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ABSTRACT

Two hypotheses guided these studies: (1) administrators with a greater risk propensity will develop more innovative job targets in a management-by-objectives program than will those with less risk propensity, and (2) educators' risk propensity will increase after group discussion. The Choice Dilemmas measure, content analysis of goal statements, and group process procedures were included in the methodology. Neither pypothesis was supported. (Author/IRT)

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GOAL SETTING BEHAVIOR AND SHIFT: TWO STUDIES OF EDUCATORS' RISK PROPENSITY

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GOAL SETTING BEHAVIOR AND SHIFT: TWO STUDIES OF EDUCATORS' RISK PROPENSITY

Risk refers to the uncertainty of achieving desirable goals and the penalties that might ensue from failure to attain appropriate outcomes. Risk is an important concept in educational administration because of its inherent relationship to the decision-making process. This process, as conceptualized by Griffiths (1959), incorporates two procedures -- decision and action. The decision aspect essentially is a judicial proceeding of selecting alternatives. The action phase is implementing the judgment or decision. Extrapolating from this conceptualization, two generalizations appear logical. First, the adequacy of the decision-making process directly impacts the efficiency and effectiveness of a school organization. Second, many decision alternatives with a greater potential for contributing to the school district's goals also have a concomitantly higher probability of failure.

Therefore, teachers and administrators, as the school organization's decision-makers, frequently are confronted with the dilemma of selecting among risky, innovative options and safe, status quo alternatives. If the predictions of Toffler (1970) and Hack (1971) are accurate, the willingness to expose oneself to possible failure in pursuit of a goal becomes increasingly important for the future effectiveness and survival of educational institutions. These writers hold that the rapid and accelerating rate of societal change will cause a "new educational revolution" which will significantly impact the shape of education. Obviously, educational decision-makers must judge these forces, adopt and implement needed changes.

Adoptive or innovative behavior may be risky behavior. Baumgartel and Sullivan (1975) found the more unfavorable the organizational climate is for innovation, the more important the propensity to take risks becomes in making

needed changes. They concluded that risk-taking becomes particularly important in those settings where there is an absence of freedom to experiment.

The probabilities and consequences that educators associate with the alternatives of meeting society's changing needs will not be completely rational. Kogan and Wallach (1964) posited, however, that the issues concerning the avoidance or acceptance of risks in arriving at decisions are likely to be important stable ingredients in the thinking process. Since risk-taking potentially is an important variable in determining the range of innovative behavior in educational organizations, two basic research studies were executed with the overall objective of exploring educators' risk propensity. The research question guiding the first investigation was as follows: What is the relationship between risk propensity and setting job targets in a management by objectives (MBO) program? The second study was guided by the following question: Will educators exhibit an increased risk propensity after group discussion?

General Theoretical Framework

Risk taking is defined as the extent to which individuals are willing to expose themselves to possible failure in pursuit of a goal. Risk-taking propensity is the relative tendency to act in situations where the desirability of outcomes and the probability of success are inversely related. The Choice Dilemma questionnaire, developed by Kogan and Wallach (1964), is the best known measure of risk-taking propensity. The instrument presents the subject with a series of hypothetical situations dealing with employment possibilities, health, investments, education, and other important decisions faced by many people. Each item represents a choice dilemma between an attractive, but risky course of action and a safe course.

After extensive research, Kogan and Wallach concluded that two psychological sources combine to yield a generality or consistency within an individual's decision-making domain. A motivational source is responsible for producing consistencies of risk or conservatism across highly divergent domains of psychological functioning. A cognitive source of generality accounts for consistencies across a narrow range of situations that share common structural properties, for example, the favorableness of organizational climate.

As closely related as the concept is to the decision-making process, the study of educators' risk-taking propensity still is somewhat limited. Blum (1961) investigated the role that a security-risk orientation would have on occupational choice. His findings suggest that the desire for security can be a deciding factor in occupational choice. Undergraduate education majors scored the highest of eight majors on the need for security. Pavalko (1971) extends this position by comparing education and business employees. He placed educators and business managers at opposite ends of an occupation-profession continuum with the norm in business occupations favoring personal aggressiveness. Krause (1971) supports this position by noting that the ability to handle uncertainty is a basic career contingency for business managers.

More specifically, J. S. Brown (1970) using the Kogan and Wallach instrument and Miskel (1974) using a survey measure, found business managers to have a higher risk propensity than educational administrators. Niazi and Holloway (1974) concluded that educational administrators' risk propensity, using the choice dilemmas procedure, is related to the situational variables of their perceived power position and group support. The specific theoretical rationales for the two studies which follow build upon these foundations.

Study One: Goal Setting Behavior and Risk Propensity

Rationale and Hypothesis

A widely touted technique for improving job performance is management by objectives (MBO). Adapting the wording for the educational situation, Odiorne (1965) defined MBO as a program where the superior and subordinate administrators or teachers of a school district jointly state their common goals, specify each person's major areas of responsibility in terms of expected outcomes, and use these for assessing each member's contribution.

As originally conceived by Drucker (1954), MBO is based on motivational needs theory. Essentially, the plan assumes that if employees are allowed increased responsibility for developing personal goals in relation to the organization's goals, autonomy in achieving them, and a method for evaluating the achievement, they will also work harder and be more effective in their jobs.

A difficult task for educators during the implementation phases of an MBO system is writing objectives. Lasagna (1971) proposed that flexibility in objective type (innovative, problem solving, administrative, and personal), time frame (short and long range), and evaluation methods (quantitative and qualitative) insure the applicability of the performance objectives. Lasagna's concept of flexibility, Drucker's thoughts on motivational needs, and the prediction of changing school situations suggest that MBO programs can encourage innovation if the educators decide to write goals and job targets that are flexible, novel, and controversial. It seems reasonable to predict that a person's risk propensity would be related to the types of objectives that are written in such a program. Based on this rationale, the hypothesis was drawn that administrators who write more innovative performance objectives will have higher risk propensity levels than administrators who write less innovative objectives.

Methodology

Sample. The population consisted of the entire administrative staff of a large suburban school district. The risk propensity measure was mailed to each of the 142 administrators. A total of 133 (94%) responses were accumulated. Performance goals for two academic years were obtained from the district's personnel files. Sixteen of the returns were from newly employed administrators and no performance objectives were available. Therefore, the sample was 116 (82%) administrators from the single district.

Instrumentation. A modified version of Kogan and Wallach's (1964) Choice Dilemmas measure was used in both studies. Six of the 12 situation problems comprising the original instrument were carefully selected for their potential content interest to educators. The six choice dilemma items are the following: job security or high salary, reduced health or risky surgery, blue chip or risky investment, win-lose or tie a football game, university reputation or degree completion, and escape from prison or survival.

Six response categories are provided for each item. The alternative categories represent different probabilities of outcomes: one, three, five, seven, nine, or ten in ten. As such, each category was scaled in accordance with its probability (one, three and so forth). The lower the score the higher the subject's risk propensity is.

The item values were summed to yield a total risk propensity score. The range for the total score is 6 to 60. The alpha coefficient for the six item form is .52.

A content analysis procedure was used to measure the innovativeness level of the MBO performance objectives or goals. Five properties of innovativeness, as suggested in the rationale, were identified and defined. These are: (a) abstrusity or the degree of abstraction, (b) controversiality or the potential for causing

conflict, (c) divisibility or the amount of shared responsibility, (d) longevity or the need for an extended length of time for completion, and (e) novelity or the extent of uniqueness. In summary, more abstruse, controversial, divisible, and novel performance objectives needing a longer time frame to accomplish were defined as being innovative.

Each of the five properties was divided into five extent categories ranging from very high to very low. Each extent category was defined and elaborated with example performance objectives. These categories were scaled by assigning descending values from five to one.

The next step was to classify or scale the 615 performance objectives (5.3 per subject) into extent categories for each of the five properties. In other words, the statements were content analyzed five times. The five values were then averaged to yield an overall goal innovativeness level ranging from five to one.

The coding system was evaluated for intercoder agreement using Scott's (1955) index of reliability (pi). This procedure corrects the reliability coefficient for the number of categories describing the property and for the probable frequency that each is used. The overall or average reliability for the five properties was .69.

Procedures. The risk propensity measure was sent to and returned from the administrators through the district's mail system. As previously mentioned, the performance objectives were collected from the district personnel files. Before the content analysis procedure started, each subject was assigned a code number. The statements were then listed by code number and content analyzed for each property. Since the subjects averaged about five statements apiece, a mean value for the performance objective innovativeness levels was calculated for each. The result was an innovativeness level between one and five for each administrator.

Analysis. An analysis of covariance procedure was used to test the hypothesis. Since position, sex, hierarchical position, experience, level of educational attainment reportedly affect risk propensity, the covariance procedure was used to free the results of lower level interaction effects.

The 116 administrators were divided into three goal innovativeness groups -- low, moderate, and high. An F ratio was calculated for differences in mean risk propensity score on each item and the total.

Findings

Table 1 contains a summary of the data used to test the hypothesis that administrators who write more innovative job targets will have a higher risk propensity than those who write less innovative statements. No significant differences were found in the seven analysis of covariance procedures. In fact, the F values range only from 0.1 (probability = .92) to 1.5 (probability = .22). Consequently, no support was found for the hypothesis.

The innovativeness level of the performance objectives clearly is not related to risk propensity as measured by the six-item choice dilemma questionnaire. The reliability of the instrument was low (.52) and the intercoder reliability was adequate but somewhat weak (.69). One explanation for the results resides in the combined limitations of the measures -- error variance was being compared to error variance.

A second alternative that must be considered, however, is that the rationale is not efficacious. Given the difficult task of writing job targets, situational conditions may mediate or negate the posited relationship. In other words, norms guiding the development of objectives might dictate the type of appropriate objectives rather than individual personality characteristics. To test this alternative, a contingency analysis would be needed.

Study Two: Group Effects on Risk Propensity

Rationale and Hypothesis

Much of the interest in comparing individual with group decision making has centered around the so-called "risky-shift" phenomenon. Graham and Harris (1970) concluded that a fairly well documented finding is that a group will select lower odds of success than will the average member prior to discussion. An explanation for this change has been made by R. Brown (1965) using value theory. According to this conceptualization, the willingness to take risks is a culturally valued characteristic and the disclosure of risk level in the presence of others will induce individuals to become more risky. An alternative explanation is provided by Burnstein (1975). He asserted that shifts in choice -- risky or otherwise -- reflect a form of social influence based on the dissemination of cogent information. He contends that often there exist seminal ideas which initially are available to only some members of the group. As a result of discussion, all members gain access to these ideas and reformulate their decisions accordingly. Combined the explanations appear roughly analogous to Kogan and Wallach's assertions about motivational and cognitive components of risk taking. Both positions support the guiding hypothesis that educators' risk propensity will increase after group discussion.

Methodology

Sample. Volunteers from six graduate classes in educational administration were recruited for the "risky shift" experiment. In the experimental group, 79 (100%) students in three classes participated. In the control group, 60 (100%) students in three other classes participated. The result was a sample of 139.

Experimental treatment. This procedure consisted of a group discussion technique similar to the one described by Teger and Pruitt (1967). The 79 subjects in the treatment group first completed the Kogan and Wallach questionnaire (described earlier in Study One). Second, they were divided into groups of three or four. Third, instructions were given to discuss each item and arrive at a group

consensus (2 of 3 or 3 of 4) on the best alternative for each question. One hour was allowed for this step. Finally, after the group activity, each subject again responded to the questionnaire.

The control group completed the questionnaire at the beginning of a class session. Instead of a group discussion, however, the regular class procedures were pursued for about one hour. Each subject again responded to the questionnaire.

Analysis. Analysis of covariance also was used for this study. In this instance, however, the covariate was the matched pretest score for risk propensity. The rationale for this technique is that present risk propensity levels might be good predictors of future levels. To control for this possible effect, the scores were equated or adjusted by using the pretest as a covariate. The posttest levels were then compared for experimental effects.

Findings

The results are summarized in Table 2 for the hypothesis that the risk propensity of educators would increase after group discussion. The hypothesis was not supported. Five of the F values are less than 1.0. Two F values, however, do approach a level of significance (Job Security or High Salary -- $F = 2.4$, probability = .12 and Win-Lose or Tie -- $F = 2.2$, probability = .14).

For this sample of educators, the risky shift phenomenon was not found. Within these limited findings, some tentative statements appear plausible. The risk is value theory received no support. An overall group shift was not apparent. Some evidence might exist for Burnstein's position that risk will increase where cogent information can be provided. The treatment group tended to shift to a more risky position on two selected items. These "shifts" occurred on items where the pretest scores were low (more risky) and where the consequences might not be as long lasting or severe as some others. While the loss of salary and losing the football game are not desirable, the possible results certainly are not as terminal as the risky surgery and escape from the prisoner of war camp.

Summary and Implications

The hypotheses were not supported. Risk propensity was not related to educators' goal setting behavior and did not change after group discussion. At least three factors should be considered in interpreting these data and planning further research on risk taking.

First, the reliability of the modified choice dilemmas questionnaire is hardly adequate for future investigations. The efficacy of the present theory is difficult to question when the measure is weak. The content analysis procedure, however, demonstrated more promise. If top administrators, for example, are attempting to evaluate an MBO system for possible effects or differences among buildings or divisions, the systematic classification of objectives should assist such an effort.

Second, in studying administrator behavior, a contingency approach (combining personality and situational indicators) is advisable. In the first study, all administrators in a single district were to be included with the assumption that their work environments were comparable. This assumption probably was not reasonable. The job context from school to school and certainly from division to division (instruction to finance for example), in fact, are not similar. A situational factor can function as a mediating variable and apparently negate the hypothesized relationships. Baumgartel and Sullivan (1975), for instance, suggested organizational climate as an important variable in risk taking. Therefore, measures of situational variables should be included in future risk-taking studies.

Finally, the risky shift hypothesis should be tested with a better measure. This generalization has important implications for the practice of using groups to facilitate innovation. More specifically, the tentative suggestion of the cognitive component of changing one's decision after group discussion deserves further research. An interesting and potentially important investigation would be to determine the effects of cognitive information on educators' risk-taking behavior.

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TABLE 1

Means, Standard Deviations, and Analysis of Covariance Summaries for Goal Setting Behavior and Risk Propensity

Risk Propensity Measure	Mean[1]	Goal Innovativeness (G) Low[2]	Moderate	High	Analysis of Covariance Summaries Source	df	Mean Square	F	P[3]
Job Security or High Salary	Mean	5.2 (1.7)	4.9 (1.9)	5.1 (1.6)	G	2	1.2		
	Adj.	5.2	4.9	5.2	Error	108	2.9	0.4	.66
Reduced Health or Surgery	Mean	6.9 (2.2)	6.9 (2.0)	6.3 (1.9)	G	2	6.0		
	Adj.	6.9	7.0	6.2	Error	108	3.9	1.5	.22
Blue Chip or Risky Investment	Mean	7.2 (2.7)	7.1 (2.4)	7.4 (2.4)	G	2	0.5		
	Adj.	7.3	7.1	7.3	Error	108	6.2	0.1	.92
Win-Lose or Tie	Mean	3.9 (1.9)	4.4 (2.5)	3.8 (2.0)	G	2	4.6		
	Adj.	3.7	4.4	3.9	Error	108	4.8	0.9	.39
University Reputation or PHD Completion	Mean	6.5 (2.5)	5.9 (2.5)	6.1 (2.4)	G	2	1.4		
	Adj.	6.3	5.9	6.2	Error	108	5.9	0.2	.79
Escape or Survival	Mean	5.7 (2.5)	5.8 (2.8)	5.0 (2.7)	G	2	4.6		
	Adj.	5.7	5.7	5.1	Error	108	7.4	0.6	.54
Total	Mean	35.4 (6.9)	34.9 (7.1)	33.9 (6.7)	G	2	10.8		
	Adj.	35.1	35.0	34.0	Error	108	49.6	0.2	.81

[1]Adjusted Means are given after Adj.

[2]Standard Deviations are in parentheses by the group mean.

[3]Exact Probabilities for F.

TABLE 2

Means, Standard Deviations, and Analysis of Covariance Summaries for Change in Risk Propensity After Group Discussion

Risk Propensity		Group (G) Means		Analysis of Covariance Summaries				
Measure	Test[1]	Treatment[2]	Control	Source	df	Mean Square	F	P[3]
Job Security	Pre	5.3 (2.3)	5.0 (2.4)	G	1	5.6	2.4	.12
or High	Post	4.6 (2.2)	4.7 (2.8)	Error	129	2.3		
Salary	Adj.	4.5	4.9					
Reduced	Pre	7.2 (2.3)	6.6 (2.5)	G	1	0.0	0.0	.96
Health	Post	7.0 (2.1)	6.5 (2.5)	Error	129	3.0		
or Surgery	Adj.	6.8	6.8					
Blue Chip	Pre	7.1 (2.6)	7.0 (2.5)	G	1	0.3	0.1	.81
or Risky	Post	6.6 (2.7)	6.6 (2.8)	Error	129	4.3		
Investment	Adj.	6.5	6.6					
Win-Lose	Pre	3.9 (2.6)	4.3 (2.8)	G	1	6.3	2.2	.14
or Tie	Post	3.3 (2.5)	4.0 (2.8)	Error	129	2.9		
	Adj.	3.4	3.9					
University								
Reputation	Pre	5.7 (2.3)	5.7 (2.6)	G	1	0.1	0.0	.90
or PHD	Post	5.5 (2.4)	5.6 (2.8)	Error	129	3.1		
Completion	Adj.	5.5	5.6					
Escape	Pre	5.3 (3.0)	5.6 (2.5)	G	1	0.0	0.0	.93
or	Post	4.9 (3.0)	5.3 (2.7)	Error	129	4.0		
Survival	Adj.	5.1	5.1					
	Pre	33.8 (9.2)	34.1 (7.1)	G	1	35.5	0.6	.43
Total	Post	31.8 (8.4)	32.9 (9.7)	Error	129	57.0		
	Adj.	31.7	32.9					

[1]Adjusted Means for the Posttest are given after Adj.

[2]Standard Deviations are in parentheses by group mean.

[3]Exact Probabilities for F.