FACTOR ANALYSIS APPROACH TO STUDY STRESS MITIGATION CAPABILITY OF A WELL TRAINED TEAM LEADER

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ABSTRACT : *A leader in any Organization has a very challenging task at all levels. However, as the leaders' stature rises with elevation in his position; his responsibilities towards members of his team and affiliated organization also go up. This naturally demands more commitment and higher dedication as a result leader faces higher stress levels than team members. However, at the same time leaders are expected to have higher controlling sense, a psychological factor that acts as stress-buffering mechanism. The demanding role of the team leader who has to manage man, material and team is quite obvious. A team leader is expected to handle exceeding demands as compared to available resources. In these conditions a well trained and motivated team leader who does not let stress to take toll on his judgment, decision making and efficiency plays vital role in steering his team members out of stressful situations. The purpose of this study is to identify major aspects that enable well trained and motivated leaders to handle stress while leading the team and capabilities that are pivotal to steer team members out of stressful situations without the negative impact of stress affecting the efficiency and morale of the team members. The aspects that are considered in present study to ascertain team leader's capability to manage stress is training, personal qualities, professional competence and confidence level of leader to handle stress. The study has been conducted based on a 12 items questionnaire. 300 persons who had exposure to working in varied kind of environments due to transferable nature of job as part of organizational obligations participated in this study. The collected data was analyzed using Factor analysis method using Statistical Package for Social Sciences (SPSS) on Windows platform. The results indicated that training; leadership attributes and self-confidence of team leader are major factors that mitigate stress on leader's judgment, decision making and efficiency.*

KEY WORDS: Stress, Leadership, Leader, Team and Exploratory Factor Analysis.

1. INTRODUCTION

As a Leader rises to higher position of leadership in team, expectations from peers and subordinates increases manifold and so does the demand. Since stress is the outcome of increasing demands exceeding resources (Lazarus et al, 1984), the leader has to be well prepared to face such situations. Besides, while managing demand and resources, leader has to also manage his team members efficiently as they are the key instruments in achieving organization goals and objectives. However, managing a team invites stressful situations too. Psychologist, Harry Levinson (1981) highlighted that "managing others creates unending stress". Although leadership stress is not a new phenomenon in day to day life, however, it is on the rise at a fast pace. The manifestation of stress among leaders is primarily due to physiological and psychological reasons (Sherman et al, 2012). However, it is imperative on the part of the leader to work relentlessly for organization objectives and goals without letting stress taking toll on his judgment and decision making capability which may otherwise prove deterrent to the efficiency of his Team. Cohen (2001) termed stress as a perception phenomenon which emerges in unbalanced situations as a result of person's ability to execute the assigned task successfully. Since leaders face such situations more often, as they have to manage exceeding demands within available resources. Therefore, managing team members to consistently work for organization objectives and goals without letting stress impair his decision and judgment making capability is a major challenge which leader has to face quite often. The Study was designed to identify the main factors that facilitate minimization of stress on leader's judgment, decision making, and efficiency and drives his team members to work consistently for organizational goals and objectives without letting stress taking toll on their performance. Therefore, there was a need to adopt a tool that could identify common latent factors in the dataset with a goal to find the common factors that will account for the correlations (McDonald, 1985). Factor Analysis approach (Young & Pearce, 2013) appeared to be most appropriate choice as it operates on the notion that measurable and observable variables can be reduced

to fewer latent variables that share a common variance and are unobservable (Bartholomew, Knott and Moustaki, 2011).

2. METHODOLOGY

The samples for this study comprised of 300 respondents who had exposure to working in varied environments due to transferable nature of job. The groups of such people were identified and they were contacted over a period of two weeks. A questionnaire comprising of 12 items was distributed to each member of the group and their responses were collected. The questionnaire contained 12 questions on aspects of training, motivation and personal qualities of leader which are likely to mitigate stress among its team members. The questionnaires were distributed to respondents personally by the author after assuring the confidentiality and they were asked to respond to questionnaire honestly on five point Linkert scale. The scale used for grading was; 1- disagree strongly, 2- disagree, 3- undecided, 4- agree and 5- strongly agree. The data was analyzed using SPSS (version 20) software on Windows platform. Descriptive and inferential statistics were computed using the software and results were analyzed using factor analysis. Factor analysis uses mathematical procedures to simplify interrelated measures to facilitate discovery of patterns in a set of variables (Child 2006). The attempt to discover the simplest method for interpretation of observed data is called parsimony, and this is essentially the aim of factor analysis (Harman, 1976). Exploratory Factor Analysis (EFA) approach was used to analyze data in this study as all conditions to perform factor analysis were met in the undertaken study. As Study intended to identify the number of factors influencing variables (items contributing to mitigation of stress) and analyze which variables 'go together' (DeCoster, 1998).

3 DATA ANALYSIS

In Data Analysis, prior to extraction of the factors, database was required to be checked for patterned relationship to ensure that issue of data multicollinearity does not exist. This was achieved by performing Bartlett's Test of Sphericity (Bartlett, 1950) using SPSS on Windows platform. The results of test are shown at table 1. Since Bartlett's Test of Sphericity is significant ($p<.05$) therefore data has patterened relationship and it is suitable for factor analysis as Kaiser-Meyer-Olkin(KMO) sampling adequacy figure is 0.795 which is above .50 cut-off. The descriptive statistic of each item is shown at table 2 and total variance of items shown at table 3 gives number of significant factors. In the labeled section "Rotation Sums of Squared Loadings," in table 3, four factors with eigen values greater than 1 has emerged. The first factor accounts for 18.071 % of variability, factor 2 accounted for 16.910 % of variability, factor 3 accounted for 16 % and factor 4 accounted for 9.507% of variability in all 12 variables (items). The Scree plot inspection (Tabachnik and Fidell, 2007) shown at figure 1, indicates that departure from linearity coinciding with a 4 factor result. Therefore, this Scree test indicates that the data should be analysed for 4 factors. Rotated factor gives better interpretation as unrotated factors are ambiguous. Since the goal of rotation is to attain an optimal simple structure which attempts to have each variable load on a few factors as possible, primarily to simplify the interpretation by defining a distinct cluster of interrelated variables (Rummel, 1970 and Cattell,1973).Therefore, using Varimax rotation with 25 iterations for convergence and significant loading cut-off of .50, a rotated component matrix which gives factor loading for each variable is obtained and shown at table 4.

Table1: KMO and Bartlett's Test (SPSS Output)

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.795
Bartlett's Test of Sphericity	Approx. Chi-Square	890.092
	df	66
	Sig.	.000

Table 2: Descriptive Statistics (SPSS)

Items	Mean	Std. Deviation
Well trained team leader easily manages stress in difficult situations and environments.	3.34	1.05
Level of stress management among team members is directly proportional to team leaders capability to function in difficult situations without getting his judgement and decision making impaired.	3.88	.74
The ability of team members to take stress depends on team leader's capability to absorb the stress.	4.06	.71
Teams with good team leaders are capable of absorbing the negative impact of stress and function optimally in all environments.	4.13	.71

A well trained team with good team spirit but with mediocre team leader can still perform in non-demanding environments.	3.65	.93
Team members expect their leaders to handle stress better than them.	4.05	.71
Under stressful conditions trained and motivated leaders make inspiring decisions.	3.85	.81
Ambitious but hollow team leaders are more likely to compromise on the righteous path when faced with stress caused due to ambiguity of assessment parameters. This in turn causes immense stress to his team members.	4.17	.76
Team members will willingly follow a team leader who is competent and loyal to them, irrespective of the difficulty of service conditions.	4.37	.71
Even more than professional competence, empathy and compassion are required in a team leader in order to discern and manage stress in his subordinates.	4.08	.79
I am capable of handling the stress that is impacting me.	4.15	.66
I am capable of handling the stress that is impacting my team members.	4.09	.69

Table 3: Total Variance (SPSS Output)

Component	Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %
1	2.169	18.071	18.071
2	2.029	16.910	34.981
3	1.920	16.000	50.982
4	1.141	9.507	60.489

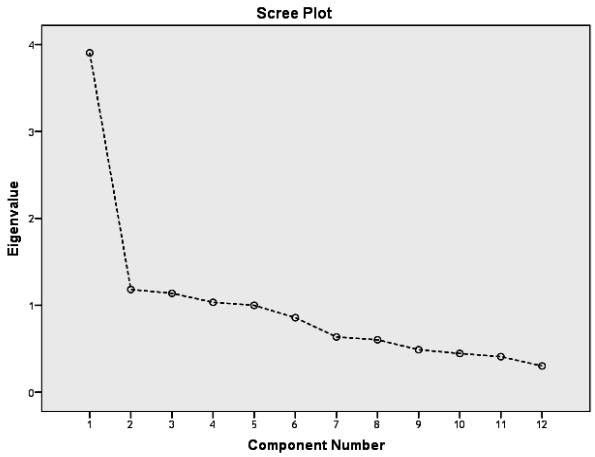

Figure 1: Screen Test Criterion (SPSS Output)

Table 4: Rotated Component Matrix (SPSS Output)

Rotated Component Matrix				
	Component			
	1	2	3	4
Level of stress management among team members is directly proportional to team leader's capability to function in difficult situations without getting his judgement and decision making impaired.				.92
The ability of team members to take stress depends on team leader's capability to absorb the stress.				
Teams with good team leaders are capable of absorbing the negative impact of stress and function optimally in all environments.	.70			
A well trained team with good team spirit but with mediocre team leader can still perform in non-demanding environments.	.62		.41	
Team members expect their leaders to handle stress better than them.	.56			
Under stressful conditions trained and motivated leaders make inspiring decisions.	.51	.50		

Ambitious but hollow team leaders are more likely to compromise on the righteous path when faced with stress caused due to ambiguity of assessment parameters. This in turn causes immense stress to his team members.	.62			
Team members will willingly follow a team leader who is competent and loyal to them, irrespective of the difficulty of service conditions.		.80		
Even more than professional competence, empathy and compassion are required in a team leader in order to discern and manage stress in his subordinates.		.77		
I am capable of handling the stress that is impacting me.		.60		
I am capable of handling the stress that is impacting my team members.			.83	
Level of stress management among team members is directly proportional to team leaders capability to function in difficult situations without getting his judgement and decision making impaired.			.80	

4. RESULT

Rotated component matrix as shown at table 4, shows factor loading for each item numbers. Four factors have emerged in this study. The item numbers 3,4,5,6 and 7 are loaded on factor 1, which is labeled as well trained leader is capable of mitigating stress of team members. The aspects of ability of leader to absorb stress, well trained leader mitigates negative aspect of stress on team members, expectation of team members from leader to absorb the stress and making of inspired decision even in stressful conditions have been strongly loaded on factor 1. The item numbers 8, 9, and 10 are loaded on factor 2 which has been labeled as Personal leadership qualities. The aspects of hollow but ambitious leader likely to compromise on the righteous path thereby causing stress, whereas in contrary leader with empathy and compassion for his team member is likely to discern the stress among his team members are strongly loaded on factor 2. The item numbers 11 and 12 are loaded on factor 3 which has been labeled as Confidence level of leader. The belief of handling stress that is impacting self and subordinates are strongly loaded on factor 3. The item number 1 is loaded on factor 4 which has been labeled as trained leader manages stress appropriately in difficult situations and environments. The aspect of trained leader capability to manage stress in difficult environment and situations is strongly loaded on factor 4. The Item number 6 is a complex variable as it loads on to both factor 1 and 2, respectively. Therefore, the results obtained in the study, clearly indicates that trained leader, his personal leadership qualities (loyalty, empathy and compassion) and self-confidence are major aspects that mitigate stress among his team members.

5. CONCLUSION

The Team leader is the back bone of his organization. He has to work for organizational goals and objectives and at the same time also manage his team of people who consistently work for the same goals and objectives. It is imperative on the part of leader to ensure that stress doesn't impair performance of his team members in any situation and environment. This entails that the leader is well trained and motivated besides having confidence in his capabilities to handle his own stress and amongst the team members. The leader's personal qualities like; loyalty, empathy and compassion towards his team members are equally important to mitigate the level of stress among the team members which steers them out of stress in difficult situations and environmental difficulties.

6. REFERENCES

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