

# **INVESTIGATING THE IMPACT OF GROUP PROCESS VARIABLES ON GROUP PERFORMANCE IN J&K PUBLIC CORPORATIONS**

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## **ABSTRACT**

*The paper investigates the impact of group process variables on group performance and mediating role of group leadership in the GPV-GP relationship. Data were collected from 114 groups working in head offices of J&K Public Corporations in Jammu. Results revealed the significant and positive effects of group process variables on the performance of public sector groups. However, group leadership acted as partial mediator between group process variables and group performance relationship.*

**Keywords : Group leadership, Cohesion, Potency, TMX, Group performance**

## **1. INTRODUCTION**

Group work and teamwork has become a major focus in the business world. It is an 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 for catering the individual needs for security, esteem, affiliation, power, identity etc. (Gordon, 1992). There is no accepted universal definition of work group/team in literature. One explanation for the inconsistencies may be that scholars and practitioners who study these arrangements come from distinct fields including business, psychology, sociology, human resources development and more recently, information technology. In any event, these informal and formal arrangements are becoming ever more popular. A 'work group' consists of individuals who see themselves and who are

seen by others as a social entity, who are embedded in one or more larger social systems and who perform tasks that affect others, such as customers or coworkers (Guzzo & Dickson, 1996; Hackman, 1987). Working in a team has specificities that distinguish it from working alone. Team members need to coordinate and synchronise their actions and every member has a critical role for their collective action. As task forces, project teams and quality circles become more prevalent in the corporate world, it becomes increasingly important to understand the factors that determine high performance and group-member satisfaction.

With the increasing popularity of groups and teams in organizations, the research related to group level variables has also gained momentum (Rosh et al., 2012; Hmieleski et al., 2011). The research idea generates from previous findings that group level variables affects group performance. This article is an attempt to find out the impact of group process variables (group leadership, group cohesion, group potency, team member exchange) on group performance. Henderson (1988) considered performance of groups as the normal engineering measures of efficiency, effectiveness and timeliness. Self-evaluation of performance has been widely adopted in the areas of organisational behaviour and human resources management. Bandura (1986) suggested that self-appraisals are valid predictors of performance as individuals are often the best judges of their own performance and by getting involved in a job or venture, they may become more motivated to improve their performance.

## **2. REVIEW OF LITERATURE**

Majority of the researchers after empirical investigation found positive impact of group level variables on the employee performance, group performance and organisational performance and considered organisational groups as the basic building blocks of successful organisational performance (Baninajarian & Abdullah, 2009; Greer et al., 2011). Borgatta et al. (1956) in their study on college students identified fourteen dimensions of group behaviour namely, autonomy, control, flexibility, hedonic tone, homogeneity, intimacy, participation, permeability, polarisation, potency, size, stability, stratification and viscosity. Other researchers focused on additional dimensions namely, information sharing, coordination, trust (Marks et al., 2001), intimacy (Rosh et al., 2012), group leadership (Hmieleski et al., 2011), clarity (Sharma & Bajpai, 2014), communication and team member exchange (Guzzo & Shea, 1992; Wekselberg et al., 1997). Sharma and Bajpai (2014) indicated that public sector employees exhibit a higher level of teamwork as compared to employees of private sector organisation. They further revealed that teamwork is an important determinant of the job satisfaction among public sector employees in India. Group potency is a belief that a group/team has about its general performance and effectiveness across multiple tasks and is found to be positively correlated with work group effectiveness (Stajkovic et al., 2009), team performance (Mathieu et al., 2008), perceived organisational support (Shelton et al., 2010) and group leadership (Sivasubramaniam et al., 2002). Sivasubramaniam et al. (2002) also proved the mediating role of group potency in the team leadership and performance relationship. Pearce and Conger (2003) argued that group shared leadership is one of the best ways to encourage team based work which

also supports employee empowerment and group performance. It positively influences objective team performance, self ratings of team effectiveness, manager and customer ratings of team effectiveness, functional teams and team based knowledge work (Pearce et al., 2004). Team member exchange (TMX) is a construct that focuses on the premise that instead of jobholder positions, relationships are the building blocks of organisation structure and have substantial influence on individual attitudes, group behaviour, employee satisfaction (Seers, 1989). Group members who communicate regularly and attentively with colleagues are found to achieve better group decision making influencing organisational performance (Kumarasinghe & Hoshino, 2010). It is, therefore, imperative for policy makers and public managers to provide necessary information to the employees as well as groups and empower them for advancing public-service motivation and enhancing organisational performance. Group cohesion, also known as group cohesiveness, is a widely studied construct in the group dynamics literature. Group cohesion is 'the strength of member's desire to remain in a group and their commitment to it' (Hellreigel et al., 1999). The more group members are attracted to the group, the more they will be willing to invest in pursuing the group's goals.

### **3. HYPOTHESES DEVELOPMENT**

Groups and teams require an organisational environment which supports them because teams are interdependent with the overall organisation. Successful teams need to be viewed as an appropriate way to perform the task by managers and other parts of the organisation (Spreitzer et al., 1997). Group leadership and team member exchange are needed to successfully manage the internal and external relations of the team and orient the team toward its goals (Day et al., 2006). The group development literature has examined cohesion and potency on the group level (Burke et al., 2014) and considered them as significant predictors of group work (Hardin et al., 2007). Campion and his colleagues, in their 1993 model, proposed that factors related to job design, group composition, organisational context and process (potency, social support, workload sharing and communication within groups) are related to work group effectiveness. Researchers also considered the influence of team member exchange at the group level (Herman & Dasborough, 2008). A number of studies have also examined the effects of group potency on team performance and effectiveness (Gully et al., 2002). Thus, it is hypothesised that:

**H<sub>1</sub>:** Group process variables significantly affect group performance.

**H<sub>2</sub>:** Group leadership mediates the group process variables and group performance relationship.

### **4. RESEARCH DESIGN AND METHODOLOGY**

#### **4.1 Data Collection**

Both primary and secondary sources relevant for gathering requisite information pertaining to the research problem have been used in the study. Primary data based on the first hand information have been collected through self-modified and well-

structured questionnaire. Secondary sources investigated are books, newspapers and relevant journals. Unpublished & published information from internet and magazines is also used to substantiate literature survey and primary information.

#### **4.2 Technique of data collection**

Questionnaires consisted of two sections, one general and other to elicit information about dimensions of group process variables, group leadership and group performance. The data were collected on five point Likert scale (5<--1>) where 5 denotes strongly agree and 1 denotes strongly disagree. Suggestions were kept in open ended form. After pretesting, the questionnaire was further modified and final survey was conducted on the groups working in the head offices of J&K public corporations located in Jammu city. Census method was followed in contacting 1189 employees (group members) working in the head offices of all the eighteen J&K public corporations, out of which 888 employees responded effectively.

The organisational units/ section/ department are treated as groups in this study and the number of groups came to be 114. The groups are selected on the basis of two criteria that is, they had a minimum of three members each and they work interdependently (Langfred, 2005). The groups included management groups, supervision groups, supporting groups, mechanical section groups, legal section groups, finance section groups etc.

Group-level phenomena can be measured in a variety of ways and in the organisational sciences, the most common approach is to collect individual survey responses and aggregate those to the group level (Klein et al., 2001). In this study, the group scores are obtained by aggregating the individual scores on each item within the groups.

#### **4.3 Analytical strategy**

Prior to using the group averages, however, the validity of aggregating individual scores should be investigated by the reliabilities of responses among employees in the same group (Hofmann & Stetzer, 1998). Inter-rater reliability, referred to as ICC (1), compares between-group to within-group variances using the individual ratings of each respondent. The reliability of means, referred to as ICC (2), assesses the relative status of between-group and within-group variances using the average ratings of respondents within each group (Schneider et al., 1998). After obtaining ICC(1) and ICC(2) for various constructs, rwg (j) statistics are computed which assesses the consistency of responses within groups, and higher consistency (i.e.,  $\geq .70$ ) suggests that responses represent the properties of the group or organisational unit (Klein et al., 2000). The mean rwg (j) values, ICC (1) and ICC (2) values for various constructs of the study are either close to or above the conventionally acceptable values of 0.70, 0.12 and 0.60 respectively (LeBreton & Senter, 2008). On the basis of these results, it was concluded that the aggregation of various constructs are justified and they can be used as group level variables (Table 1).

### **5. SCALE PURIFICATION –EXPLORATORY FACTOR ANALYSIS**

The data reduction is performed in three steps. First of all, in the anti-image correlation the items with value less than 0.5 on the diagonal axis are deleted. In the second step, the

extracted communalities are checked (amount of variance in each variable) and items with values less than 0.5 are ignored for the further analysis. In the third step, in rotated component matrices statements with multiple loadings and values less than 0.5 are deleted. Further, value of Kaiser-Meyer-Olkin (KMO) above 0.70 and significant Bartlett's test of Sphericity (BTS) is considered as an indicator of appropriateness of using exploratory factor analysis (Malhotra & Birks, 2007). Beside these, variance explained (VE) above 50% is also taken into consideration. The detailed explanation of the factors emerged after applying EFA separately on each constructs is summarised in Table 2.

## **6. SCALE VALIDATION- CONFIRMATORY FACTOR ANALYSIS**

Confirmatory factor analysis (CFA) is way of testing how well measured variables represent a latent constructs (Hair et al., 2009). Fitness of the model has been assessed with various global fit indices like goodness of fit index (GFI), adjusted goodness of fit index (AGFI), normed fit index (NFI), Tucker- Lewis Index (TLI), comparative fit index (CFI), Root mean squared error (RMR) and Root mean square error of approximation (RMSEA). The model fit indices of various constructs is summarised in Table 3. Further, composite reliability and validity of various constructs has also been checked (Table 4).

## **7. HYPOTHESES TESTING**

### **7.1 Impact of group level variables on group performance**

In the hypothesised model, the relationship between group process variables and group performance has been tested. The effect of group process levels on group performance is determined in which model fit indices reveal model to be moderate fit ( $\chi^2/df=3.235$ , RMR=0.038, GFI=0.961, CFI=0.945, AGFI=0.911, NFI=0.922, RMSEA=0.079). The results show that group behaviour significantly and positively affects group performance (Fig.1) and hence hypotheses 1 '*Group process variables significantly affect group performance*' is accepted.

### **7.2 Mediating effects of group leadership on group process variables and group performance**

Application of the Baron and Kenny's (1986) procedure revealed partial mediation effect of group leadership (Fig. 2 & Table 5). This is due to the reason that when mediator is entered between GPV and GP, the direct relationship got reduced but still significant (SRW=0.50,  $p<.05$ ). Thus, the hypothesis  $H_2$  is partially accepted.

## **8. DISCUSSION**

In line with the study results, Sharma & Bajpai (2014) found that group level variables significantly and positively affects group performance. It has been found that by anticipating and predicting each other's needs, team goals, individual team member tasks and the coordination of the team through a common understanding and expectations of performance, group leadership helps in enhancing group performance and effectiveness (Salas et al., 2008). When members of a group are attracted to other

members of the group and when they are motivated to stay in the group, it will enhance their job satisfaction as well as their productivity (Carron, 2002). A strong belief in group's effectiveness largely contributes in creating a positive interpersonal climate and greater cooperation among group members which will further enhance the overall group performance. Consistent with study findings, Graen and Cashman (1975) argued that relationships are the building blocks of organisational structures and the extent to which group members experience relationships with their co-workers is positively associated with their job satisfaction and performance (Haynie, 2012).

## **9. CONCLUSION AND MANAGERIAL IMPLICATIONS**

In the present globalised economy, team-based approach is seen as the crucial ingredient of post-bureaucratic organisations and the key to efficiency and competitiveness in the global economy. For ensuring successful group behaviour in public sector corporations, open discussions & interactions along with informal meetings must be encouraged among group members. Further, work appreciation, suitable mechanism for receiving and redressing group members' grievances promptly & satisfactorily, group member's involvement in decision making, group reward system, learning culture, fairness in organisational activities, challenging & innovative work environment, work flexibility etc. are also required for encouraging employees to perform outstanding at individual level, group level and corporation level. In addition to these, the existing literature also enticed some strategies to enhance the level of performance such as organising social gatherings, providing on the job and off the job training facilities to employees, encouraging them to make use of RTI effectively, improving infrastructural facilities, encouraging multi-tasking approach and skill development programmes to motivate and innovate employees.

## **REFERENCES**

- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Prentice-Hall, Inc. (<http://ceo.usc.edu/pdf/G9827355.pdf>). Last accessed: 20-05-12.
- Baninajarian, N., & Abdullah, Z. (2009). Groups in context: A model of group effectiveness. *European Journal of Social Sciences*, 8(2), 335-340.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173.
- Borgatta, E. F., Cottrell, L. S., & Meyer, H. J. (1956). On the dimensions of group behaviour. *Sociometry*, 223-240.
- Burke, S. M., Davies, K. M., & Carron, A. V. (2014). Group cohesion in sport and exercise settings. *Group Dynamics in Exercise and Sport Psychology*, 147.
- Campion, M. A., Medsker, G. J., & Higgs, A. C. (1993). Relations between work group characteristics and effectiveness: Implications for designing effective work groups. *Personnel psychology*, 46(4), 823-847.

- Carron, A. V., Bray, S. R., & Eys, M. A. (2002). Team cohesion and team success in sport. *Journal of sports sciences*, 20(2), 119-126.
- Day, D. V., Gronn, P., & Salas, E. (2006). Leadership in team-based organisations: On the threshold of a new era. *Leadership Quarterly*, 17(3), 211-216.
- Gailbra Kozlo Gordon J. (1992). Work teams: How far have they come? *Training*, 59-65. (<http://ceo.usc.edu/pdf/G9827355.pdf>). Last accessed: 20-05-12.
- Gladstein, D. L. (1984). Groups in context: A model of task group effectiveness. *Administrative Science Quarterly*, 29 (4), 499-517.
- Gordon J. (1992). Work teams: How far have they come? *Training*, 59-65.
- Graen, G., & Cashman, J. F. (1975). A role-making model of leadership in formal organisations: A developmental approach. *Leadership Frontiers*, 143, 165.
- Greer, L. L., Caruso, H. M., & Jehn, K. A. (2011). The bigger they are, the harder they fall: Linking team power, team conflict and performance. *Organisational Behaviour and Human Decision Processes*, 116(1), 116-128.
- Gully, S. M., Incalcaterra, K. A., Joshi, A., & Beaubien, J. M. (2002). A meta-analysis of team-efficacy, potency and performance: Interdependence and level of analysis as moderators of observed relationships. *Journal of Applied Psychology*, 87(5), 819.
- Guzzo, R. A., & Dickson, M. W. (1996). Teams in organisations: Recent research on performance and effectiveness. *Annual Review of Psychology*, 47(1), 307-338.
- Guzzo, R. A., & Shea, G. P. (1992). Group performance and intergroup relations in organisations. *Handbook of Industrial and Organisational Psychology*, 3, 269-313.
- Hackman, J. R. (1987). The design of work teams. *Ariel*, 129, 32-197.
- Hair, J. F., Black, W. C., Babin & B. J., Anderson (2009). *Multivariate data analysis*. Upper Saddle River, Pearson Prentice Hall, NJ.
- Hardin, A. M., Fuller, M. A., & Davison, R. M. (2007). I know I can, but can we? Culture and efficacy beliefs in global virtual teams. *Small Group Research*, 38(1), 130-155.
- Haynie, J. J. (2012). Core-self evaluations and team performance: The role of team member exchange. *Small Group Research*, 43(3), 315–329.
- Hellreigel, D., S.E. Jackson and J.W. Slocum (1999). *Management*. Cincinnati, OH: South-Western College Publishing. ([http://www.freepatentsonline.com/article/Journal-Managerial\\_Issues/101938342.html](http://www.freepatentsonline.com/article/Journal-Managerial_Issues/101938342.html)). Last accessed: 03-09-14.
- Henderson, J.C. (1988). Involvement as a predictor of performance in I/S planning and design. Center for Information Systems Research (working paper No. 175), Sloan School of Management, Cambridge, MA.

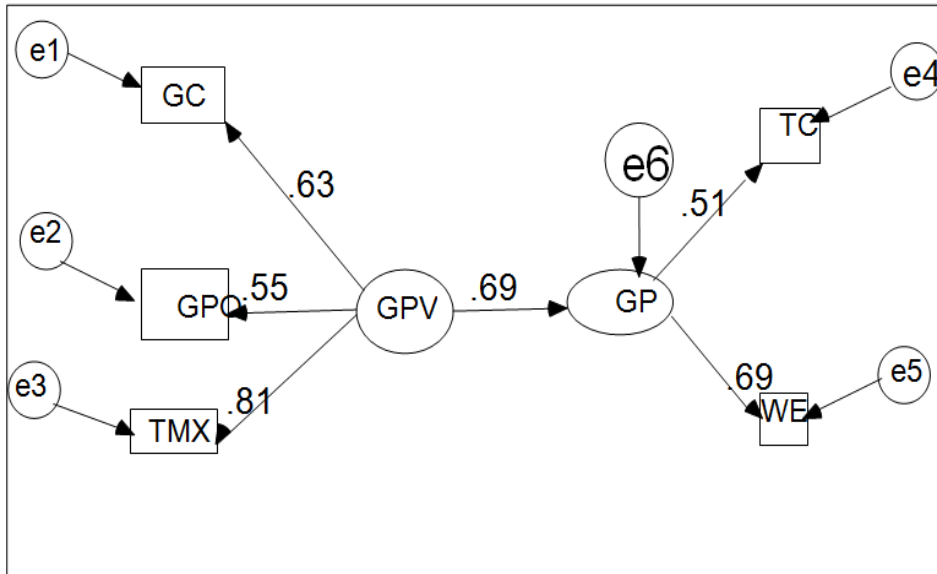
- Herman, H. M., & Dasborough, M. T. (2008). A study of exchange and emotions in team member relationships. *Group & Organisation Management*, 33(2), 194-215.
- Hmieleski, K. M., Cole, M. S., & Baron, R. A. (2012). Shared authentic leadership and new venture performance. *Journal of Management*, 38(5), 1476-1499.
- Hofmann, D. A., & Stetzer, A. (1998). The role of safety climate and communication in accident interpretation: Implications for learning from negative events. *Academy of Management Journal*, 41(6), 644-657.
- James, L. R. (1982). Aggregation in estimates of perceptual agreement. *Journal of Applied Psychology*, 67, 219-229.
- Klein, K. J., & Kozlowski, S. W. (2000). From micro to meso: Critical steps in conceptualising and conducting multilevel research. *Organisational Research Methods*, 3(3), 211-236.
- Klein, K. J., Conn, A. B., Smith, D. B., & Sorra, J. S. (2001). Is everyone in agreement? An exploration of within-group agreement in employee perceptions of the work environment. *Journal of Applied Psychology*, 86(1), 3.
- Kumarasinghe, S., & Hoshino, Y. (2010). The role and perceptions of middle managers and their influence on business performance: The case of Sri Lanka. *International Business Research*, 3(4), 3.
- Langfred, C. W. (2005). Autonomy and performance in teams: The multilevel moderating effect of task interdependence. *Journal of Management*, 31(4), 513-529.
- LeBreton, J. M., & Senter, J. L. (2007). Answers to 20 questions about interrater reliability and interrater agreement. *Organisational Research Methods*, 11(4), 815-852.
- Malhotra, N. K., & Birks, D. F. (2007). *Marketing Research: An Applied Approach*. Pearson Education.
- Marks, M. A., Mathieu, J. E., & Zaccaro, S. J. (2001). A temporally based framework and taxonomy of team processes. *Academy of Management Review*, 26(3), 356-376.
- Mathieu, J., Maynard, M. T., Rapp, T., & Gilson, L. (2008). Team effectiveness 1997-2007: A review of recent advancements and a glimpse into the future. *Journal of Management*, 34(3), 410-476.
- Pearce, C. L., & Conger, J. A. (2003). All those years ago. *Shared Leadership: Reframing the Hows and Whys of Leadership*, 1-18.
- Pearce, C. L., Yoo, Y., & Alavi, M. (2004). Leadership, social work and virtual teams: The relative influence of vertical versus shared leadership in the nonprofit sector. In R. E. Riggio, S. Smith-Orr, & J. Shakely (Eds.), *Improving Leadership in Non-Profit Organisations* (pp. 180-204). San Francisco, CA: Jossey-Bass.
- Rosh, L., Offermann, L. R., & Van Diest, R. (2012). Too close for comfort?



Distinguishing between team intimacy and team cohesion. *Human Resource Management Review*, 22(2), 116-127.

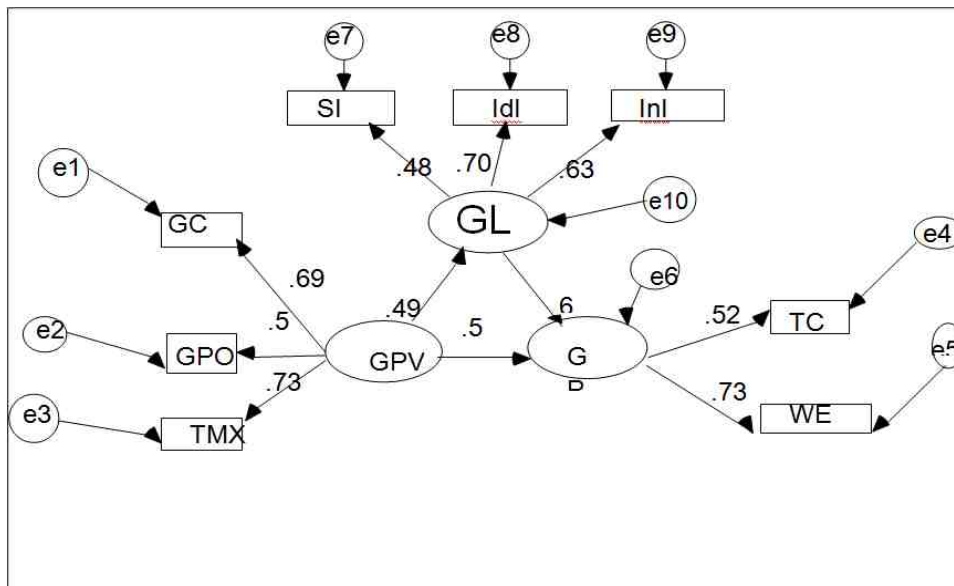
- Salas, E., Cooke, N. J., & Rosen, M. A. (2008). On teams, teamwork and team performance: Discoveries and developments. *Human Factors: Journal of the Human Factors and Ergonomics Society*, 50(3), 540-547.
- Seers, A. (1989). Team-member exchange quality: A new construct for role-making research. *Organisational Behaviour and Human Decision Processes*, 43(1), 118-135.
- Sharma, J. P., & Bajpai, N. (2014). Teamwork: A key driver in organisations and its impact on job satisfaction of employees in Indian public and private sector organisations. *Global Business Review*, 15(4), 815-831.
- Shelton, P. M., Waite, A. M., & Makela, C. J. (2010). Highly effective teams: A relational analysis of group potency and perceived organisational support. *Advances in Developing Human Resources*, 12(1), 93-114.
- Sivasubramaniam, N., Murry, W. D., Avolio, B. J., & Jung, D. I. (2002). A longitudinal model of the effects of team leadership and group potency on group performance. *Group & Organisation Management*, 27(1), 66-96.
- Spreitzer, G. M., Kizilos, M. A., & Nason, S. W. (1997). A dimensional analysis of the relationship between psychological empowerment and effectiveness satisfaction and strain. *Journal of Management*, 23(5), 679-704.
- Stajkovic, A. D., Lee, D., & Nyberg, A. J. (2009). Collective efficacy, group potency and group performance: Meta-analyses of their relationships, and test of a mediation model. *Journal of Applied Psychology*, 94(3), 814.
- Wekselberg, V., Goggin, W. C., & Collings, T. J. (1997). A multifaceted concept of group maturity and its measurement and relationship to group performance. *Small Group Research*, 28(1), 3-28.

**Fig 1: Impact of group process variables on group performance**



**Key:** GPV= Group process variables, TMX= Team member exchange, GC=Group cohesion, GPO= Group potency, GP= Group performance, TC= Task completion, WE= Work efficiency, e1-e6 are the error terms of manifest variables and latent constructs.

**Figure 2: Mediating role of group performance in GPV-OP relationship**



Key: GPV= Group process variables, GL=Group leadership, SI= Supportive impact, IdI= Idealised influence, InI= Inspirational influence, TMX= Team member exchange, COH= Cohesion, PTCY= Potency, GP= Group Performance, TC= Task completion, WE= Work efficiency,  $\epsilon_1$ - $\epsilon_9$  are the error terms of manifest variables and latent construct

**Table 1: Inter-rater reliability and inter-rater agreement within group**

Construct/Dimension	ICC(1) (Criteria $\geq 0.12$ )	ICC(2) (Criteria $\geq 0.60$ )	rwg (j) (Criteria $\geq 0.70$ )
Group leadership	.21	.64	.89
Cohesion	.18	.63	.84
Potency	.19	.64	.78
Team member exchange	.13	.61	.90
Group performance	.57	.82	.85

**Table 2: Summary of results from scale purification of constructs using rotated component method**

Factor - Wise Dimension	Mean	Standard Deviation	Factor Loading	Variance Explained	Alpha ( $\alpha$ )	Communality Value
<b>GROUP LEADERSHIP</b>						
<b>F1:Supportive impact</b>				<b>28.851</b>	<b>.986</b>	
1. My colleagues are supportive when mistakes are made	3.697	.704	.788			.741
2. My colleagues praise for my good performance	4.347	.734	.767			.734
3. My colleagues encourage me to search for solutions to my problems without supervision	3.982	.623	.677			.673
<b>F2: Idealised impact</b>				<b>22.565</b>	<b>.750</b>	
1. My colleagues enhances each other's commitment based on shared vision, empowerment & inspiration	4.312	.607	.871			.766
2. My collaboration with the other members in the team works well	3.890	.703	.829			.745
<b>F3: Inspirational impact</b>				<b>20.786</b>	<b>.838</b>	
1. My colleagues instill willingness in each other to exert their extra effort	4.046	.615	.937			.930
2. My colleagues provides sense of challenge & motivation to change	4.037	.623	.936			.929
3. My colleagues encourages critical feedback of themselves	3.918	.629	.657			.503

<b>TEAM MEMBER EXCHANGE – TMX</b>						
<b>F1: Effective team- member relationship</b>				<b>27.043</b>	<b>.721</b>	
1. Co-workers understand my problem	4.248	.623	.860			.742
2. I am flexible switching jobs with co-workers	4.422	.612	.860			.745
<b>F2: Mutual intimacy</b>				<b>13.418</b>	<b>.686</b>	
1. Others let me know when I affect their work	4.035	.776	.791			.695
2. I let others know when they affect my work	4.224	.518	.663			.629
3. Other members recognise my potential	4.132	.612	.573			.560
<b>F3: Cooperative attitude</b>				<b>12.667</b>	<b>.691</b>	
1. I suggest a better work method to my co-workers	2.297	.732	.673			.651
2. My co-workers are willing to finish work that is assigned to me	2.229	.740	.799			.705
<b>F4: Positive attitude</b>				<b>12.288</b>	<b>.714</b>	
1. Others help me learn better work methods	4.263	.607	.880			.825
2. I often ask my co-workers for help	4.040	.759	.778			.733
3. Others help me know what they expect from me	4.308	.657	.781			.712
<b>GROUP COHESIVENESS</b>						
<b>F1: Group feedback</b>				<b>25.446</b>	<b>.845</b>	
1. This group works well together	3.835	.729	.848			.737
2. You receive feedback & help from other group members.	4.002	.716	.815			.743
3. You consider your colleagues as your personal friends	4.014	.634	.747			.811
<b>F2: Unity in group</b>				<b>22.848</b>	<b>.988</b>	
1. All members of your group show friendliness & cooperativeness towards each other	3.753	.851	.989			.985
2. Your group is united in trying to reach its goal for performance	3.754	.854	.982			.982
<b>F3: Informal relationship</b>				<b>22.567</b>	<b>.705</b>	
1. You would like to work with this group again	3.911	.731	.795			.670
2. You spend time with colleagues outside the working hours	4.184	.391	.780			.794
3. Personal feelings are shared among group members	4.253	.508	.667			.550
<b>POTENCY</b>				<b>60.827</b>	<b>.717</b>	
1. Our group is very productive	4.031	.446	.890			.836
2. Our group can solve any problem	4.032	.521	.841			.824
3. Our group is a high performing group	4.032	.195	.805			.781
4. Our group does high quality work	4.04	.717	.752			.740
5. No task is too tough for our group	3.753	.594	.749			.722

GROUP PERFORMANCE						
<b>F1: Task completion</b>				<b>39.702</b>	<b>.705</b>	
1. Group members work together to complete group assignments	4.064	.607	.868			.721
2. Our group members complete designated tasks in a timely manner	4.024	.540	.814			.696
3. Our group deserves a positive evaluation	4.361	.578	.744			.578
<b>F2: Work efficiency</b>				<b>23.089</b>	<b>.682</b>	
1. Our group produces high quality work	3.829	.772	.797			.785
2. Our group completes the work effectively	4.203	.716	.776			.743

**Table 3: Fit indices of measurement models**

Dimension/ Construct	$\chi^2/df$	GFI	AGFI	CFI	NFI	TLI	RMSEA	RMR
Group leadership	2.597	0.981	0.959	0.984	0.985	0.984	0.057	0.005
Team member exchange	1.272	0.966	0.919	0.974	0.968	0.952	0.081	0.079
Cohesiveness	4.408	0.985	0.965	0.985	0.981	0.978	0.062	0.015
Potency	3.125	0.981	0.935	0.987	0.954	0.938	0.070	0.035
Group performance	3.708	0.993	0.975	0.940	0.922	0.890	0.056	0.026

**Table 4: Reliability and validity of scales**

Dimension/Construct	AVE	CR
Group leadership	0.706	0.786
Team member exchange	0.521	0.758
Cohesion	0.787	0.983
Potency	0.628	0.796
Group performance	0.517	0.934

**Table 5: Mediating role of group leadership in GPV-GP relationship**

Steps	Relationship	SRW
1	GPV → GP	0.69 (p<0.01)
2	GPV → GL	0.53 (p<0.01)
3	GL → GP	0.69 (p<0.01)
4	GPV → GL → GP	0.50 (p<0.05)