Relationship Patterns between Leader-Subordinate Similarity and Subordinate Satisfaction: a Case Study

Dr. Razali bin Mat Zin, King Fahd
Email: Razalibinmatzin@gmail.com
University of Petroleum and Minerals, Saudi Arabia.

ABSTRACT
The leadership literature is voluminous. This study adopted the contingency model to explain the relationship between the leader-subordinate similarity and subordinate satisfaction. The effects of selected intervening variables namely age, educational level, race and sex were also analyzed. The findings showed that there is a significant relationship between leader-subordinate similarity and subordinates’ satisfaction. However, this significance was determined only after accounting for the demographic variables, i.e. age, subordinates’ sex, race and educational level. Once the demographic variables were accounted for, the consideration and initiating structure dimensions of leadership showed significant relationship with subordinates’ satisfaction with work.

Key words: Subordinate Similarity, Subordinate Satisfaction, Educational Level

ABSTRAK
Introduction

Leadership effectiveness has been a major area of research during the last forty years. Studies have indicated a positive relationship between leader behavior and desired employee outcomes. Research by Fleishman and Harris (1962, p. 43) and Skinner (1969, p. 489) have shown that certain types of leader behavior have resulted in low turnover and low employee grievance. A review of the research literature by Gruneberg shows that job satisfaction is related to reduction in employee turnover, absenteeism, accidents and improvement in employee job performance (1997, p. 105).

Research examining the relationship of leader behavior and subordinate satisfaction has followed the same trend of development as the overall theories of leadership. Leadership theories have moved through three periods. First was the study of leader traits. These studies attempted to identify universal leadership traits which characterized effective leaders. Beginning in the mid 1940's, researchers aimed their research efforts toward behavioral approaches. The behaviorists sought to explain leadership effectiveness by identifying the best combination of leadership behaviors. For the last twenty years, contingency theorists have examined the association of multidimensional factors that relate to leader effectiveness.

Statement of the Problem and Hypotheses

Today, social science researchers and public sector management are concerned about the conditions under which managers or supervisors interact with their subordinates to foster subordinates' job satisfaction and increased performance. According to management literature, the trends in the 2000 include: declining resources, more stringent budgetary and fiscal management accountability, new criteria for allocation of resources, a demand for more program evaluation, more workers' accountability, a need for clearer assessment of client satisfaction, and assessment of current status of participation by various levels of hierarchy in managerial decision making (Razali et. al, 2000). With the need for more worker and management accountability, there must first be an understanding of the factors that influence the relationship between managers' style and subordinate satisfaction, performance, morale and work group productivity. A better understanding of these relationships will help promote greater satisfaction and
could positively impact on job performance (Smith, Kendall and Hulin, 1969; Lawler and Porter, 1971; Vroom, 1964; Razali, 1999; Razali et. al., 2000).

The present study investigated the relationship between leader-subordinate similarity and the subordinates' satisfaction with supervision, work, promotional opportunities and co-workers. The hypotheses of the study are:

H1. There is a significant relationship between leader behavior and subordinate satisfaction.

An early study by Fleishman and Harris examined the relationship between leadership style and subordinate grievances and turnover (1962). The study was conducted at a truck manufacturing plant with factory workers and their foremen. The results showed that foremen who are open, friendly, and showed support had less grievances and turnover among their subordinates. The results also showed that foremen who placed a high emphasis on clarifying roles and the accomplishment of organizational goals had a higher number of grievances and employee turnover. In 1969, E.W. Skinner replicated the Fleishman and Harris study. The results indicated that foremen who displayed supportive behavior had a lower number of grievances and employee turnover, while foremen who were primarily concerned with task had increased employee grievances.

H2. There is a significant relationship between leader-subordinate similarity and subordinate satisfaction.

The trend toward examining more complex and interactional variables in leaders-subordinate behavior research was incorporated into the model of this research. Truax and Carkhuff (1994) have conducted extensive research on the interaction of interpersonal factors in the counselor-counselee relationship. Their research supports the hypothesis that successful treatment outcomes are dependent on the counselor's level of empathy, warmth and genuineness. They reported that greater self-disclosure by counselors led to increased personality change in clients. Several other studies based on the matching concept have added to the empirical evidence supporting counselor-client similarity as an important component in counseling effectiveness (see Malkiewich and Merluzzi, 1980; Palmer, 1973; McLahan, 1974; Warren, 1969).

H3a: There is a significant correlation between the intervening variables (age, educational level, race and sex) and leader-subordinate similarity.

H3b: There is a significant correlation between the intervening variables (age, educational level, race and sex) and subordinate satisfaction.
Finally, this study includes an analysis of leader and subordinate demographic factors. Previous research has shown that the variables of age, sex, race and educational level may confound the study of subordinate satisfaction. Herzberg et al. were one of the first to report on the relationship between job satisfaction and age (1957). He noted a U shape curve in which job satisfaction starts high, declines then increases again with age in males. Glenn, Taylor and Weaver (1977) noted a similar trend for females. Hulin and Smith (1965, p. 209) and Saleh and Otis (1964, p. 425) reported that job satisfaction declined the last five years before retirement. It appears that age can be a factor in determining subordinate satisfaction, therefore it was included as a possible confounding variable in this study. Gender is another demographic variable identified by previous research as relating to subordinate job satisfaction. Schuler (1975, p. 365) confirmed earlier research by Herzberg et al. that noted the differences in factors related to job satisfaction for males versus females. He reported that females placed greater value on compatible co-workers than their male counterparts. Manhardt (1972, p.361) and Bartoll (1974) reported that male are more concerned with their long-term careers than are females. Race has been analyzed in a number of studies such as Jones et al. (1997, p. 5) and Orpen and Ndlovu (1997, p. 31). Jones et al. compared the satisfaction levels of both white and black sailors. The results showed no significant differences in the general satisfaction levels. However, black sailors did report higher satisfaction with promotional opportunities and supervision. Bartoll reports that other studies have found that white expressed higher levels of general job satisfaction.

Significance of The Study

Most studies have focused on single variables that affect leadership effectiveness. Few have focused on the interactive process between various elements that comprise the leader-subordinate relationship. This study investigated the interaction between two variables, (1) matching of the leader and subordinate leadership styles and (2) the subordinate's job satisfaction.

The literature is replete with references calling for the need to study additional situational variables. Of particular note are studies by Bass (1981, p. 617); Vecchio (1981; p.960); Valenzi and Dessler (1978, p. 677); Stogdill (1969, p. 155); Schriesheim (1982, p.227) Greene (1975, p. 187); Yukl (1981,p.287); Jones et al. (1997); Orpen and Ndlovu and Razali and Ali Yusob (1999). The results of these studies indicate that leadership effectiveness is affected by complex interactions of many variables. These variables need to be systematically explored so that more integrated theories of leadership can be developed.
Another major factor influencing the need for this study is the lack of research regarding the relationship between leaders and subordinates in Malaysian organizations. The results of leader-subordinate similarity and its relationship to the subordinates' job satisfaction will have implications for future personnel choices in the selection of managerial staff for the organization under study. This concept has been applied in the treatment field. Palmer noted that matching of counselor and client has been found to increase staff satisfaction with their job and resulted in long staff tenure (1973, p. 95). With the great possibility of continuous budget cuts from the government under the present economic crisis, top management in most Malaysian organizations must give more attention to the possible effects of leadership behavior similarity on employees' satisfaction in order to create a climate which is conducive for higher performance and productivity.

RELATED LITERATURE

Much of the research regarding leadership behavior and subordinate satisfaction that has been conducted in organizations during the last two decades has focused on behavioral definitions of leadership behavior. Several studies during this period have also included situational and personal moderators as factors that influence the relationship between leader behavior and subordinate satisfaction.

Research on the relationship between leader behavior and job satisfaction in the public sector (state rehabilitation agencies) was conducted by Aiken, Smits and Lollar (1972; p. 65). The researchers used the Leader Behavior Description Questionnaire (LBDQ) as a measure of leader behavior and the Job Satisfaction Inventory (JSI) as the measure of employee satisfaction. The results indicated a high positive relationship between the consideration subscale of the LBDQ and the relationship with employer subscale of the JSI. This relationship was significant at the .001 level of confidence. The authors suggested that the quality of the interpersonal relationship between supervisor and subordinate is a central aspect of satisfaction with employment in state rehabilitation agencies.

Hunt and Liebscher investigated the relationship between leadership behavior, leadership preference and employee satisfaction in two state highway department bureaus (1973, p. 74). The Leader Behavior Description Questionnaire (LBDQ) was used to assess leader behavior, the Ideal Leader Behavior Questionnaire (ILBQ) was used to assess leadership preferences and the Job Descriptive Index (JDI) was used to assess employee satisfaction. The two bureaus (construction and design) had different job
tasks and different levels of employee-supervisor interaction. Among the hypotheses of this study were the following: (1) there would be significant differences between the two bureaus regarding leadership preferences; (2) there would be significant differences between bureaus regarding leader behavior scores; (3) there would be significant relationships between leader behavior scores and employee satisfaction; (4) there would be significant relationships between leader preference scores and employee satisfaction and (5) the interactive effects of leadership behavior and leadership preference would have a stronger relationship with the dependent variable (employee satisfaction) than would leadership behavior alone.

The findings indicated significant differences between the two bureaus in Hunt and Lelbscher's study regarding leadership preference and leadership behavior. There was also a significant relationship in both bureaus between leadership behavior and employee satisfaction. The simple relationship between leadership behavior and employee satisfaction was found to be as strong as the more complex model of interaction of leadership behavior and preference with employee satisfaction. They emphasize the following unexpected finding:

Perhaps the most surprising finding is that, contrary to theory, the discrepancy and interactive models are no more highly related to the criteria than is leadership behavior.

Vecchio (1981, p. 947) used the LBDQ consideration and initiating structure dimensions in his study of the behavioral and situational moderators of subordinate satisfaction. He made the distinction between global measure of employee satisfaction and a more explicit measure of employee satisfaction with supervision. He pointed out that much research interest has centered on the relationship between leader behavior and the criterion of global satisfaction. Few studies have been conducted on the more proximal measure of subordinate satisfaction with supervision and leadership behavior. He further argued that subordinate satisfaction with supervision is conceptually closer to the independent variable of leader behavior than are global satisfaction measures. In his study of 107 subordinate-supervisor dyads, Vecchio reported that there were stronger relationships found between leader behavior and subordinate satisfaction with supervision than between leader behavior and the global satisfaction. This finding is supportive of his argument that "conceptually proximal constructs should manifest stronger relationships" (p. 955).
Schriesheim, House and Kerr (1976, p. 297) conducted a study to examine the results of leader initiating structure on subordinates' satisfaction and role clarity. The findings of their research included the following: 1) The relationship between the consideration dimension on all three scales (LBDQ, LBDQ-XII and SBDQ) and subordinate satisfaction and role clarity were all significant and positive. There were no significant differences in the aforementioned relationships according to instrument; 2) The relationships between both LBDQ measures of initiating structure and subordinates satisfaction were positive and significant (p<.01). The relationship between the SBDQ measure of initiating structure and subordinate satisfaction was negative and nonsignificant; 3) The relationships between all three measures of structure and role clarity were significant and positive. However, the correlation of the two LBDQ measures of structure and role clarity were significantly higher (p,.01) than the correlation between the SBDQ structure and role clarity (p < .05); and 4) There were significant and positive intercorrelations between the consideration and structure subscales on both forms of the LBDQ. The intercorrelation between the SBDQ structure and consideration subscales was significant and negative.

Schriesheim (1982, p. 221) reported that earlier Ohio State research studies also indicated strong relationships between leader behaviors categorized as high consideration-high initiating structure and subordinate satisfaction and performance. These findings influenced many to assume that the "high consideration-high initiating structure style" was superior to all other combinations of leader behaviors. Schriesheim investigated the validity of the high-high style superiority in his study. Using the LBDQ and the Minnesota Satisfaction Questionnaire, he found that the consideration dimension of the LBDO alone accounted for almost all of the variance in the dependent variable of subordinate satisfaction. Thus, he argued that the superiority of the high consideration-high initiating structure combination is an American myth.

An interesting study by Greene (1975, p. 187) looked at leader-subordinate influence as a reciprocal interaction, rather than as a one-way analysis. Looking beyond the question of the effects of leader behavior on subordinates, Greene also asked what effects subordinate performance had on leader behavior. This longitudinal study by Greene supported other research that found strong relationships between consideration and subordinate satisfaction (p<.001). He also found that subordinate performance had demonstrable effects on leader behavior. He illustrates that:
The leader's attitude toward his subordinates, and its expression, is contingent upon their performance. The leader, may be expected, for example, to support and show his approval of those subordinates who have positively reinforced him by their good performance and to be less considerate of subordinates who negatively reinforce him by their low performance. Low performance by a subordinate causes the leader to engage in more structuring behavior. High subordinate performance, on the other hand, would appear to lead reduction in emphasis on initiating structure.

In another study Graen, Novak and Sommerkamp (1992) tested the effects of Leader-Member Exchange Model (LMX) and Job Design (JD) on productivity and satisfaction. In this field experiment involving 106 form-processing employees of a large public service organization, four treatment conditions are compared: LMX, JD, a combination of LMX and JD, and a placebo control on satisfaction and productivity. The LMX model is characterized by distinct leader-member exchange relationships, while the job design includes task characteristics similar to those specified in the job characteristic model by Hackman and Oldham (1976). Overall the results support the hypothesis that LMX model affects subordinates satisfaction. For example, in exchange for positional resources such as privileged information, the member commits himself or herself to a higher degree of involvement and feel more satisfied. However, the results indicate that the job design model as tested was ineffective in enhancing members' productivity and satisfaction.

Valenzi and Dessler investigated the effects of leader behavior and role ambiguity on job satisfaction, and the interaction of these three variables (1978, p. 671). Questionnaires were administered to 342 employees of two electronic firms. The results once again showed that leader consideration has a significant positive correlation with employee satisfaction (p<.001). The results on role ambiguity showed that it was negatively related to subordinate satisfaction (p<.001). In addition, role ambiguity influenced the relationship between leader consideration and subordinate satisfaction. The findings reflected that in situation of high role ambiguity, employee satisfaction increased as leader consideration increased.

Osborn and Hunt (1980, p. 730) looked at the effects of unit size on leader behavior-subordinate satisfaction relationship. They predicted that leadership behavior and the situational variable (size of unit) would interactively relate to subordinate satisfaction. They further hypothesized that the relationship between organizational size and subordinate would be negative. The findings supported other research findings of positive
relationships between both dominant leader behaviors (consideration and initiating structure) and the satisfaction criteria (p<.01). However, the findings regarding size as a moderator of the leader behavior-subordinate satisfaction paradigm were contradictory to other similar studies. They concluded that:

As size increases, lower, not higher, consideration is associated with greater overall satisfaction. In a similar fashion, higher initiating structure is associated with lower overall satisfaction as size increases.

Contradictions in the research findings have led to a gradual inclusion of situational and intervening variables in leader-subordinate satisfaction studies. The results of the studies reported in the literature review indicate that leadership effectiveness is affected by complex interactions of many variables. These variables need to be systematically explored so that more integrated theories can be developed.

**METHODOLOGY**

**Subjects**

The subjects for this study were employees who are working at the Kuala Lumpur City Hall. The total number of subjects selected was thirty-five (35) chief managers or assistant chief who were categorized as leaders and one hundred (100) lower-level employees who were grouped as subordinates. The subjects were randomly selected from the Kuala Lumpur City Hall’s telephone directory.

**Instrumentation**

Two instruments were used in this study: 1) The *Leader Behavior Description Questionnaire (LBDQ) Form X11* by Stogdill (1963) and the *Job Descriptive Index (JDI)* by Smith, Kendall and Hulin, 1969. The test instruments were chosen because of their extensive use in leadership and subordinate satisfaction research, as well as the high reliability of both instruments. The demographic questions pertaining to age, sex, race and educational level were included at the end of the questionnaire.

*LBDQ Form X11*

This instrument was designed to describe leadership styles. It is based on over twenty years of leadership studies conducted at Ohio State University. Leadership behaviors were factor analyzed into two major leadership dimensions: consideration and initiating structure. According to Stogdill (1963) the consideration dimension measures the degree to which a leader...
has regard for the comfort, well being and contribution of his followers. The initiating structure dimension measures how clearly a leader defines his own role, and lets followers know what is expected of them. The consideration and initiating structure scales are comprised of 10 items each which are scored on a five point dimension ranging from “Always” to “Never.” The responses for each scale item are then added to produce an overall score ranging from 10 to 50.

**JDI**

This is a 72-item questionnaire designed to measure employee job satisfaction. Smith et al. (1969) define job satisfaction as the feelings a worker has about his job. Earlier tests designed to measure employee job satisfaction only produced an overall satisfaction score. The JDI goes beyond this global satisfaction concept and measures five dimensions of job satisfaction: 1) work; 2) promotional opportunities; 3) supervision; 4) co-workers; 5) Pay. However, for the purpose of this research, the pay dimension was omitted from the questionnaire. The items are divided among the four scales in the following manner: type of work (18 items); promotional opportunities (9 items); supervision (18 items); and co-workers (18 items). Responses to test items are forced choice format of "Yes", "Uncertain" and "No". To avoid a positive halo effect, approximately half of the items are negatively worded so they are scored in reverse. The responses for each scale item are then added to produce an overall scale score. The promotional opportunities scales are doubled because they only contain half of the test items as the type of work, supervision and co-workers scales.

**Pilot of Instrument**

The draft survey questionnaire was pretested with a small sample of the University Utara Malaysia employees which included three Assistant Registrars and six senior clerks. As a result of the pretest several aspects of the survey were changed, a few items were deleted, some were clarified and additional directions were provided.

**Data Collection**

The responses of one hundred and thirty-five (135) employees were solicited by distributing the questionnaire to each individual with self-addressed envelop. A cover letter explaining the purpose of the study and a guarantee of individual confidentiality accompanied the questionnaire. The first set of questionnaires which include items from LBDQ-Form XII and demographic questions were mailed to thirty-five (35) chief or assistant chief
administrative staff. A second set of the questionnaires which include items from LBDQ-Form XII, items from JDI and demographic questions were mailed to one hundred (100) middle level administrators. The rate of return was 96 percent for the chief and assistant chief administrators (34 of 35), and the rate of return for subordinates was 91% percent (91 of 100). The overall rate of return for the study was 96.79 percent (125 of 135).

Data Analysis
Analysis of the research data was based on selected programs from the Statistical Package for the Social Sciences (SPSS). The first two hypotheses of this study concern the relationship between leader behavior and job satisfaction and leader-subordinate match and subordinate satisfaction. The linear relationships between these bivariate hypotheses were initially assessed by Pearson product-moment correlation. The Pearson correlation is used to test for significant relationships between the independent and dependent variables when the variables are continuous data. Some significant relationships were found. These results and results from previous research indicated that the control variables may be affecting the degree of relationship between the independent and dependent variables. Therefore, additional analysis was performed using multiple regression procedures.

In this study, the degree of similarity of leadership styles between leaders and subordinates was assessed by taking the absolute difference between the leader's and subordinate's scores on the two scales of the LBDQ-XII. Similarity is based on the concept of frequency matching, or matching in terms of an aggregate sense of total score. Since the interpretation of the LBDQ-XII is based on the magnitude of the overall score within each subscale, this method preserve the integrity of meaning of the LBDQXII. An example of the matching procedure is as follows: if a leader's score was 43 and a subordinate's score was 42, the absolute difference for the scale would be 1. In this case, the leader's and subordinate's style would have to be considered very similar. However, if a leader's score was 42 and a subordinate's score was 12, the absolute difference of 30 would indicate dissimilar leadership behaviors. The absolute difference method was utilized by Hunt and Liebscher in their leadership research (1973). The .05 level of confidence was used to test for significance.

FINDINGS AND DISCUSSIONS
Demographic variables of age, sex, race and educational level were selected as control variables based on previous research studies that found
significant relationships between these variables and job satisfaction. Analysis of demographic variables are as follows:

**Age:** The ages of the leaders ranged from forty-five (45) to fifty-eight (56). The mean age was 47.5 years. The median age was 48.5, with forty (40) as the mode. The ages of the subordinates ranged from twenty-eight (28) to forty-six (46). The mean was 41.33 years. The median age was 43.5, with thirty-three (33) as the mode.

**Sex:** Of the 34 leaders, 27 (79.4%) were males and 7 (20.6%) were females. Of the subordinates, 68 (74.7%) were males and 23 (25.3%) were females.

**Educational Level:** The range of years of education completed for leaders was from 16 to maximum of 22 years. The mean educational level was 18.22 years. The median number of years was 17 and the mode was 17 years of education completed. The range of education completed for subordinates was from 11 to maximum of 16 years. The mean educational level was 11.88. The median number of years was 11.5 and the mode was 13 years of education completed.

**Race:** Twenty-five (73.5%) of the leaders reported as Malay races and five (14.7%) as Chinese and four (11.8%) as Indians. Three subordinates (3.3%) who participated in the study were Indian, eight (8.8%) were Chinese and eighty (87.9%) were Malay.

Hypothesis 1 concerned the simple bivariate relationship between leader behavior and subordinate satisfaction. The findings related to this hypothesis are presented graphically in Table 1.

**TABLE 1: PEARSON CORRELATION OF LEADERSHIP STYLE (N=34) AND SUBORDINATE SATISFACTION (N=91)**

<table>
<thead>
<tr>
<th>CONSIDERATION</th>
<th>WORK</th>
<th>PROMOTION</th>
<th>SUPERVISION</th>
<th>WORKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>r=.048</td>
<td>r=.038</td>
<td>r=.086</td>
<td>r=-.066</td>
</tr>
<tr>
<td></td>
<td>p=.58</td>
<td>p=.66</td>
<td>p=.32</td>
<td>p=.44</td>
</tr>
<tr>
<td>INITIATING STRUCTURE</td>
<td>r=-.017</td>
<td>r=-.023</td>
<td>r=.083</td>
<td>r=-.083</td>
</tr>
<tr>
<td></td>
<td>p=.84</td>
<td>p=.79</td>
<td>p=.36</td>
<td>p=.44</td>
</tr>
</tbody>
</table>

*Level of Confidence= .05 or greater

The results of the Pearson correlation analysis indicated that there were no significant relationships between each independent variable and each dependent variable. Thus, the hypothesis was not accepted as true. Findings
of previous research studies concerning the relationship between the initiating structure dimension and subordinate satisfaction measures have been inconsistent and contradictory. Therefore findings not supporting the hypothesis as it related to the LBDQ-XII factor of initiating structure and the JDI factors of satisfaction with work, promotional opportunities, supervision and coworkers were not surprising. However, the overwhelming majority of previous research on the LBDQ-XII factor of consideration have shown positive and significant relationships with subordinate satisfaction measures. Therefore, findings that did not support the hypothesis regarding a significant relationship between the LBDQ-XII consideration scale and the JDI subordinate satisfaction scales were somewhat surprising.

Recent research has indicated that the simple bivariate studies of leader behavior and subordinate satisfaction were unsophisticated and lead to inconclusive results. Hypothesis 1 was formulated to investigate the relationship of leader-subordinate similarity on the LBDQ-12 factors to subordinate JDI satisfaction subscales. Further statistical analyses were employed to determine the influence of continuing factors (demographic variables of age, sex, educational level and race) on both the independent variable (leader-subordinate match of leadership behavior) and the dependent variable (JDI measures of subordinate satisfaction with work, promotional opportunities, supervision and co-workers). The impact of the confounding variables on the independent variable of leader-subordinate similarity and subordinate satisfaction was then accounted for by using multiple regression analysis.

The data pertaining to Hypothesis 2 was analyzed according to the four subscales of the JDI. In the statistical analyses these subscales are labeled SUB WORK, SUB PROMOTION, SUB SUPERVISION and SUB CO-WORKERS. The similarity index scores are labeled L-S SIMILARITY IN CONSIDERATION and L-S SIMILARITY IN INITIATING STRUCTURE. Related results are presented graphically in Table 2.

<table>
<thead>
<tr>
<th>L-S SIMILARITY CONSIDERATION</th>
<th>SUB WORK</th>
<th>SUB PROMOTION</th>
<th>SUB SUPERVISION</th>
<th>CO-WORKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-S SIMILARITY CONSIDERATION</td>
<td>r= .133</td>
<td>r= .023</td>
<td>r= .080</td>
<td>r= -.071</td>
</tr>
<tr>
<td></td>
<td>p= .12</td>
<td>p= .78</td>
<td>p= .34</td>
<td>p = .41</td>
</tr>
</tbody>
</table>
Leader-subordinate similarity was correlated with subordinate satisfaction. Each independent variable (e.g. leader-subordinate similarity in consideration, leaders-subordinate similarity in initiating structure) was correlated with each dependent variable (e.g. subordinate satisfaction with work, promotion, supervision and co-workers). Pearson correlation analysis of each independent and each dependent variable indicated one relationship between the variables analyzed was significant at the .05 level of confidence. The similarity between leader and subordinate on the LBDQ-12 subscale of initiating structure (the leader defines his role and the roles and expectations of subordinates) is positively correlated with the subordinates' score on the JDI subscale SUB WORK (satisfaction with type of work). The correlation between L-S SIMILARITY IN INITIATING STRUCTURE and SUB WORK was .162 and was significant at the .05 level of confidence (see Table 2). The other correlations between leader-subordinate similarity on the LBDQ-12 dimensions of consideration and initiating structure are not significantly related to the other subordinate satisfaction subscales.

The researchers also included analysis of leader and subordinate demographic factors to test for intervening variables that may be confounding the results of this study as stated in Hypothesis 3a and 3b. The control variables selected for this study include the following:

1. **Leader Age** (LEADAGE): Ages of the thirty-four (34) chief or assistant chief managers.
2. **Leader Sex** (LEADSEX): Genders of the thirty-four (34) chief or assistant managers.
3. **Leader Race** (LEADRACE): Forced choice designations of thirty-four (34) chief or assistant chief managers' races.
4. **Leader Education** (LEADED): The highest grade or number of years of education completed by the thirty-four (34) leaders.
5. **Subordinate Age** (SUBAGE): The ages of the ninety-one (91) subordinates.
6. **Subordinate Sex** (SUBSEX): Genders of the ninety-one (91) subordinates.
7. **Subordinate Race** (SUBRACE): Forced choice designations of ninety-one (91) subordinates' race.

<table>
<thead>
<tr>
<th>L-S SIMILARITY INITIATING STRUCTURE</th>
<th>r= .162</th>
<th>r= .004</th>
<th>r= -.029</th>
<th>r= -.01</th>
</tr>
</thead>
<tbody>
<tr>
<td>p=.05*</td>
<td>p=.95</td>
<td>p=.72</td>
<td>p=.90</td>
<td></td>
</tr>
</tbody>
</table>

* Level of Confidence = .05 or greater
(8) **Subordinate Education** (SUBED): The highest grade of number of years of education completed by the ninety-one (91) subordinates.

There were several significant correlations between the control variables (see Table 3). The independent variable of similarity between leaders and subordinates on initiating structure is negatively correlated with leader's educational level. The correlation was -.174 and was significant at the .05 level of confidence. This significant correlation indicates that the higher the educational level of the leader, the greater the similarity between him (her) and his subordinates on the degree of structured definitions of roles and expectations. The negative correlation results from the definition of similarity (the lower the absolute difference between LBDQ-XII scores between leaders and subordinates, the higher the similarity index).

The dependent variable of SUB WORK was significantly correlated with two control variables, LEADSEX and SUBED. The correlation between SUB WORK and LEAD SEX was .183 and was significant at the .05 level of confidence. The positive relationship between LEADSEX and SUB WORK indicates that subordinates's satisfaction with their type of work is greater when their leader is female. SUBED and SUB WORK had a correlation of .198 and was significant at the .05 level of confidence. This indicates that the higher the subordinate education level, the higher their satisfaction score on work. The dependent variable of supervision is related to leader sex and leader education. The correlation between SUB SUPERVISION and LEADSEX indicates that subordinate satisfaction with supervision was greater with female leaders. The correlation between SUB SUPERVISION and LEADED was .174 and was significant at the .05 level of confidence. This indicates that subordinate satisfaction with supervision increases as the educational level of the leaders increases. The relationship between LEADSEX and SUB CO-WORKERS indicates greater satisfaction between subordinates and their co-workers when the leader is female. The relationship between the dependent variable, SUB CO-WORKERS, and SUBAGE indicates that the degree of satisfaction with co-workers increases as age increases. Due to the large number of control variables that were significantly correlated with the independent and dependent variables, multiple regression analysis was used to account for the effects of the control variables on the dependent variables in this study.

**TABLE 3: PEARSON CORRELATION OF CONTROL VARIABLES WITH MEASURES OF LEADER-SUBORDINATE SIMILARITY (N = 125) AND THE SUBORDINATES ‘ JOB SATISFACTION (N=91)**

<table>
<thead>
<tr>
<th></th>
<th>LEAD</th>
<th>LEAD</th>
<th>LEAD</th>
<th>LEAD</th>
<th>SUB</th>
<th>SUB</th>
<th>SUB</th>
<th>SUB</th>
</tr>
</thead>
</table>
**Control Variables:**

- **LEADAGE** - Age of Leader
- **SUBAGE** - Age of Subordinate
- **LEADSEX** - Sex of Leader
- **SUBSEX** - Sex of Subordinate

---

<table>
<thead>
<tr>
<th></th>
<th>AGE</th>
<th>SEX</th>
<th>RACE</th>
<th>ED</th>
<th>AGE</th>
<th>SEX</th>
<th>RACE</th>
<th>ED</th>
</tr>
</thead>
<tbody>
<tr>
<td>L-S SIMILARITY</td>
<td>r=.129</td>
<td>r=.009</td>
<td>r=.059</td>
<td>r=.006</td>
<td>r=.059</td>
<td>r=.056</td>
<td>r=-.030</td>
<td>r=.019</td>
</tr>
<tr>
<td>IN CONSIDERATION</td>
<td>p=.13</td>
<td>p=.90</td>
<td>p=.49</td>
<td>p=.93</td>
<td>p=.48</td>
<td>p=.51</td>
<td>p=.72</td>
<td>p=.82</td>
</tr>
<tr>
<td>L-S SIMILARITY</td>
<td>r=.039</td>
<td>r=.043</td>
<td>r=.136</td>
<td>r=.174</td>
<td>r=.014</td>
<td>r=.055</td>
<td>r=.110</td>
<td>r=.077</td>
</tr>
<tr>
<td>IN INITIATING STRUCTURE</td>
<td>p=.64</td>
<td>p=.61</td>
<td>p=.11</td>
<td>p=.05*</td>
<td>p=.86</td>
<td>p=.51</td>
<td>p=.19</td>
<td>p=.36</td>
</tr>
<tr>
<td>SUB WORK</td>
<td>r=.100</td>
<td>r=.183</td>
<td>r=.006</td>
<td>r=.039</td>
<td>r=.070</td>
<td>r=.082</td>
<td>r=.155</td>
<td>r=.198</td>
</tr>
<tr>
<td></td>
<td>P=.24</td>
<td>p=.05*</td>
<td>p=.94</td>
<td>p=.64</td>
<td>p=.41</td>
<td>p=.33</td>
<td>p=.17</td>
<td>p=.05*</td>
</tr>
<tr>
<td>SUB PROMOTION</td>
<td>r=.160</td>
<td>r=.072</td>
<td>r=.067</td>
<td>r=.006</td>
<td>r=.056</td>
<td>r=.150</td>
<td>r=.136</td>
<td>r=.039</td>
</tr>
<tr>
<td></td>
<td>p=.66</td>
<td>p=.40</td>
<td>p=.43</td>
<td>p=.93</td>
<td>p=.51</td>
<td>p=.07</td>
<td>p=.11</td>
<td>p=.64</td>
</tr>
<tr>
<td>SUB SUPERVISION</td>
<td>r=.11</td>
<td>r=.214</td>
<td>r=.030</td>
<td>r=.174</td>
<td>r=.024</td>
<td>r=.010</td>
<td>r=.082</td>
<td>r=.041</td>
</tr>
<tr>
<td></td>
<td>p=.89</td>
<td>p=.05*</td>
<td>p=.72</td>
<td>p=.05*</td>
<td>p=.77</td>
<td>p=.90</td>
<td>p=.33</td>
<td>p=.62</td>
</tr>
<tr>
<td>SUB CO-WORKERS</td>
<td>r=.134</td>
<td>r=.210</td>
<td>r=.048</td>
<td>r=.055</td>
<td>r=.169</td>
<td>r=.006</td>
<td>r=.032</td>
<td>r=.087</td>
</tr>
<tr>
<td></td>
<td>p=.12</td>
<td>p=.05*</td>
<td>p=.58</td>
<td>p=.52</td>
<td>p=.05*</td>
<td>p=.94</td>
<td>p=.70</td>
<td>p=.31</td>
</tr>
</tbody>
</table>

* Level of Confidence = .05 or greater
LEADRACE= Race of Leader
SUBRACE= Race of Subordinate
LEADED = Educational Level of Leader
SUBED = Educational Level of Subordinate

With the influence of the control variables accounted for, a clearer indication of the association between independent and dependent variables results. Multiple regression analysis also determines the order and magnitude of the influence that each variable has on the dependent variable. And it also yields the proportion of the variation in the dependent variables which was attributable to the independent variables, leader-subordinate similarity on consideration and leader subordinate similarity on initiating structure. The multiple regression analysis of the relationship between leader-subordinate similarity and subordinates' job satisfaction accounting for control variables is presented in Table 4 and 5.

TABLE 4: MULTIPLE REGRESSION ANALYSIS OF THE RELATIONSHIP BETWEEN LEADER-SUBORDINATE SIMILARITY IN INITIATING STRUCTURE (N = 125) AND SUBORDINATES' JOB SATISFACTION ACCOUNTING FOR THE LEADERS' AND SUBORDINATES' AGE, SEX, RACE AND EDUCATIONAL LEVEL (N = 91)

<table>
<thead>
<tr>
<th>CONTROLS</th>
<th>SUB WORK</th>
<th>SUB PROMOTION</th>
<th>SUB SUPERVISION</th>
<th>SUB CO-WORKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>R Square</td>
<td>.1592</td>
<td>.0935</td>
<td>.0746</td>
<td>.0893</td>
</tr>
<tr>
<td>R Change</td>
<td>.1592</td>
<td>.0935</td>
<td>.0746</td>
<td>.0893</td>
</tr>
<tr>
<td>F</td>
<td>2.67</td>
<td>1.46</td>
<td>1.15</td>
<td>1.35</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>L-S SIMILARITY IN CONSIDERATION</th>
<th>SUB WORK</th>
<th>SUB PROMOTION</th>
<th>SUB SUPERVISION</th>
<th>SUB CO-WORKERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>R Square</td>
<td>.1697</td>
<td>.0928</td>
<td>.0757</td>
<td>.0909</td>
</tr>
<tr>
<td>R Change</td>
<td>.0105</td>
<td>-.0007</td>
<td>.0011</td>
<td>.0016</td>
</tr>
<tr>
<td>F</td>
<td>2.55*</td>
<td>1.28</td>
<td>1.03</td>
<td>1.23</td>
</tr>
</tbody>
</table>

* Level of Confidence = .05 or greater

TABLE 5: MULTIPLE REGRESSION ANALYSIS OF THE RELATIONSHIP BETWEEN LEADER-SUBORDINATE SATISFACTION
The findings of the multiple regression analysis indicated that once the effects of the control variables were accounted for, the relationship between the independent variable of L-S SIMILARITY IN CONSIDERATION and the dependent variable of SUB WORK was significant at the .05 level of confidence. Also, the independent variable of L-S SIMILARITY IN INITIATING STRUCTURE and the dependent variable of SUB WORK is related at the .05 level of confidence. These findings indicate that when confounding variables are accounted for, that as similarity between leaders and subordinates in consideration and initiating structure increases, subordinate satisfaction with work increases.

**CONCLUSION**

The findings of this study show the importance of more sophisticated research designs in the study of the leadership-satisfaction relationship. The independent variable of leader-subordinate similarity was studied, and found to be significant with subordinates' satisfaction with the nature of the work. However, this significance was determined only after accounting for the demographic variables namely leaders' age, leaders' race, leaders' educational level, subordinates' age, subordinates' sex, subordinates' race and subordinates' educational level. Once the demographic variables were accounted for, the consideration and initiating structure dimensions of leadership showed a
significant relationship with subordinates' satisfaction with work. This is believed to be an important finding in light of the fact that subordinates in this study were engaged in an a public organization which has been perceived as very instrumental to society due to its critical and significant position for effective service deliveries of public amenities. They might regard that their work contributed in one way or another to the above noble missions.

The other variables of subordinate satisfaction with promotion, supervision and coworkers did not prove significant. It is difficult to hypothesize about the reasons for this lack of significance since no other research has been done examining the leader subordinate similarity-subordinate satisfaction relationship. One possible explanation is that there was additional confounding variables beyond the scope of this study. Another possibility is that the participants were not skilled or objective enough to accurately assess the variables being measured. Further, the participants could have felt uncomfortable in providing accurate information about themselves even though they were assured that their responses would be confidential. Finally, the "state of the art" in the accuracy of testing these variables may be a cause of the inconclusive results.

This research builds on a solid base of leadership studies. However, as many authors indicate, there is a need to develop more sophisticated and precise research designs. It is hoped that this study would be replicated with other samples. Finally, it is recommended that other variables be identified and investigated in the context of new construct of leadership theories.

REFERENCES

Aiken, Wilbur J.; Smits, Stanley J.; and Lollar, Donald S. "Leadership Behavior and Job Satisfaction in State Rehabilitation Agencies." Personnel Psychology, 25 (1972).


Jones, Allan P.; James, Lawrence R.; Bruni, John R; and Sells, S.B. "Black-White Differences in Work Environment Perception and Job Satisfaction and Its Correlates." Personnel Psychology, 30 (1997).


Stogdill, R.M. Manual for the Leader Behavior Description Questionnaire - Form XII. Columbus, Ohio State University, (1963).


