AD 744697

Security Classification

DOCUMENT CONTROL DATA - R & D

Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified

1. ORIGINATING ACTIVITY (Corporate author) Industrial Relations Center University of Minnesota Minneapolis, Minnesota 55455	2a. REPORT SECURITY CLASSIFICATION Unclassified 2b. GROUP

3. REPORT TITLE

THE MODERATING EFFECT OF NEED TYPE ON THE PREDICTION OF OVERALL JOB SATISFACTION

4. DESCRIPTIVE NOTES (Type of report and inclusive dates)

Technical Report

5. AUTHOR(S) (First name, middle initial, last name)

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6. REPORT DATE	7a. TOTAL NO OF PAGES	7b. NO OF REFS
15 March 1972	16	22

8a. CONTRACT OR GRANT NO	9a. ORIGINATOR'S REPORT NUMBER(S)
N 00014-68-A-0141-0003 b. PROJECT NO. NR 151-323	8500
c. d.	9b. OTHER REPORT NO(S) (Any other numbers that may be assigned this report)

10. DISTRIBUTION STATEMENT

Approved for public release; distribution is unlimited

11. SUPPLEMENTARY NOTES	12. SPONSORING MILITARY ACTIVITY
	Personnel & Training Research Programs Office of Naval Research (code 458) Arlington, Virginia

13. ABSTRACT

Need-fulfillment theories of job satisfaction generally assume that there are significant individual differences in the outcomes people prefer (need) to obtain from their jobs. Moreover, these need-fulfillment theories hypothesize that the relationship between the outcomes received from the job and job satisfaction, is dependent upon these needs; that is, individuals are satisfied according to the degree to which their particular needs are met or "fulfilled" by the work environment. In the present study, need type is hypothesized to have a moderating effect on the relationship between the specific dimensions of job satisfaction and overall job satisfaction. More specifically, the hypothesis proposes that unique weighting patterns of the specific satisfaction components and different levels of predictive accuracy will be found for groups having differential need patterns. A questionnaire was employed which measured both the work-related needs and the corresponding degree of need satisfaction, as well as Overall Job Satisfaction, for a total sample of 548 managers. A hierarchical clustering procedure was used to obtain groups of managers with homogeneous need patterns, and 12 different need types emerged from this analysis. The hypothesized moderating effect of need type found support in this study. Specifically, need type was found to moderate the relative contributions of the specific satisfaction components in the prediction of overall satisfaction. Thus, differential multivariate weighting combinations of specific job satisfaction dimensions predictive of overall job satisfaction were found for each of the respective need types. In addition, the prediction level of overall satisfaction was found to be generally greater for the need types than for the total sample.

DD FORM 1473 (PAGE 1)

S/N 0101-807-6811

Security Classification

A-31409

Security Classification

14 KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
job satisfaction						
needs						
need fulfillment						
individual differences						
need patterns						
differential need patterns						
overall job satisfaction						
moderator variable						
need type						
reinforcers						
hierarchical grouping analysis						
multiple regression						
predictor patterns						
analysis of variance						

DD FORM 1 NOV 65 1473 (BACK)

Security Classification

The Moderating Effect of Need Type on the Prediction of Overall Job Satisfaction[1]

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The significance of individual differences in predicting and understanding various job satisfaction, work motivation and job outcome relationships, has been emphasized by numerous researchers (Betz, 1969; Weissenberg & Gruenfeld, 1968; Wernimont, Toren, & Kapell, 1970; Wild, 1969; Wofford, 1970). The rationale often associated with the prediction of job satisfaction in these studies draws from the need fulfillment model, which proposes that job satisfaction is a function of the degree to which needs are satisfied ("fulfilled") by the work environment. A central concept to the need fulfillment model concerns the notion of a reinforcer system. where such a system is determined and described by the various kinds and amounts of stimuli found in the work environment. According to such need theories, individuals with different sets of needs, even though in the same job or working under conditions of equivalent reinforcer systems, would not necessarily experience the same level of overall job satisfaction.

Although the earlier studies included in the emerging concern for individual differences, such as Schaffer's (1953) monograph on need satisfaction, pointed to the importance of individual differences in the consideration of job satisfaction, they largely ignored any consideration of identification and description of groups that were homogeneous with respect to such characteristics as reinforcer preferences (needs), expectancy level,

motivational type, degree of job fit, etc.

Over the past several years, there has been a substantial interest in the merits of subgrouping analysis and typal theories (McQuitty, 1957, 1961, 1966; Owens, 1968; Vale & Vale, 1969; Borgen & Weiss, 1971). A number of more recent studies have explicitly incorporated the typal approach in the analysis of the motivation and satisfaction constructs (e.g., Katzell, Barrett, & Parker, 1961; Dunnette, Campbell, & Hakel, 1967; Graen, Dawis, & Weiss, 1968; Carlson, 1969; Dell & Gunderson, 1969; Lardy, 1971).

One of the more recent formulations of the need fulfillment model is given in A Theory of Work Adjustment (Dawis, England, & Lofquist, 1964; Dawis, Lofquist, & Weiss, 1968). This theory rests upon the assumption that individuals vary in their work needs; that is, they vary in their perceptions of which aspects of work are important to them. More specifically, this theory hypothesizes that job satisfaction is a function of the correspondence between the needs of the individual and the reinforcer (i.e. need fulfillment) system of the job. As found in the earlier need fulfillment models, this theory places a primary emphasis on individual differences in needs, but leaves to empirical research the task of specifying the nature of the relationship between needs and reinforcer systems and indicating how this relationship is predictive of job satisfaction.

Following the development of the Work Adjustment Theory, a study by Graen, et al., (1968) incorporated a strategy which combined the logic of typological analysis with a consideration of individual differences in motivational variables. In addition to identifying and describing differential motivational types, the authors also used the need pattern as a moderator variable in the prediction of job satisfaction. The results did,

in fact, support the hypothesis that need type moderated the relationship between preference (need) for an outcome and satisfaction with that outcome.

In the present study, need type is hypothesized as moderating the relationship between a number of specific dimensions of job satisfaction and overall job satisfaction. More specifically, the hypothesis proposes that differential patterns of predictor weights for the components of satisfaction and different degrees of predictive accuracy will be found for groups with differential need patterns. This hypothesis therefore assumes that there exist differential need types, that is, groups of individuals with distinctive need patterns.

The basis for the hypothesis is that there is an interaction between individual differences in needs (i.e., preferences for reinforcers on the job) and individual differences in specific satisfaction (i.e., the degree to which these needs are satisfied). These variables (needs and specific satisfactions) have been found to correlate low (Dawis, et al., 1968), since the fulfillment of any need depends on the particular reinforcers available in the work situation. However, it is expected that satisfaction with a specific work aspect will contribute differentially to overall satisfaction as a function of the need level (importance) for the group.

The present study, then, represents a first step in describing the relationships between specific need types, satisfaction with specific aspects of work, and overall job satisfaction. The primary intent was to demonstrate that the pattern of individual needs moderates the relationship between the specific dimensions of job satisfaction and overall job satisfaction.

Method

The Triple Audit Opinion Survey (TAOS) was developed to measure the needs of an individual with reference to various aspects of his work and work environment. Need was defined as a preference for a specific reinforcer or reinforcer class (Dawis, et al., 1968), and was measured by asking an individual how important each aspect of work (i.e., each specific reinforcer) was to him. The TAOS also measured the level of satisfaction for each of the specific reinforcers.

In the first part of the TAOS, respondents rated the degree of satisfaction they felt with various aspects of their present job on 5-point scales. There were 112 Likert-type items which were scored on 27 specific satisfaction scales and a criterion scale of Overall Satisfaction. The second part of the questionnaire, measuring needs, consisted of 108 Likert-type items in which respondents were asked to rate the importance of the various aspects of work with respect to their conception of their ideal job. The items were scored on 27 scales corresponding to the same reinforcer dimensions used above. Again, the responses were made on 5-point scales.

The Ss were 570 managers from five different operating companies of the same retailing corporation. The Ss represented a wide variety of managerial levels, ranging from entry-level management positions through company presidents. Both parts of the TAOS were administered to the Ss in their work setting during working hours. The identity of each respondent was kept anonymous to encourage frankness.

The D^2 statistic (Cronbach & Gleser, 1953) was used as the index of similarity between pairs of individuals on the need scales, and was computed for the 570 individuals across the 27 need scales. Homogeneous

need-type groups were formed by cluster analyzing the similarity matrix using the Ward & Hook (1963) hierarchical grouping procedure.

After the need-type groups had been identified and the solution for the number of groups determined, scores on the 27 specific satisfaction scales were computed for each group. Linear multiple regression coefficients were then computed for each need-type group and for the total sample, with Overall Satisfaction as the criterion variable and the 27 specific satisfaction scales as the predictor variables. To determine whether need type had a moderating effect on the relationship between Overall Satisfaction and specific satisfaction scales, Fisher's test for the difference between R's was employed. In addition, the differential patterns of specific satisfaction scales for each need type and for the total sample were determined by identifying that subset of scales having significant beta weights.

Finally, demographic variables were examined and analyzed to further determine the nature and characteristics of each of the need types.

Results

The intercorrelations between all scales confirmed the pattern of low covariation between satisfaction and need items. For the total sample of 570 managers, correlation coefficients for 27 pairs of satisfaction and need scales referring to the same reinforcer dimension ranged from -.34 to .21, with a median of -.03. Coefficients for the 27 x 27 cross-correlation matrix ranged from -.38 to .21 with a median of .06.

The hierarchical grouping analysis of the 570 x 570 matrix resulted in a 12 cluster solution which included 548 of the initial 570 managers. The remaining 22 individuals were distributed over 8 additional groups of five members or less, and were not included in the determination of the solution. Of the 12 groups in the solution, five groups had N's of

sufficient size to warrant use in the regression analysis.

At this point, it might be helpful to mention that while a particular clustering method may result in the independence of the types, unless one is using a substantially large sample, many of the emerging subgroups are too small for stable inferences of the kind required by correlational forms of moderator analysis. Although it is possible to combine the groups in some specified arrangement in order to obtain larger group N's, the information lost in the combining process might well exceeed that associated with any gains from greater N sizes. Since the regression model assumes at least as many subjects as the number of variables, a decision was made such that the moderator analysis would include only groups having more subjects than the number of elements comprising an individual's need profile. Also, since sample size can be taken into account and appropriately adjusted for in tests of statistical significance, the decision to drop small clusters deemed a more meaningful strategy than that of combining. Landy (1971) reported encountering similar difficulties in his work involving the use of motivational type as a multivariate moderator of the relationship between job satisfaction and performance. Problems of this same nature were also encountered in a need-type study conducted by Graen, Dawis, and Weiss (1968). As Landy (1971) noted, the problems surrounding the trade off between subgroup size and the amount of information to be lost or gained will probably continue as long as models are employed that assume a multivariate-normal surface.

The significant predictors of Overall Satisfaction were determined for each group through the use of Decremental Stepwise Multiple Regression Analysis. Need type was found to moderate the relative contributions of the specific satisfaction scales in the prediction of Overall Satisfaction.

Table 1 shows the specific satisfaction scales and their beta weights which are combined multivariately to form unique predictor patterns for the different need types.

Insert Table 1 about here

In addition to the differences in the relative contributions of the specific satisfaction scales to the prediction of Overall Satisfaction, some evidence was found in support of the hypothesis that need type also moderated the level of prediction between Overall Satisfaction and the 7 specific satisfaction scales for each group. The resulting R's using 7 predictors for each group and for the total sample are shown in Table 2. The R's for the five groups ranged from .86 to .98 with all five

Insert Table 2 about here

differing significantly from zero. The R for the total sample was .84 and also significant. Fisher's Z transformation was employed to test the differences between the correlation coefficients obtained for each group and for the total sample. Significant multiple correlation differences were found for three of the five need-type groups. It should be noted, however, that although significant group-total sample correlation differences were found for need types C and D, they are based on N's that are small relative to the number of predictors.

A one-way analysis of variance on each of the demographic variables for the 12 groups showed no differences between the groups in age, sex, tenure on the job, tenure with the company, and time in the occupation. A chi-square test of independence between need type and company affiliation also failed to show any significant relationship.

Discussion

The results of the research reported here tend to support the hypothesis that need type can serve as an effective moderator of the relationship between the specific components of job satisfaction and an overall feeling of job satisfaction. It is important to note that need type functions as a multivariate moderator; thus an individual's pattern of needs is of primary importance. Need types may be seen to differ mainly in the way their needs are interrelated, and thus, need type may be conceptualized as needs organized in complex interaction.

The complexity of need pattern interaction and organization results from a multivariate combination, and although this technique provides a potentially rich source for study, it is subject to several cautions. Landy (1971) has made some critical observations regarding the ineffective practices and strategies followed in certain kinds of research -- such as, the tendency to identify a subgroup, examine the score of a series of single variables for the individuals in this subgroup, and act on the assumption that everyone in the subgroup has the same "qualities" of traits represented by these single variables.

A closely related consideration concerns the question of how to specify need type. As described earlier, the need-type hypothesis (as used in the context of this study) assumes that there exist differential need types, that is, individuals with distinctive need patterns, and that these need types may be seen to differ primarily in the way their needs are interrelated. After generating 12 groups of managers with distinctive need patterns, the problem of describing these groups had to be resolved.

A number of studies found in the literature which employed a clustering procedure to subgroup people on a set of variables were examined

with respect to the methods used to describe their "types". At the risk of over-generalizing, it seemed that the elevation component or level score on the variables contained in a profile, most often accounted for the differences between clusters or groups, rather than dispersion (scatter) or shape. As a matter of fact, a substantial portion of these studies failed to report any analysis with respect to scatter or shape, and it can only be presumed, the possible influences of scatter and shape on the cluster descriptions were probably only rarely considered.

In the light of the above observations, a secondary objective of this study addressed specifically the question of how to characterize clusters or subgroups. After a careful review of several possible techniques which could be employed to the cluster characterization question, a method was selected which essentially involved comparing variances and establishing acceptable limits for determining whether or not a specific need dimension in the profile was characteristic of the given need pattern. More precisely, for any group, need type was defined in terms of those needs which met the specified variance criterion.

The variance criterion was defined in the following manner. For a given group, the observed (i.e., individual differences) variance on each Importance (need) scale was compared with the error variance (i.e., the squared standard error of measurement) of the total sample (N = 548) on that same Importance scale. In order for that scale to be designated as being "characteristic"of that group, the group's observed variance has to be less than the error variance for the total sample on that scale. For a particular group, each of the 27 need scales meeting the variance criterion was then ranked with respect to its mean Importance score relative to the other groups. The mean Importance scale rankings were arbitrarily divided into equal thirds -- the highest four being designated as "High"

and the middle four as "Medium" and the lowest four as "Low". For each of the five need-type groups used for this study, the scales found to be characteristic of the group's need pattern and their level classification are shown in Table 3.

For the present group of managers from five different operating companies within the same corporation, there appeared to be a number of different need-type groups for which the relationship between overall satisfaction and specific satisfaction differed from the relationship found for the total sample. While it may be argued that the findings provide only slight evidence regarding the moderating effect of need type on the degree of relationship between specific dimensions of satisfaction and overall job satisfaction, this argument fails to consider the information provided by differential weighting patterns of specific satisfaction found to be associated with each of the five need types. That is, by identifying need type, one might more accurately determine that particular pattern of reinforcers in the work environment which will be related to overall feelings of job satisfaction.

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Table 1

Significant Beta Weights for Specific

Satisfaction Scales for 5 Need Types and Total Sample[a]

Scales	Need Type					Total Sample
	A N=115	B N=131	C N=40	D N=39	E N=93	N=548
Advancement		.25				
Career Progress	.35		.66	.37		.30
Career Choice		.32				.25
Company Aims & Plans			.40			
Cooperation				.45		.15
Promotion Bases						-.11
Recognition	.29	.25				
Staffing Practices					.59	.19
Work Challenge	.25	.27		.43	.48	.28
Minimum Set Multiple R[b]	.80**	.80**	.82**	.85**	.85**	.82**
Number of Predictors[c]	3	4	2	3	2	6

[a]Beta weights significant at .01 level.

[b]Using only predictors with beta weights significant at .01 level.

[c]Number of predictors with beta weights significant at .01 level.

*$p < .05$

**$p < .01$

Table 2

Multiple Correlation Coefficients Between 27 Specific Satisfaction Scales and Overall Satisfaction for Five Need Types

Need Type Group	N	R[a]	Z_{diff}[b]
A	115	.86**	0.77
B	131	.86**	0.82
C	40	.96**	4.42**
D	39	.98**	6.46**
E	93	.89**	1.91*
Total Sample	548	.84**	

*p < .05

**p < .01

[a]Multiple R using 27 specific satisfaction scales as predictors.

[b]Z values on Fisher's test for the difference between total sample and group R's.

Table 3

Characteristic Scales and Level Categories for Five Need-Types[a]

Ranked Mean Importance Category[b]	Need-Type A N=115	B N=130	C N=40	D N=39	E N=93
HIGH				Advancement Ability Utilization Performance Evaluation Staffing Work Challenge	Advancement Ability Utilization Communications Promotion Bases Supervisory Competence
MEDIUM	Ability Utilization Formal Channels of Communication Promotion Bases Supervisory Competence		Supervisory Competence		
LOW		Promotion Practices Supervisory Competence Work Challenge			

[a]A scale was determined to be characteristic if the observed variance (SD) for a cluster was less than the error variance ($SE_{measurement}$) for each given scales.

[b]Categories were determined by dividing ranked set of 12 cluster means into upper, middle and lower thirds.