working life (QWL) (Champoux, 1981; Davis and Cherns, 1975; Hackman and Suttle, 1977; Kabanoff, 1980; Kahn, 1981; Lawler, 1982; Near, *et al.*, 1980; Quinn and Shephard, 1974; Quinn and Staines, 1979; Staines, 1980) there is no one acceptable description of what quality of work life (QWL) really means. In general, management scholars think of

QWL as having two characteristics, namely a concern for the well-being of the worker and organizational effectiveness (Beckman and Neider, 1987). This orientation to QWL is quite congruent with the concept of integration of the individual and the organization (Argyris, 1964) — a process by which the goals of the individual and the goals of the organization become increasingly congruent and reaching a state of oneness.

The present study defines QWL from an interactional psychology perspective, explaining human experiences in terms of interaction between the characteristics of the person and properties of the environment (French, Caplan and Harrison 1982; French, Rogers and Cobb, 1974; Lewin, 1951; Murray, 1938; Terborg, 1981). People aspire to satisfy their needs, and their affective experiences are determined by the extent to which the environment responds favorably to their needs — the greater the person-environment congruence the more positive the affective experiences. The more positive the affective experiences, the more motivated people act in ways that result in a good fit with the environment (Naylor *et al.*, 1980; Raynor, 1982).

Within this frame of reference, QWL is conceptualized in this study in terms of need satisfaction. Workers bring a cluster of their needs to the organization and are likely to enjoy a sense of QWL to the extent that these needs are satisfied through their membership in the organization. The greater the need satisfaction by the organization, the greater the QWL. In other words, QWL is conceptualized as stemming from an interaction of personal and organizational factors. Its personal roots are found primarily in the psychological needs of the workers. Its organizational roots are located in the organizational mission, supervisory style, pay, et cetera — those organizational resources and conditions relevant to meeting personal needs.

Four groupings of needs are of concern in this research.

- (1) Survival needs: These refer primarily to needs for (a) security and (b) economic resources (pa₃).
- (2) Social needs: These include needs for (a) interpersonal interaction and friendship, through which the person gives and receives affection and warmth, and (b) membership acceptance and involvement in a significant social group.

- (3) Ego needs: These include needs for (a) self-esteem that is recognition and regard for one's personal worth, for the value of the work he or she does, etc., and (b) autonomy — that is, the opportunity for the exercise of independent thought and judgment and for making creative contributions to one's work.
- (4) Self-actualization needs: These refer to one's search of selffulfillment, growth, and the utilization of one's higher abilities.

These needs are structured hierarchically as postulated by Maslow (1954) and mostly accepted (with some variations) by most developmental theorists (e.g., Erikson, 1963; Kohlberg, 1969; Loevinger, 1976). That is, the lower needs have a higher prepotency than higherorder needs and the individual is motivated to satisfy them first and grow through a progression of satisfaction of needs that are structured hierarchically. The four groupings of needs presented, however, deviate from Maslow's in two regards. First, physiological needs (e.g., food, air) while basic for the person are not considered in this research in line with their relatively high degree of fulfillment in western society. Second, Porter's (1961) addition of a distinct "autonomy" need is incorporated in the present classification and treated as one of the ego needs. The conceptualization of QWL as hierarchical need satisfaction is consistent with a recent theory of quality of life (QWL) applied to society at large (Sirgy, 1986).

The main assumption of this study is that the individuals' needsatisfaction in the organization (or QWL) affects a variety of behavioral responses (organizational identification, job satisfaction, job involvement, job effort and performance, and personal alienation), and thus have significant managerial implications. We will discuss the effects of need satisfaction (or QWL) on these behavioral responses next.

Need Satisfaction (QWL) and Organizational Identification

The concept of organizational identification (OI) has been defined in different ways in various studies. For example, OI has been traditionally conceptualized as loyalty and a dominant career-orientation toward the employing organization, compatibility of employee and organizational goals, and reference of self to organizational membership (Brown, 1969, Patchen, 1970). The effect of OI have been studied in relation to variables such as motivation (Blau and Scott, 1962; Etzioni, 1975; Galbraith, 1978), job satisfaction (Likert, 1967; McGregor, 1967), individual decision-making (March and Simon, 1958; Simon, 1976), job performance (Kaufman, 1960) and creativity (Rotondi, 1975).

But then the question arises concerning the determinants of OI. Several theorists (Argyris, 1964; March and Simon, 1958; McGregor 1967; Simon, 1957; Tolman 1943) have argued that OI is an outcome state of a process by which the goals of the individual and the goals of the organization become increasingly integrated and congruent. That is, self-identification with an organization may be reached when the individual senses fulfillment of his/her needs in the organization. In this context, the individual invests his/her ego in it, and attributes importance to the organizational mission and practices in his/her selfconcept. Supporting this conceptualization of the dynamics of OI are the research studies of Hall *et al.*, (1970) and Rotondi (1976) who account for OI in terms of need satisfaction.

Within this frame of reference, the basic hypothesis of this research is that the more one's needs are met via membership in the organization, the greater will be his or her identification with the organization. That is, the presence or absence in the organization of those qualities, conditions, and opportunities through which one can meet survival, social, ego, and self-actualization needs is seen as a major determinant of the individual's OI; conversely, the larger the discrepancy between one's needs and the resources available in the organization for meeting those needs, the lower will be his or her identification with the organization (*Hypothesis 1*).

Need Satisfaction (QWL) and Job Satisfaction

Job satisfaction refers to one's affective appraisal of various job dimensions such as the work itself, supervision, pay, promotion policies and co-workers. It is argued here that one's experience of job satisfaction may be accounted for in terms of one's experience of needs satisfaction in the organization. In line with dissonance theory (Festinger, 1957) it is argued here that a person who gratifies his/her needs in his/her employing organization is likely to rely upon "softer" criteria in his/her affective assessment of various of job dimensions, a fanning out of positive affect associated with those elements which nourish these needs. A "softer" assessment might reduce potential dissonance between his/her experience of need satisfaction and his/her actual experience on the job. Thus, the presence or absence in the organization of those qualities, conditions, and opportunities through which one can meet survival, social, ego, and self-actualization needs is seen as a major determinant of the individual's experience of job satisfaction; conversely, the larger the discrepancy between one's needs and the resources available in the organization for meeting those needs, the lower will be his or her experience of job satisfaction (*Hypothesis 2*).

Need Satisfaction (QWL) and Job Involvement

People differ in the extent to which they are ego-involved in their jobs. While for some work is simply the means of earning a living, others are deeply involved in their tasks and take special pride in their work. A study by Morse and Weiss (1955) of the work among a national sample of employed men indicated that "for most men, having a job serves other functions than simply the earning of a living. In fact, even if they had enough money to support themselves, they would still want to work. Working gives them a feeling of being tied into the larger society, of having something to do, of having purpose in life" (Morse and Weiss, 1955, p. 191). Job involvement, one's ego involvement in the work itself, has been widely studied by researchers such as Lodahl and Kejner (1965), Schwyhart and Smith (1972) and reviewed by Rabinowitz and Hall (1977).

In terms of dissonance theory (Festinger, 1957), it could be argued that lack of involvement in the work would create cognitive dissonance or be incongruent with the self-concept of an individual whose needs are met by the organizational resources. This could be especially the case with people who progressed to satisfy high-level needs (Herzberg, 1959). And since, people strive to reduce cognitive dissonance (or maintain cognitive consonance) they are expected to maintain a high level of job involvement given high need satisfaction, and vice versa. Hence, it is hypothesized that job involvement is positively related to need satisfaction (*Hypothesis 3*).

36 DAVID EFRATY AND M. JOSEPH SIRGY

Need Satisfaction (QWL) and Effort and Performance Effectiveness

While variations in attaining performance objectives may take place even in the absence of personal barriers (e.g., lack of ability or knowledge) or environmental barriers (e.g., lack of cooperation from others), the role of motivation is also important, and it is here that need-satisfaction is apt to have effects. In accordance with the interactionist perspective of human behavior, it is argued here that behavioral variables such as investment of *effort* in doing the job as well as *performance effectiveness* are determined, at least in part, by the degree of congruence between the needs of the individual and the organizational resources available for meeting them.

In terms of dissonance theory (Festinger, 1957) it is argued that the more the workers gratify their needs via their membership in the employing organization, the more they may feel obliged to the organization to invest effort in doing the job and be perceived effective workers. A positive experience of need satisfaction at work which is not coupled by investment of effort and a favorable performance evaluation may be experienced as an unpleasant state (dissonance) which in turn would increase the individual motivation to work. Two-factor theory (Herzberg, 1959) may account for the investment of effort and performance effectiveness in terms of person-organization fit at work. In accordance with this theory, the expression of high-order needs at work is the primary source of motivation to work. Thus, those who enjoy higher personality-organization (P-O) fit at work may be argued to be individuals whose higher-level needs have been met by organizational resources. This experience is intrinstically rewarding, motivating the individual to excel in doing the job. Conversely, it could be argued that those who have not grown as much through a progression of satisfaction of the hierarchy of needs, may experience P-O incongruence. Their motivation to excel in terms of investment of effort and performance effectiveness may correspond to their experience. Hence, it is hypothesized that the individual's level of need satisfaction is positively related to his/her investment of effort in doing the job (Hypothesis 4) and to his/her performance effectiveness as perceived by his/her superiors (Hypothesis 5).

Need Satisfaction (QWL) and Personal Alienation

The various aspects of alienation are discussed in the psychology literature (Marcuse, 1941; Bennis and Slater, 1964; Horney, 1949; Seeman, 1959; Dean, 1961). These include feelings of normlessness, isolation, and powerlessness. Normlessness refers to a sense of purposelessness and conflicts of norms encountered by those who pursue objectives and goals which are not congruent with their identities and appreciative systems (Horney, 1949). Isolation refers to a sense of loneliness. This is the experience of individuals who have detached themselves from significant relationships in permanent groups that provide them with ready-made values from which they derive identity (Bennis and Slater, 1964). Powerlessness refers to a sense of helplessness and feeling of not being able to change the present or the future (Marcuse, 1941). The assumption underlying this research is that satisfaction and growth through a progression of the need hierarchy is associated with assertiveness and self-expression which are desired and needed for healthy development (Goldstein 1940; Maslow, 1954; Herzberg, 1959; Roger, 1951). Individuals who are given such opportunities in their organizations are likely to enjoy a sense of integration of experience. This is because via their organizational membership they pursue to satisfy low- and high-level needs. On the other hand, those who are deprived of such opportunities for self-expression are likely to experience a sense of incongruence between their needs and the organizational resources provided for meeting such needs. Their work experience is not likely to be as meaningful. They are likely to experience helplessness, powerless, and normlessness. Hence, it is hypothesized that alienation is negatively related to need satisfaction (Hypothesis 6).

METHOD

Sampling

Subjects (N = 219) were selected randomly from personnel lists of the largest eight gerontological organizations in a large city in the Midwest.

Three of these organizations provide services to the aged in nursing homes while the other five organizations render services to the aged in the community.¹

The subjects were introduced to the study via a personal letter from the principal investigator. The latter described the objectives of the study as aiming to learn how people, working with the aged, feel about their work and their organizations. With the exception of 10 night shift service deliverers in one nursing home, all initially selected for the sample consented to take part in the study. All subjects were seen in their respective organizations and were given a self-administered questionnaire consisting of the research instruments.

Research Instruments

The Need Satisfaction Measure: A modified version of the Need Satisfaction Questionnaire (Porter, 1961) was used for assessing the (1) level of individual needs which are pursued on the job, (2) the level of organizational resources relevant to those needs which are perceived or experienced by the individual, and (3) the congruence between the person's needs and organizational resources — with greater congruence reflecting more organizational opportunities for need fulfillment or need satisfaction.

Four need categories including seven needs based initially on Maslow's hierarchy (Maslow, 1954) were covered in this instrument:

- (1) Survival needs:
 - (a) Security needs, and
 - (b) Pay
- (2) Social needs:
 - (a) Needs for interpersonal interactions and friendships; and
 - (b) Needs for membership and being-in-the-know in a significant social group.
- (3) Ego needs:
 - (a) Needs for self-esteem; and
 - (b) Needs for autonomy
- (4) Self-actualization needs

A typical item of the questionnaire reads as follows: The feeling of security in my position:

- (a) How much is there now? min. 1 2 3 4 5 6 7 max.
- (b) How much should there be? min. 1 2 3 4 5 6 7 max.

The rating of the first of these two questions yielded a measure of perceived organizational resources, while rating of the second question yielded a measure of perceived need level. The possible scores of organizational resources and needs range from one to seven for the security need, the need for pay, and the need for being-in-the-know — all of which were represented by one item. The need for interpersonal interactions and friendships was represented by two items; self-esteem and self-actualization were represented by four items. Need satisfaction (an index of congruence between organizational resources and personal needs) was derived by taking the absolute difference between "is" (organizational resources) and "should" (need) scores. The nomological validity of this scale is evident by its use in other research (e.g., Hall *et al.*, 1971). Unpublished temporal reliability of this scale was reported 0.8 in private communication with Professor Porter.

The Organizational Identification Measure: While early OI studies have conceptualized OI as loyalty and a dominant career orientation to the organization as a reference group (Gouldner, 1957), recent empirical studies tended to conceptualize OI as a composite of several aspects of involvement such as attraction to the organization, compatibility of individual and organizational goals, reference of self to organizational membership and loyalty (Brown, 1969). In line with this approach, OI was measured using a 12-item index patterned after Brown (1969). Nomological validity of this measure is evident by the studies of Patchen (1970) and Rotondi (1976). Sample items from this measure include:

- (1) When I hear about someone criticizing the name (name of agency) I feel as if I were personally criticized.
- (2) I feel a sense of pride working for (name of agency).

40 DAVID EFRATY AND M. JOSEPH SIRGY

(3) Personally, I share the goals (name of agency) and I value its mission.

The subjects were requested to rate the extent to which each item is applicable to them by using a scale ranging from one (not at all true) to seven (completely true). Thus, higher scores indicate greater OI. Cronbach reliability coefficient of the OI scale in the present study was found to be .7591 (.7898 standardized).

The Job Satisfaction Measure: To measure job satisfaction the Job Descriptive Index (JDI) (Smith et al., 1969) was employed. It measures satisfaction with five areas of one's job namely satisfaction with work, pay, promotion policies, supervision, and co-workers. For each area, there was a list of adjectives or short phrases and each respondent was instructed to indicate whether or not each word or phrase applies to a particular facet of his/her job by checking "Yes," "No," or "?". Indicating "Yes" to a positive item or "No" to a negative item credits the respondent with three points, while indicating "?" credits the respondent with one point. Thus, higher scores represent greater satisfaction. The JDI has consistently been shown to be highly correlated with variables such as job satisfaction dimensions of life satisfaction (Iris and Barret, 1972) and positive leader reward behaviors (Keller and Szilagyi, 1976). With respect to reliability, Smith et al. (1969) reported an average corrected reliability coefficient for the five scales of 0.79 for split-half estimates of internal consistency. Higher internal consistency reliabilities were reported for each of the scales: Work (0.84), pay (0.80), promotion (0.86), supervision (0.87) and co-workers (0.88). The Cronbach reliability coefficient of the JDI in the present study was found to be 0.782 (0.784 standardized).

The Job Involvement Measure: Job involvement or the extent to which the person is ego-involved in his/her job was measured by 12 items adapted from an index by Lodahl and Kejner (1965). The responses to each item was measured on a 7-point scale ranging from one (not at all true) to seven (completely true) with higher scores indicating greater ego-involvement in the work. Subjects were asked to rate the extent to which each of these items is applicable to them. Nomological validity of this measure is evident in the literature (Gould and Werbal 1983; Rabinowitz and Hall, 1977; Schwyhart and Smith, 1972). The Cronbach reliability coefficient in the present study was found to be 0.6108 (0.6336 standardized).

The Job Effort Measure: Effort scales are relatively new in the organizational psychology literature; hence we developed our own measure. Subjects were asked to rate individually the extent to which each of three items is applicable to them using a scale ranging from one (not at all true) to seven (completely true). The items were:

- (1) While at work, I do much more than I am expected to do.
- (2) I put as little effort as possible into doing my job (reversed scoring).
- (3) I do my work to the very best of my ability.

The Cronbach reliability coefficient in the present study was 0.2868 (0.3783 standardized), which is considered low. This may be due to the low number of items used to measure job effort.

The Performance Effectiveness Measure: In this study we assumed that the subjects' (employees') superiors do have some global general impression of their workers. This is why an overall effectiveness rating scale similar to the one used by Richard and Neel (1976) was developed and given to the directors of the participating organizations or their representatives requesting them to make a global assessment of work performance for each of the research subjects from their organizations. In making such an assessment, subjects were instructed to consider the various dimensions of their job - "the amount of effort they (the service deliverer) devote to their work, speed and efficiency in getting things done, kindness and consideration for clients, skill, reliability, readiness to tackle unusual problems, ability to follow through without supervision and the like". Furthermore, the instructions encouraged the rater in case of insufficient information about a subject to feel free to seek the counsel of a supervisor who follows a particular person's work or ask that supervisor to make a rating. Relying on the assumption that most of the subjects function at, at least, a "decent" level of performance, the performance effectiveness scale was designed to be in an

42 DAVID EFRATY AND M. JOSEPH SIRGY

attempt to differentiate maximally among the subjects. The scale involved the following categories:

- 1. Poor: currently is not meeting our minimal standards for this job.
- 2. Fair: below average performance, needs close supervision.
- 3. Average: adequate performance with general supervision.
- 4. Good: Solid, dependable, above average worker.
- 5. Very Good: does more than his/her share; among top 25 percent.
- 6. Excellent: certainly among the top 10 percent in this job.
- 7. Outstanding: one of the top two or three people I know for this job.

The Personal Alienation Measure: Dean's Alienation Scale (Dean, 1961) was used to measure the subjects' experience of alienation. The scale consists of 24 items. Nine items measured powerlessness. A sample item of powerlessness is: "There is little or nothing I can do toward preventing a major shooting war". Nine items measured normlessness. A sample item of normlessness is: "Everything is relative, and there are not definite rules to live by". Six items measured social isolation. A sample item of social isolation is: "Sometimes I feel all alone in the world". Items of all these subscales were presented randomly to the subjects who were asked to rate, individually, their level of agreement by checking a five-point scale ranging from "strongly agree" to "strongly disagree". Higher numbers represented higher levels of alienation. Dean (1961) reported reliability coefficients (split-half) of 0.78 for the Powerlessness subscale, 0.73 for the Normlessness subscale, and 0.84 for the Social Isolation subscales. The correlation coefficients among the three subscales (N = 384) ranged from 0.41 to 0.90 suggesting that it is quite feasible to consider the subscales as belonging to the same general concept. The total alienation scale had a reliability of 0.78. The correlation coefficients between the various components of alienation and Adorno's "F" scale (for a college sample pretest of 73 respondents) were reported by Dean (1961) ranging from 0.23 between Social Isolation and Authoritarianism to 0.37 between

Powerlessness and Authoritarianism, suggesting that the scale measures something other than Authoritarianism. Further nomological validity of the scale was evidenced by the significant positive correlation between advancing age and alienation and significant negative correlations between the alienation scale and two other variables — rural back-ground and social status (Dean, 1961). The Chronbach Alpha reliability coefficient for the total Alienation scale was found to be 0.7031 (0.7001 standardized). The Alpha coefficients for the Alienation subscales were: 0.7782 (0.7783 standardized) for the Powerlessness subscale, 0.7948 (0.7963 standardized) for the Normlessness subscale, and 0.4069 (0.3785 standardized) for the Social Isolation subscale.

RESULTS AND DISCUSSION

The correlations between need satisfaction (QWL) and all the variables examined in this study are presented in Table I.

These correlations reveal that need satisfaction relates significantly to all of the behavioral responses examined in this research - job satisfaction, organizational identification, job involvement, job effort performance effectiveness, and personal alienation. These correlations indicate the more employees satisfy survival, social, ego, and self-

	NS	OI	Л	PA	JE	JS	PE	x	SD
NS								1.366	1.016
OĨ	-0.497***							5.247	0.948
JI	-0.264***	0.546***						5.248	0.716
-	-0.315***	-0.122**	0.022					3.117	0.507
JE	-0.091*	0.311***	0.409***	-0.113**				1.561	0.497
JS	-0.893***	0.391***	0.263***	-0.205***	0.183***			1.319	1.182
	-0.120**	0.202***		-0.099*	0.053	0.094*		4.592	1.208
Not	OI = OI $JI = Jo$ $PA = Pe$ $JE = Jo$ $JS = Jo$	eed Satisfacti ganizational b Involveme rsonal Alien b Effort b Satisfaction rformance E	Identificat nt ation	tion S * **	p = Mean $p = Stand$ $p < 0.10$ $p < 0.0$ $p < 0.0$ $p < 0.0$	ard Devi 5	atior	1	

TABLE I Correlation matrix

actualization needs in the organization, the more they will be identified with the organization, the more they will derive satisfaction from their/ his job, the more involved they will be in their/his job, the more they will exert effort on their job, and the more effective they would be perceived by their/his superiors, and the less personal alienation they will experience. These results are consistent with Hypotheses 1 thru 6.

This study underscored the relative importance of need satisfaction (or quality of working life) for a variety of management-related variables. The managerial and public policy implications of the study are clear. Managers as well as public policy makers should strive to enhance the quality of work life of employees. That means, that they should strive to provide organizational resources that would meet employee survival, social, ego, and self-actualization needs. Increasing the quality of work life of employees may have tangible and intangible benefits to the employing organizations in terms of job satisfaction and motivation, job involvement, organizational identification, job effort, and job performance. Increasing the quality of work life of employees provides additional benefits to society at large by decreasing personal alienation, and therefore enriching people's lives with positive experiences.

There are some limitations of this study that should be noted. The correlation between need satisfaction and job effort, although significant, is low (r = -0.09, p = 0.09). The low correlation may be due to low reliability of the measure (Chronbach Alpha = 0.2868 and 0.3785standardized). This measure was generated for the purpose of this study and therefore no data are available (beside this study) to further ascertain the reliability and validity of this measure. Future research may attempt to increase the number of items involved in the job effort scale and test its reliability and validity with other job effort measures. Similarly, the correlation between need satisfaction and performance effectiveness is low (r = -0.1219, p = 0.036). Although, the validity of performance effectiveness measure has been established by the Richard and Neel's (1976) study, we feel that the low correlation may be increased if the measure included *multiple* indicators of performance effectiveness. Also, the low correlation may have been due to the sociometric aspects of the scale, i.e. the measure was administered to the employees' supervisors, not the employee themselves as was done with the other measures (need satisfaction, job satisfaction, job involvement, job effort, and organizational identification). As shown in Table I, the correlations between performance effectiveness (nonself-report measure) and the self-report measures are lower than the correlations among the self-report measures. This might suggest that the self-report measures may share a great deal of method variance.

In view of the above, the validity of the need satisfaction measure (or quality of working life) should be further researched in relation to a variety of employee behavioral responses in a variety of organizational settings. Future research would profit greatly from replicating the study using more multiple measures and nonself-report measures.

NOTES

* The data for this study was collected under the auspices of the Benjamin Rose Institute, Cleveland, Ohio.

¹ Demographic characteristics of this group are described as followings:

- 1. Sex: The sample included 212 females and seven males.
- 2. Age: The age of the subjects ranged from 18 to 81 years yielding a mean age of 43 and a standard deviation of 1.4.
- 3. Seniority in the organization: This ranged from one to 37 years yielding a mean age 4.5 and a standard deviation of 4.7.
- 4. Seniority of serving the aged: This ranged from one to 42 years yielding a mean age of 8.2 and standard deviation of 7.9.
- 5. Occupation: Of the 219 persons in the sample, 115 engaged in paraprofessional work (one orderly; 55 nursing aides; and 59 home aides) and 104 engaged in professional work (six social service associates; 24 social workers; 54 registered nurses; and 20 licensed practical nurses).
- Site: Of the 219 persons in the sample, 110 worked in instutions (56 paraprofessionals and 54 professionals) and 109 worked in community agencies (59 paraprofessionals and 50 professionals).

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David Efraty, Ph.D.,	M. Joseph Sirgy, Ph.D.,
Department of Business Management and	Marketing Dept.,
Administrative Services	Virginia Polytechnic Institute,
University of Houston — Downtown	Blacksburg, Virginia 24061,
1 Main Street	U.S.A.
Houston, TX 77002	
USA	