Relationship between Stress and Team Performance

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Abstract:

    The purpose of this paper was to analyze the effect of stress on team performance. In order to explore this issue, the method used for data collection was the questionnaire. This was distributed among 100 subjects. The result of the investigation acknowledges that stress is negatively correlated with team performance. When a person becomes exposed to some stress, his performance is affected negatively and he/she loses their ability to accomplish his tasks. The amount of this relationship has a greater dependency on to how much stress the person becomes exposed to.

Key words: Stress, Team Performance

Introduction:

Today in the global setting it is an important issue that stress can have an adverse effect on an individual's performance at work place as well as proceeding to team and to the whole organization negatively. Also according to McGrath (1976) stress is the interaction among three terms, namely perceived demand, perceived ability to manage and the importance of managing perceived demand. But unfortunately no team has

succeeded to find a way to quit stress although many ideas have been proposed. A stressful individual must be suffering from low concentration to a particular work which spells out his work into subtracting standard. The team may burnout and experience low motivation, which can affect their quality of life as well as their profitability. Today a great attention is given to managing stress because if stress is not managed decently among team members then they will not accomplish their goals with their greatest potential. According to Callister (1997) students are relieved as soon as they find a way to solve a problem e.g. stress. In the present time it is an important issue to lower the aspects of causing stress because lowering stress, either on individuals or on team members, may drive them to achieve their organizational goals satisfactorily. Satisfaction of a team member is a key point for the success of the entire team performance.

The aim of this paper is to evaluate the interrelationship between the two variables, stress and team performance. The evaluation of this study clarifies the gap in three different ways. The first one is that previous researchers have not considered stress and team performance together in order to determine the relation between them, but rather they have chosen different parameters. The second one is that the study is different from other researchers such as that of Callister (1997), which shows the effect of stress only for a member or individual. This paper briefs about the impact of stress on the whole team. Also this study differs from that of Driskell (1999) which uses the method to perform in routine-stress and highly-stressed situations, while this study evaluates the relationship between stress and team performance through the method of using questionnaires. The third one is that this research between stress and team performance has not performed in Pakistan or in other countries in the past.

If one wants to fulfill the needs of a team or organization to save money, interest rate, improve yield and sales, it is

necessary to upgrade the work life of the team by reducing stress. Through polishing a team in the way described before, one must find applications which include team creativity, efficient communication and reduce anxiety.

This research paper will help students, employees, teams and companies to manage stress. To exemplify, a student in stress will not be able to perform efficiently and effectively. The same is the case with any team or company. A relieved student can perform more efficiently in his studies, research and team work. Similarly the student can perform better later in any industry or organization as a team member.

Literature Review:

Stress

According to Lane Price and Tepas (2001) and Laflamme (2008) stress is that factor, action, case or that situation which generally causes to destroy the working ability of an individual. Stress usually causes serious problems including discouragement, bad health and lowers the academic record of a particular person.

There are two types of stress that are usually considered: the one is caused by hazardous stimuli and the other one is used for engineering applications. In neuropsychiatry the term stress was recognized in 1930 by a scientist named Hanselye. He examined that when an organism becomes exposed to hazardous stimuli, it experiences what is called General Adaptation Syndrome (GAS). This GAS is usually composed of three phases: the first phase is called alarm phase in which the organisms become able to recognize the entity that gives stress or hazard to its body, the second phase is called resistance phase, in this phase the organism tries to stand against the stress and the third phase is called the exhaustion phase in which the body becomes unable to do the everyday activities. The third phase usually crushes the

immune system and the adrenal gland, which causes many problems, like the problem related to the circulation of blood in the human heart and some mental problems. Leblane (2009), Shirom (1998), Kavanagh(1981) observed that when an individual experiences some stress, this may also manifest in the form of several factors like increasing of heart beat or lack of sleep.

Team Performance

Hans Dooreward (2002) states that performance in a team based work largely depends upon the proficiency of the employees to plan, manage and control the team tasks and the team performance that is always associated with the team. All these are balanced in the shape of team roles among the members of the team.

Shea and Guzzo (1992) state that there is the fashion toward organizing the work around the team rather than around the individuals. Team is usually considered as the building block of most organizations, and for this purpose organization gives huge amount in order to achieve better performance. Meihuizen (2000) claims that the team based work enhances not only the productivity level but also the quality on both level of an organization and team. According to John H. Bradley (1997), the differences in team performance are usually caused by the differences in the personality type composition between two teams. Vijfeijken (2004) states that in most organizations there is a fashion, usually a type of pay is developed for the purpose of planning performance, which leads the individuals in order to make them able to do work in a team. The interdependence is one of the basic terms that can influence the team performance like the relation between tasks and outcomes, interdependence and performance is usually affected by team members, thus the relationship between the efficient team and task can be made successful by good behavior and attitude of the team member. Hayo C. Baarspul

(2009) observes that within a team, the behavior of team members to each other relates to the degree to which the decision making process involved in any party is enhanced.

Link between Stress and Team Performance

Strokes and Kite (1994) state that several factors, including stress, can influence the competencies of a group for solving problems. According to Kathleen D. Vonk, Canon-Bower & Salas (2008), a lower level of stress on a body will afford better team performance and so it will increase the rate of productivity and other issues. The pressure of performance acts faster, as the double edge knife sword, for the knowledge and potency of a team. Flor & Turk (1989) assert that some of the operation teams use faithfulness simulators and many programs like the act of escaping and resistance and ideal situations for the purpose of studying the effect of stress on the individual or group in solving problem.

Driskell (1999) states that the focus on the individual subjected to continuous stress moves towards self more strongly than towards the team which shifts his/her attention from the organization work. Dutton (1981) and Larsen(2001) claim that when the individual comes under stress his mental performance and decision making ability become affected and then he suffers from performance inelasticity or narrow thinking, the team members under stress lose their ability to overcome complicated situation and to control the information. Matthias Sutter (2011) considers that the team will be always successful by assigning the team members to matching tasks, for this purpose different type of experiments being used to study how to allocate roles to the team, how this will influence the performance of a team. The performance of team becomes better when the right role is allocated to the team and the team members are allowed to give their opinion about their decision.

H1: Stress is negatively related to Team Performance.
H0: Stress is not negatively related to Team Performance.

Methodology:

The following methods are used for sampling conveniently: a sample of 100 members of a government university was selected for collecting the essential data for the evaluation of this study. These members were all the students of different study programs. Only self-administered questionnaires were used. After collecting these questionnaires, all of the 100 questionnaires were received back. The return rate was 100%. The questionnaire consists of a total of 11 items out of these, 7 items were for stress and 4 items were for team performance. Stress items were adopted and adapted from the questionnaire of stress used by international stress management association. Out of 19 items only 7 items are selected, Team performance items were adopted from the questionnaire of team performance used by quality values research and consulting services. The accurate values of the system are presented below in metrics. In order to test the hypothesis the system of correlation and the analysis of regression were used.

Study Model

Team Performance	→	Stress
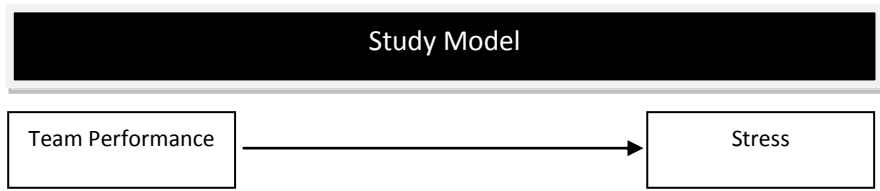
		Frequency	%age
Gender	**Male**	95	95
	Female	5	5
Age	**20-29**	98	98
	30-39	2	2
	40-49	0	0
Education	**Bachelors**	99	99
	Masters	1	1
	M.phil.	0	0
	Ph.D.	0	0
Experience	**1-4**	13	13

	5-9	0	0
	10 & above	0	0

Table: 1: Demographics

Results and discussion:

1. Correlation Analysis:

In the below metrics the correlation among the two variables, namely stress and Team Performance was evaluated. The results in the metrics indicate that the two variables are strongly correlated with each other in each and every aspect. During the analysis, stress will be denoted by St, and Team Performance will be denoted by Tp.

	St1	St2	St3	St4	St5	St6	St7	Tp1	Tp2	Tp3	Tp4
St1	1	.139	.344**	.244*	.090	.182	.149	.101	-.051	-.003	-.098
St2	.139	1	-.174	-.061	-.069	.084	.291**	.209*	.082	-.027	.105
St3	.344**	-.174	1	.364**	.286**	.372**	.086	-.202*	.131	-.023	-.176
St4	.244*	-.061	.364**	1	.260**	.265**	-.035	-.275**	-.259**	-.257**	-.270**
St5	.090	-.069	.286**	.260**	1	.226*	-.096	-.120	-.152	-.271**	-.316**
St6	.182	.084	.372**	.265**	.226*	1	-.013	-.025	-.044	.012	-.060
St7	.149	.291**	.086	-.035	-.096	-.013	1	.310**	.089	-.017	.009
Tp1	.101	.209*	-.202*	-.275**	-.120	-.025	.310**	1	.253*	.406**	.104
Tp2	-.051	.082	.131	-.259**	-.152	-.044	.089	.253*	1	.349**	.276**
Tp3	-.003	-.027	-.023	-.257**	-.271**	.012	-.017	.406**	.349**	1	.242*
Tp4	-.098	.105	-.176	-.270**	-.316**	-.060	.009	.104	.276**	.242*	1

Table: 2: Correlation Matrix
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The above table shows the correlation between item to item.

	St	Tp
St	1	-0.201*
Tp	-0.201*	1

** Correlation is significant at 0.05 level of significance
Table 3: Correlation Matrix

The correlation matrix as shown in the table above shows that stress is negatively correlated with team performance with the values of -0.201 at the significance level of 0.05. Hence it is found that the degree of relationship between stress and team performance is determined to be -0.201 at the significance level of 0.05 which is also negative.

2. Regression Analysis:

For testing the study hypothesis, the analysis of regression was used in fourth step. For the purpose of examining *H1* and *H0* of the study, the regression was run by keeping stress as independent and team performance as dependent variable. This gives the following results.

Variables	B	t-stat	Significance
St	-.128*	-2.036	0.044
R square = 4.1 %		**Adjusted R square = 3.1%**	

** Correlation is significant at 0.05 level of significance
Table 4: Regression Analysis

The above table clarifies that the Beta of stress is -0.128, which is negative, and its significance is 0.044 which is greatly significant at 0.05 level of significance. Also it is shown clearly that the t.stat of stress was found to be -2.036. This is also one of the best indications that the variable is strongly significant. The fitness of the whole model is about 4.1% (adjusted R square = 3.1%). So we can say that by increasing one unit of stress it will cause a decrease of 0.128 in team performance. Hence from the result we discover that stress has negative impact on team performance, so we accept *H1*.

Recommendations and particular implications:

From the results of above study the following few recommendations are drawn:

- Allow or give chance to the team member or individual to reach his/her full potential for doing work by continuous learning and performance support.
- For successful management it is required to have constant communication with team members. So to keep constant communication with members in order to relieve stress and manage when and how to talk with a specific person, by doing so the individual is motivated towards doing work successfully.
- The team member must be allowed to take decision himself in certain circumstances which, by analysis, decreases stress on the individual in critical situation.
- Create such a working environment which is collaborative because when there is some contribution among team members then the stress is distributed among members and will enhance their productivity.
- It is necessary for the head of a department to create a sense of ownership because if an individual considers the success of an organization as his own success then he/she must be satisfied from his/her job and hence the amount of stress is reduced.

Limitations and future research:

There are some limitations to the above study. Among these limitations one of the primary limitation is that the study sample size was not sufficient. So that is why the researchers who want to research on such relationship are directed to use larger sample for this study. Another limitation is that the data is collected from a few students of university among them a few

students are female and the rest of them are male. So the researchers are advised to collect data equally both from males and females.

Also one of the main limitations of the study was the shortage of time and resources due to which the difficulty comes to collecting the data from each and every organization and from every field of life. Future studies are directed to collect data from more fields in order to find better results.

Besides, the research was limited to only two variables. Future researchers are advised to implement some other variables in such a relationship, such as team work and team performance, ownership and team performance etc.

The last major limitation is that the data was collected from only one university of Pakistan. So future researchers are directed to collect data from various organizations all over the world in order to generalize the relationship between these two variables.

Conclusion:

From the study it is concluded that the stress has always a negative impact on the performance of a person; if the amount of stress increases then the performance of the person decreases. When an individual or a team comes under stress then it loses its mental as well physical ability for accomplishing their respective tasks.

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