TRANSFORMATIONAL LEADERSHIP, GROUP SATISFACTION AND GROUP PERFORMANCE: EVIDENCES FROM PUBLIC SECTOR

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ABSTRACT

This study examines the effects of transformational leadership on group satisfaction and group performance. The model was tested with 175 employees comprising of 32 groups of four J&K public corporations namely, J&K State Forest Corporation, J&K State Transport Corporation, J&K State Industrial Development Corporation and J&K Cements limited. Results indicated that transformational leadership was positively related to group satisfaction and group performance. Transformational leadership must be taken into account in hiring, promoting, and training supervisors in organisational contexts. In particular, leadership development in public corporations would be benefitted from implementing combined training and coaching approaches based on the transformational leadership concept. Implications for theory and research of leadership at multiple levels as well as for practice are also discussed.

Keywords: Transformational leadership, group satisfaction and group performance

INTRODUCTION

Organisations embark on efforts to be successful in improving organisational performance and gain a competitive advantage in today's global marketplace. They employ groups and teams-work groups-to increase the efficiency and effectiveness of work processes, innovate and solve problems. Furthermore, organisations increasingly use communities of practice to enhance performance (Lesser & Storck, 2001). Executives, academicians, and performance consultants alike seek to better understand work groups given the critical role they play in efficiently delivering cost-effective, high-quality products and services that meet customer needs and improving organisational performance. Group work and teamwork has become a major focus in the business world and is as essential component in contemporary organisations, as evidenced by 82% of companies that have at least 100 employees reporting that they rely on teams and groups (Gordon, 1992). Leading teams yields several challenges, positive climate of trust and support, and coordinating information transfer and task completion (Zaccaro, Rittman, & Marks, 2001). Bliese, Halverson, & Schriesheim, (2002) posited that "the study of leadership is inherently multilevel in nature" (p. 4) but leadership research has been suffering from a dearth of deliberate theoretical and empirical differentiation between levels of analysis (Yammarino, Dionne, Chun, & Dansereau, 2005). Transformational leadership, defined as a style of leadership that transforms followers to rise above their self-interest and challenges them to move beyond their current assumptions (Bass and Riggio, 2006; Pieterse et al., 2010), has been identified as providing significant potential outcomes for individuals (Casimir, Waldman, Bartran, & Yang, 2006; Liu, Siu, & Shi, 2010) as well as returns for teams (Mathieu et al., 2008; Peus, Kerschreiter, Frey, & Traut-Mattausch, 2010; Schaubroeck, Lam, & Peng, 2011). But with some recent exceptions (e.g., Wang & Howell, 2010; Braun,

Peus, Weisweiler & Frey, 2013), research analyzing effects of transformational leadership at team levels is still scarce. Transformational leaders show individualized consideration, and are thereby able to recognize and respond "to each individual's abilities, aspirations, and needs" (Walumbwa, Orwa, Wang, & Lawler, 2005, p. 238). They adjust their inspirational motivation and idealized influence behavior to the specific goals and interests of individual followers (Chun et al., 2009), and ensure that each individual follower is able to voice concerns through intellectually stimulating behavior (Liu et al., 2010). Thus, the main aim of this study is to investigate relations between team perceptions of supervisors' transformational leadership and desired outcomes i.e, group satisfaction and group performance.

REVIEW OF LITERATURE

Literature across samples & cultures also provided widespread support for positive association between transformational leadership and higher performance both for individuals, groups and organisations (Elenkov, 2002) and intra organisational activities (Bass, 1997 and Viitanen & Konu, 2009). Transformational leadership enhances individual and team effectiveness, with recent research highlighting its potential for diverse teams (Kearney and Gebert, 2009). Some studies have demonstrated a link between transformational leader behaviour and diverse group /team effectiveness (e.g. Keller, 2006) while other researchers found no relationship (Wilson-Evered et al., 2001) and complicated, multifaceted effects (Jaussi and Dionne, 2003). This indicates the utility of complex pathways in explaining transformational leadership effects on groups/teams. Most of the previous studies focused on the effects of transformational leadership at an individual level (Judge & Piccolo, 2004; Judge, Woolf, Hurst, & Livingston, 2006) particularly, transformational leadership related positively to job satisfaction in numerous investigations (Judge & Piccolo, 2004; Podsakoff, MacKenzie, & Bommer, 1996; Podsakoff et al., 1990). However, some studies have also linked transformational leadership with various aspects of group performance namely team innovation (Waldman, 1940), team decision-making skills (Bass, 1994), cohesion and conflict management (Atwater and Bass, 1994) and social loafing (Kahai et al., 2000). Thus, there has been some effort to link team performance with transformational leadership (Bass, 1990; Yammarino, 1996) but the relationship between transformational leadership, group satisfaction and group performance is still scarce. As, employee satisfaction at group level is a required component of team/ group effectiveness (Stevens and Campion, 1994; Sundstrom et al., 1990), their inclusion into a leadership/team performance model is pertinent. So, an attempt has been made to examine the impact of transformational leadership on group performance and group satisfaction.

RESEARCH HYPOTHESES & CONCEPTUAL MODEL

After scanning the relevant literature, a conceptual framework developed for the study is as under:



Figure 1: Conceptual Model Showing Transformational Leadership, Group Satisfaction and Group Performance.

Transformational Leadership, Group Satisfaction And Group Performance: Evidences From Public Sector

In accordance with the above theoretical frame work, the following hypotheses have been developed for the study:

H1: Transformational leadership significantly affects group satisfaction.

H2: Group satisfaction significantly affects group performance.

RESEARCH METHODOLOGY

Both primary and secondary sources were used to collect the data. The primary data were gathered using questionnaire sub-divided into two sections- one general and other to elicit information about transformational leadership, group satisfaction and group performance. Items in the questionnaire were extracted from the research papers of Timothy et al., 2011; Fernandes, 2011 and Rad & Yarmohammadian, 2006 (transformational leadership), Kennedy, 2002 and Rehman & Mansoor, 2012 (group satisfaction), Langfred, 2000; Man & Lam, 2003 & Roe et al. 1995 (group performance). Information relating to these dimensions were collected on 5 point Likert Scale and questions relating to personal information and suggestions were kept open ended.

The study was conducted at four J&K public corporations in Jammu & Kashmir namely J&K State Forest Corporation, J&K State Transport Corporation, J&K State Inustrial Development Corporation and J&K Cements limited. The sample consisted of 242 enrolled employees (172 men; 70 women) working at Jammu Head offices. Effective response came from 175 employees. Thirty-two work groups (Table 1) with an average of 5.53 members (S.D.=1.72) were formed; the number of participants in the groups ranged from four to eight. Participants ranged in age from 18 to 58, and the average age was 35.44 (S.D. =4.68).

Treatment of multi-level nature of dataset

Because our dataset involves individuals within groups, two potential levels of analyses exist—the team and individual levels. However, as we theorized all of our variables to be team-level variables, we explored the appropriateness of aggregating individual responses to the team level. We examined the inter-rater agreement (rwg) and the inter-class correlation coefficients (ICCs) as well as their corresponding F-tests. For all the three constructs namely transformational leadership, group satisfaction as well as team performance, F-tests indicated significant between-group variance, and ICCs and rwgs exceeded acceptable levels for aggregation (Klein & Kozlowski, 2000; LeBreton & Senter, 2008), indicating sufficient withinteam agreement (transformational leadership: rwg = .79, ICC[1] = .34, ICC[2] = .69; group satisfaction: rwg = .80, ICC[1] = .22, ICC[2] = .55; team performance: rwg = .82, ICC[1] = .26, ICC[2] = .60). This evidence was sufficient to justify averaging individual responses to create team-level scores, which we then used in our hypothesis testing.

SCALE PURIFICATION AND EXPLORATORY FACTOR ANALYSIS

The data were analysed with the help of two softwares (SPSS and AMOS). Before data analysis, it was duly purified with the help of exploratory factor analysis and validated through confirmatory factor analysis (CFA). The detailed result of exploratory factor analysis is as under:

Scale purification - exploratory factor analysis

The multivariate data reduction technique of factor analysis was carried with Principal Component Analysis method along with orthogonal rotation procedure of varimax for summarising the original information with minimum factors and optimal coverage. The statements with factor loading less than 0.5 and eigen value less than 1.0 were ignored for

the subsequent analysis (Hair et al., 2010). The data reduction was performed in three steps. First, in the anti-image correlation the items with value less than 0.5 on the diagonal axis were deleted. In the second step, the extracted communalities were checked (amount of variance in each variable) and items with values less than 0.5 were ignored for the further analysis. In the third step, in rotated component matrices statements with multiple loadings and values less than 0.5 were deleted. The purification of three constructs were carried out separately and detailed outcome of factors of each construct is as under.

Measurement of transformational style

The KMO value was accorded at 0.690 and BTS measure at 2126.615 with df 45 and p =0.000 supports the suitability of data for pursuing factor analysis. Three factors, along with identified items emerged under it. Factor 1: Idealised influence: This factor comprised of five items namely, 'set high standards (MS = 4.10, S.D = 0.320, FL = 0.847)', 'meet expectations (MS = 4.09, S.D = 0.283, FL= 0.822)', 'enthusiastic towards employees (MS= 4.05, S.D = 0.514, FL = 0.773)', 'optimistic view (MS = 4.14, S.D = 0.343, FL = 0.753)' and 'meeting the challenging work (MS= 3.99, S.D = 0.589, FL = 0.716)'. The respective communalities values were found to be .735 .742, .598, .682, .536 respectively. The factor explained 31.116% of variance. Factor 2: Intellectual stimulation: The three items enticed were 'develop different ways (MS = 4.15, S.D = 0.368, FL=0. 907)', 'promote innovation & creativity (MS = 4.14, S.D = .348, FL = .904)', 'complete confidence in employees (MS = 4.20, S.D = 0.404, FL = 0.863)'. The values of communalities and MSA were more than 0.50. The factor demonstrated 25.174 % of variance. Factor 3: Individual consideration: This factor consisted of two items i.e. 'teach & coach the other staff members (MS= 3.94, S.D = 0.501, FL = 0.838)' and 'develop employees through individuation and mentoring (MS = 4. 05, S.D = 0.571, FL = 0.812)'. This factor explained 75.20 % of variance.

Measurement of group satisfaction: The KMO value was accorded at 0.819 and BTS measure at 1904.240 with df 28 and p = 0.000 supports the suitability of data for carrying factor analysis. Two factors, along with identified items emerged under it. Factor 1: Good interpersonal relationship: 'group members get clear feedback (MS = 4.16, S.D = 0.364, F.L = 0.904)', 'show concern for group member's career progress (MS = 4.11, S.D = 0.309, FL = 0.894)', 'members receive adequate support (MS = 4.20, SD = 0.404, FL = 0.829)', 'group members have an opportunity to fulfill their ability (MS = 4.11, S.D = 0.373, F.L = 0.779)', 'group members have ample opportunities for advancement (MS = 4.15, S.D = 0.393, FL = 0.768)', 'members have good interpersonal relationship (MS = 4.14, SD = 0.384, FL = 0.762)', were included in this factor. This factor explained 47.37 % of variance. Factor 2: Sense of achievement and important items under this head included 'members feel a sense of achievement from job (MS= 4.06, SD= 0.340, FL= 0.896)' and 'group members get compliments for doing job well (MS=4.11, SD=0.387, FL=0.892). The item-wise communality values arrived were 0.802 and 0.768 respectively.

Measurement of group performance: The KMO value was accorded at 0.789 and BTS measure at 817.074 with df 6 and p = 0.000 supports the suitability of data for carrying factor analysis. Two factors, along with identified items emerged . Factor 1: Improved work capacity: This factor comprised 'group participates in managerial affairs (MS= 3.93, SD= 0.584, FL=0.977)' and 'group members work capacity has improved (MS= 3.93, SD=0.605. FL=0.976)'. The values of communality for this factor were 0.955 and 0.955 respectively. Factor 2: Group

enthusiasm: This factor comprised 'group members handle tasks with proficiency (MS= 4.13, SD= 0.337, FL=0.835)' and 'group members work together (MS= 3.96, SD=0.505, FL=0.835)'. The values of communality for this factor were 0.698 and 0.698 respectively.

SCALE VALIDATION-CONFIRMATORY FACTOR ANALYSIS

Confirmatory factor analysis (CFA) uses a multivariate technique to test whether a pre specified relationship exist between the manifest & latent variables and how well measured variables represent a latent constructs (Demirbag et al., 2006). The items with standardised regression weights (SRW) less than 0.50 are deleted (Hair et al., 2006). Fitness of the model has been assessed with various global fit indices like goodness of fit index (GFI), adjusted goodness of fit index (AGFI), comparative fit index (CFI), normed fit index (NFI), root mean squared error (RMR) and root mean square error of approximation (RMSEA). For the model to be fit, at least one absolute criterion and one incremental fitness criteria should meet the prescribed limits (Hair et al. 2006).

Transformational Leadership

This construct consisted of three factors extracted from EFA, viz., 'Idealised influence',' Intellectual stimulation' and 'Individual consideration' comprising ten variables, later reduced to two factors i.e. 'Idealised influence', 'Intellectual stimulation' and eight variables after applying CFA. The model was found valid and reliable with the factor loadings above .70 and composite reliability of 0.99. The Cronbach's alpha value for 'Idealised influence' and 'Intellectual stimulation' were .745 and .678 respectively and the overall reliability for the construct is .696. The model predicted a good fit with chi-square statistics of 48.6, GFI= 0.979, AGFI= 0.948, CFI=0.983, RMR=0.007 and RMSEA=0.070.

Group Satisfaction

The group satisfaction comprised of two factors i.e. 'Good interpersonal relationship' having six statements and 'Sense of achievement' having two statements. The model predicted a good fit with chi-square statistics of 59.7, GFI= 0.966, AGFI= 0.932, CFI=0.978, RMR=0.0074and RMSEA=0.074.All the retained items loaded highly on the latent construct thereby satisfying convergent validity criteria.

Group Performance

The group performance comprised with two factors 'Improved work capacity' and 'group enthusiasm' having two items each under them. The model also yielded good results (GFI= 0.989, AGFI= 0.962, CFI=0.992, RMR=0.04 and RMSEA=0.074). All the retained items loaded highly on the latent construct.

VALIDITY AND RELIABILITY OF THE CONSTRUCTS

Convergent validity tests the extent to which the covariance between the two measures is uniquely explained by the trait factor (Lim and Ployhart, 2006). Thus, items that are indicators of a specific construct should converge or share a high proportion of variance in common. It can be established by factor loadings, variance extracted and Bentler-Bonnet Delta Coefficient. All the factor loadings were above .50, VE for all the constructs was above 0.50 and Bentler-Bonnet coefficient for all the scales were above 0.90, indicating strong convergent

validity. The variance extracted for the two constructs were higher than the squared correlation between them thereby proving discriminant validity of the constructs.

Reliability of the constructs have been checked through internal consistency by the application of Cronbach's alpha (Cronbach, 1951) as well as by extracting the composite reliability with the help of variance extracted. Alpha values equal to or greater than 0.70 indicate high construct reliability (Nunally, 1970 and O'Leary-Kelly & Vokurka, 1998). The alpha values for all the three scales ranged between 0 .78 to 0.84 which indicated that the scales are quite reliable.

DATA ANALYSIS AND INTERPRETATION

The hypothesized relationships among observed and latent variables were analyzed through Structural equation modeling (SEM) which is superior to ordinary regression models by incorporating multiple independent and dependent variables as well as hypothetical latent constructs. After running SEM, we examined significant relationships as depicted in Table 1. The goodness-of-fit index (GFI=0.956), adjusted goodness-of- fit index (AGFI=0.919), root mean square error of approximation (RMSEA=0.066) and standardized root mean square residual (RMR=0.014) were within the acceptable range. The other indices like normed-fit index (NFI), comparative- fit index (CFI) were above 0.9 therefore, it can be concluded that the model exhibits a reasonable fit to the data. The model consisted of two paths, which were found significant (RMR= .036, RMSEA= .063, GFI=.930, AGFI=.942 and CFI=.959). The first path traced the relationship between transformational leadership and satisfaction of employees. The standardized regression weight between the transformational style and satisfaction of employees (SRW=.61, p< .01) indicate significant relationship between the two, which confirmed the first hypothesis that transformational leadership is positively associated with satisfaction of employees. The rationale behind is that where the leaders are adaptive, develop different ways to encourage employees and shows complete confidence in them, this in turn results in employee satisfaction. The second path reflected that employee satisfaction had positive association with employee performance (SRW= .61, p<.01). The reason behind is that satisfied employees develop great work endurance and participate in managerial affairs. They handle the tasks with proficiency and develop competency in completing assignments in time.

Table 1: Overall Fitness

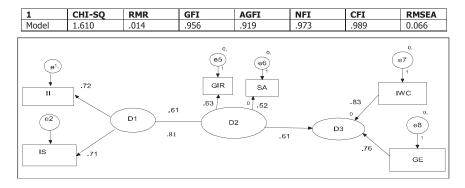


Fig 2: Hypotheses Testing Through SEM

II-Idealised influence, IS-Intellectual simulation, D1 Transformational leadership, D2- Group satisfaction, GIR-Good interpersonal relations, SA-Sense of achievement, D3-Group performance, IWC-Improved work capacity, GE-Group enthusiasm.

DISCUSSION, LIMITATIONS AND FUTURE RESEARCH

The study attempts to examine how transformational leadership predicts group satisfaction and group performance. Although some attention has been given to leadership of teams, but relatively little attention has been given to transformational leadership within or by teams. The main aim of this study is to move work that has been completed on the individual leadership of teams to the group or team level. The model of team performance offered by Braun, S., Peus Claudia, Weisweiler Silke & Frey Dieter (2013) serve as a basis for formulating our hypotheses and to set up the model tested in the current study. We also supplemented our theoretical framework with work completed by Shamir et al. (1993) and Avolio et al. (1996) to further substantiate our prediction that transformationally led groups would achieve a higher level of group performance over time.

Our study is not free of limitations that should be kept in mind when interpreting the findings. First, our results are predominantly based on questionnaire data, which may be subject to common source and common method biases. Second, a major strength of our study is the measurement of team performance via objective data. Third, our model was restricted to the positive influence of transformational leadership on team performance and group satisfaction. Thereby, we neglected (a) other forms of leadership, (b) mediators, and (c) potential downsides to the proposed relationships. Fourth, the study is restricted to the head offices of J&K Public Corporations operating in Jammu city only. Despite the stated limitations, this study makes several substantial contributions to multilevel theory and research. We demonstrated that transformational leadership enhances group satisfaction and group performance at team levels of analysis. There are a number of interesting avenues that can be pursued in subsequent research on team leadership. First, the results here need to be replicated on other samples that have a more diverse membership with respect to age, ethnicity, and work experience. Second, the measures of group leadership used here must be further refined, with specific emphasis on measuring the other forms of team leadership.

CONCLUSION AND STRATEGIC IMPLICATIONS

Based on the assumption that transformational leadership comprises individual- and team-focused behaviors (Wang & Howell, 2010) and that shared mental models in teams are likely to converge over time (Dionne et al., 2010), we studied the relationship between transformational leadership and relevant outcomes at team levels of analysis. The current study reaffirms the importance of examining the effects of team leadership on subsequent group performance. Results of the current study largely confirmed our hypotheses. First, a positive relationship between transformational leadership and group satisfaction was found. Further, a positive relationship of group's perceptions of supervisors' transformational leadership with group performance was discovered. This result is consistent with earlier claims to incorporate individual and team relations in leadership research (Schriesheim, Castro, Zhou, & DeChurch, 2006; Yukl, 1999). Our findings suggest that organizations should introduce training approaches that address transformational leader behavior at multiple levels (i.e., individual-directed and team-directed) in order to provide supervisors with necessary knowledge and

skills. Transformational leadership must be taken into account in hiring, promoting, and training supervisors in organisational contexts. In particular, leadership development in public corporations would be benefitted from implementing combined training and coaching approaches based on the transformational leadership concept.

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ANNEXURE

Table 1: List of sample corporations and respondents

S. No.	List of J&K Corporations	Sampling Technique	No. of Employees	Effective Response	No of Groups
1.	J&K State Forest Corporation	Census	114	71	12
2.	J&K State Road Transport Corporation	Census	48	44	5
3.	J&K Cement Limited	Census	40	28	6
4.	J&K State Industrial Development Corporation	Census	40	32	8
Total			242	175	32