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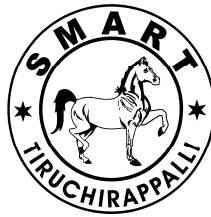
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# STRESS MANAGEMENT - AN EMPIRICAL ANALYSIS

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## *Abstract*

*This study is aimed at exploring various strategies adopted by the BPO Personnel to overcome the stress, based on their perception. Stress Management warrants much attention nowadays, particularly in the corporate sector; more so in the IT Sector. While a minimum level of stress is harmless, even necessary to bring out the best in human beings at work, too much of stress will wear the employee out, upset his work life balance and simply damage him totally. The study was based on primary data collected by using pre-structured questionnaire. To evaluate the stress managing strategies, t-test and F - test were used. First, reliability of the items in the scale measuring the Stress Management was evaluated using Reliability / Item Analysis with Cronbach's Alpha Coefficient. Next, Principal Component Method of Factor Analysis, with Varimax Rotation, was used to identify the major characteristics underlying the Stress Management.*

**Keywords :** Occupational Stress, BPO Personnel, Stress Management

## **Introduction**

Stress, which is seen as modern society's illness and reported by professionals from different sectors, has effects on people's behavior, communication and efficiency. Stress is described as a relationship between individuals and their environment that is appraised as dangerous and evaluated as beyond their ability to deal with it. It is not the stressor that causes stress but the individual's perception and emotional reaction to it because stress is a physiological, non-specific reaction, to external or internal demands. In the Information Technology Industry, particularly in the BPO Sector, the likelihood of being exposed to very

stressful situations is more evident among the professionals. The problems encountered by the IT professionals may differ from those faced by their peers in other industrial sectors. A career in IT is increasingly marked by struggles against deadlines, rapid mobility across projects and frequently changing relationships, collapsing inter-personal relationships at work and the shock style of conflict management, temporal dissociation, the 'night here, morning there' syndrome (since most Indian software companies are clients of US-based concerns, they have to work at night in India while it is day in the US), misuse of free time and growing infectious cynicism that can lead to despair, distress, pressure, and finally stress.

## Statement of the Problem

Stress is the latest killer. It is the cause, rather than the effect, of several physical, mental and emotional problems. When such a situation prevails in the IT Sector, a software professional has to face all these situations and in addition, he/she often has to take care of his/her kith and kin, elders, and other responsibilities in the family. Maintaining the balance between work and life becomes a tough task. Therefore, facing and coping with stress is very important for IT professionals for their effective functioning in office and active participation in the society. Hence this study is aimed at finding out the Stress Management Strategies adopted by the IT professionals in the BPO Sector. As a study of this kind could offer valuable insight to the relevant people, an attempt has also been made to identify the extent of influence socio-economic and personal factors have on Stress Management of IT professionals.

## Objectives

In order to gain a better understanding of Stress Management and its role in moderating the effect of occupational stress on job satisfaction, the following objectives were framed for the present study.

- 1) To study the underlying dimensions of occupational stress and extent of such stress among BPO personnel in Puducherry
- 2) To identify the sources of occupational stress
- 3) To evaluate the Stress Management (stress coping strategies) among the BPO personnel
- 4) To find out the extent of relationship between occupational stress and job satisfaction

- 5) To identify the ways of (stress management) moderating the relationship between occupational stress and job satisfaction
- 6) To summarize the findings, give conclusion and offer necessary suggestions

## Hypotheses

Based on the objectives of the study, the following hypotheses were framed.

- 1) There is no significant difference in the occupational stress among BPO personnel, with different demographic characteristics.
- 2) There is no significant relationship between the stress management strategies and the age of the BPO personnel.
- 3) Gender does not play a significant role in the relationship between stress management and the respective gender of the respondents.
- 4) The marital status of the respondents does not have significant impact on the stress coping techniques of the BPO staff.
- 5) The relationship between the stress management methods and the religious beliefs of the BPO workers is not significant.
- 6) Significant relationship is not present between stress managing techniques of the BPO personnel and their caste backgrounds.

## Research Methodology

### Data Collection

The data used in this study were primary data, collected from randomly selected sample of BPO personnel in Puducherry, using a well-structured questionnaire. Simple Random Technique was adopted to select the required sample among the BPO personnel population in the study area. To measure occupational stress

and stress management (stress coping strategies), various statements with 5 point and 3 point Likert type scales were included in the questionnaire. There are 60 items (statements) to measure the occupational stress with scale ranging from “Never feel”, “Occasionally feel”, “Sometimes feel”, “Frequently feel” to “Always feel”. To measure the stress coping strategies, 17 items, with 3 point scale, with “never”, “sometimes” and “always”. The job satisfaction was measured with 9 factors, using the scale with responses, “Extremely satisfied”, “Satisfied”, “Somewhat Satisfied”, “Neither Satisfied nor Dissatisfied”, “Somewhat Dissatisfied”, “Dissatisfied”, “Extremely Dissatisfied”.

#### **Analysis of Stress Management**

First, reliability of the items in the scale, measuring the stress management, was evaluated by using Reliability / Item Analysis, with Cronbach’s Alpha Coefficient. Next, Principal Component Method of Factor Analysis, with Varimax Rotation, was used to identify the major characteristics underlying the Stress Management. The relationship between primary strategies adopted for managing stress and any one of the demographic, job-oriented and personality characteristics was evaluated by comparing the group mean scores by using t-test (for two group comparison) and one-way ANOVA (for more than two group comparison).

A multivariate statistical technique called Canonical Correlation Analysis was also carried out to identify the relationship between two sets of variables, one set for dependent and another for independent. In this study, the dependent set was the stress management factors and

independent set was demographic, job-oriented and personality characteristics. In the following section, results of the above analysis are tabulated and inferences are drawn.

To know which item belongs to which factor, the factor analysis was adopted with factor loadings. The factor loading is nothing but the correlation between extracted factor and scale items, which ranges between -1 and +1. **Table-1** shows factor loadings of each item, with four extracted factors after varimax rotation.

Varimax Rotation is an orthogonal rotation of the factor to maximize the variance of the squared loadings of a factor (column) on all the variables (rows) in a factor matrix, which has the effect of differentiating the original variables by the extracted factor. Each factor will tend to have either large or small loadings of any particular variable. A varimax solution yields results which make it easy to identify each variable with a single factor. This is the most common rotation option. The rotation actually helps to make the output more understandable and usually necessary to facilitate the interpretation of factors. The sum of eigen values is not affected by rotation but rotation will alter the eigen values (and percent of variance explained) of particular factors and will change the factor loadings.

From the results of factor analysis after varimax rotation, the eigen values of valid factors were changed to 4.52, 2.43, 1.80 and 1.14 while leaving the total variance the same (65.91%). In terms of percentage, the variance explained by first, second, third and fourth factor is 30.11, 16.18, 12.01 and 7.61 after varimax rotation.

From factor loadings, it is understood that the first factor recorded high correlation with the first item (item 1) (0.83), indicating that the first factor possesses the maximum variance of this item. Following item 1, item 3 (0.82), 7 (0.80), 11 (0.78), 10 (0.75), 6 (0.74) and 2 (0.71) registered high loading, with first factor compared to their loadings with other three factors. Similarly, the second factor with items 14 (0.78), 15 (0.74), 16 (0.68) and 17 (0.66), third factor with items 13 (0.83) and 4 (0.79) and fourth factor with items 5 (0.71) and 12 (-0.61) recorded high loadings. That is, second factor is highly characterized by items 14 and 15, third factor by items 13 and 4, and fourth factor highly exemplified by item 5. Based on the items with high loadings, the first, second, third and fourth factor are identified with labels, "Ignoring Problem & Taking Rest", "Talking with Family & Friends", "Emotional & Irritability to Self" and "Letting-off tension by other means". In sum, it is found that the BPO personnel tend to ignore problem and take rest, talk with family and friends, become emotional and irritable to self, and they let off tension by other means to overcome the stress.

To find out whether the adoption of the above four stress management strategies are affected by their socio, economic and personality characteristics and the extent of adoption among respondent group based on these characteristics, t-test (for two groups) and F test, also called one way ANOVA (comparing more than two groups), were applied. The following part provides results, along with interpretation, eliciting the effect of socio-economic and personality characteristics on four major strategies of stress management.

## Discussion and conclusion

**Table- 2** provides the results of One Way ANOVA for comparing the extent of stress management among three age groups. As per the Table, the mean scores range between 1.84 and 2.02 for up to 25 years, 1.86 and 2.11 for 26-35 years and 1.86 and 2.14 for above 35 years age group against all four as well as overall stress management strategies.

The mean scores for all age groups against all four as well as against overall stress management strategies are between 1.50 and 2.50 and it was the range, "Sometimes". Thus it is understood that the BPO personnel of all age groups tend to manage the stress "sometimes". The F value is insignificant for all four factors of stress management. It is insignificant for overall stress management also. Hence it is deduced that stress management among BPO personnel is independent of their age level.

According to **Table- 3**, which shows the t-test results, the extent of stress management between male and female BPO personnel, the adoption of strategies such as "ignoring the problem and taking rest" and "overall stress management" are likely to be more among male group (Mean = 2.02 & 2.01) than their female (Mean = 1.83 & 1.91) counterparts.

Adoption of other strategies like talking with family and friends, being emotional and irritable to self, and letting off tension by other means is found to be at similar level between two gender groups. The t-values, which are more than one for "ignoring the problem and taking rest" and "overall stress management" and very low for the remaining factors, evidences the above picture. From t-value of 1.74 for "ignoring

the problem and taking rest”, which is significant at 10 per cent level, it is evident that ignoring the problem and taking rest to cope with stress is related to sex differences of the BPO personnel. On the whole, it is concluded that the overall stress management does not depend upon gender but ignoring the problem and taking rest to overcome the stress are significantly higher among male than female BPO personnel.

**Table -4** provides the results of comparing stress management levels between married and unmarried BPO personnel.

From the examination of the Table, it is understood that both married and unmarried BPO personnel tend to adopt all the four strategies, “sometimes”, to cope up with the stress. This is because the mean scores for married and unmarried respondent groups against all four stress management strategies fall between 1.50 and 2.50, the value range for “sometimes”. However, from the comparison of mean scores, it is further understood that “ignoring the problem & taking test”, “emotional & irritability to self”, “letting-off tension by other means” as well as “overall stress management” are likely to be more among the unmarried group. But the t-value is significant only for the fourth factor, “Letting-off tension by other means” (t-value = 1.89,  $p < 0.10$ ). In other words, overall stress management is unaffected by the marital status of BPO personnel but adoption of strategy such as “letting off tension by other means” is remarkably more among unmarried personnel in BPO centres.

As per the **Table- 5**, the extent of stress management is ‘sometimes’ for BPO personnel irrespective of religion as mean scores for both religious (Hindu & Non-Hindu religious group) groups are between 1.50 and 2.50.

From the comparison of mean scores between two religious groups, it is seen that “ignoring problem & taking rest” and “emotional & irritability to self” as part of stress management as well as extent of managing the stress overall are found to be more among Non-Hindu Groups (Mean values are higher). The t-value for all strategies, except “emotional & irritability to self”, is insignificant. In the case of “emotional & irritability to self”, the t-value for the difference in mean scores is significant at 1 per cent level (t-value = 2.89,  $p < 0.01$ ). From the above picture, it is summed up that adoption of overall stress management is sometimes independent of religion whereas becoming emotional and irritable to self to overcome the stress is significant higher among Non-Hindu Group compared to their Hindu counterparts.

The extent of stress management strategies of BPO personnel is compared across groups by caste and the results of the analysis are reported in the **Table- 6**.

It can be seen that the BPO personnel of all castes adopt stress management strategies only “sometimes” and not “always”. However, extent of adopting the strategy like talking with family and friends to overcome the stress is remarkably less among SC/ST groups (Mean = 1.88, t-value = 2.95,  $p < 0.10$ ). The mean scores for all caste groups are in the “sometimes” range and almost near to each other in terms of “overall stress management” (between 1.95 and 1.98), in turn indicating that BPO personnel of all castes have “sometimes” adopted various strategies to manage the stress. At the same time, the BPO personnel from SC/ST groups rarely adopt the strategy of talking with family and friends to overcome the stress and they differ significantly from other caste groups in this regard.

## Findings

The following are the findings from the empirical analysis of the respondents' opinion.

### Stress Coping Strategies

The major Stress Coping Strategies of BPO personnel are to ignore the problem and take rest, talk with family and friends, become emotional and irritable to self and let off tension by other means.

The Stress Management Strategies of BPO personnel are independent of their age, gender, marital status, religion, caste, education, job status, length of service in present position, total length of service in the field and income.

There is no significant relationship between Stress Management Strategies and age factor of the BPO employees.

Being male or female does not have a significant impact on the Stress Management Techniques of the BPO personnel. There is no significant relationship between Stress Management Strategies and the marital status of staff employed in BPOs.

There was no bearing whatsoever of religion on the methods adopted to manage and control stress effectively.

Analysing the impact of caste on Stress Management Methods followed in the BPO industry, the relationship was not significant.

### Scope for Further Research

The experience of the present work indicates a wide scope for further research in the field of Job Stress and its Management.

- ◆ A comparative study on stress faced by employees with varied psycho, social, educational, economic profiles

- ◆ Studying the Stress Management Methods adopted by employees working in industries other than BPO
- ◆ Measuring the effectiveness of the Stress Coping Strategies across various industries, particularly in the ITES (Information Technology Enabled Services Sector )
- ◆ Comparing the stress levels of employees in the private sector vs. public sector
- ◆ Contrasting the effectiveness of Stress Management Methods across workers of different countries.

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**Table-1**  
**Factor Loadings of Items with Extracted Factors**  
**(After Varimax Rotation)**

Item No	Description of Scale Items	Factor			
		1	2	3	4
1	Ignore the Problem	<b>0.83</b>	-0.06	0.07	-0.08
3	Take rest	<b>0.82</b>	-0.01	0.08	0.05
7	Simply give up the problem	<b>0.80</b>	0.12	0.32	-0.07
11	Try to cool down and maintain composure	<b>0.78</b>	0.17	0.29	-0.04
10	Gather more information about the problem	<b>0.75</b>	0.26	0.18	0.06
6	Delay solving the problem	<b>0.74</b>	0.32	0.08	0.12
2	Set Priorities and do other jobs	<b>0.71</b>	-0.06	0.02	0.15
14	Do meditation	-0.02	<b>0.78</b>	0.21	-0.15
15	Express irritability to self	0.10	<b>0.74</b>	-0.07	0.24
16	Talk things over with family and spouse	0.13	<b>0.68</b>	0.09	-0.23
17	Try to solve the problem after consulting friends	0.25	<b>0.66</b>	0.04	0.08
13	Take a day-off	0.18	0.09	<b>0.83</b>	-0.08
4	Become emotional and lose temper	0.26	0.05	<b>0.79</b>	0.24
5	Try to let-off the feeling of tension by other means	0.19	0.14	0.37	<b>0.71</b>
12	Leave the office early and go home	0.26	0.35	0.23	<b>-0.61</b>
Explained Variance		4.52	2.43	1.80	1.14
% of Total Variance		30.11	16.18	12.01	7.61
Cumulative % of Total Variance		30.11	46.29	58.30	65.91
Factor Label		Ignoring Problem & Taking Rest	Talking with Family & Friends	Emotional & Irritability to Self	Letting-off tension by other means

Source: Primary Data



**Table-2**  
**Stress Management Strategies of BPO Personnel by Age**

Q. No	Stress Management Strategies	Age (in Years)			F value
		Up to 25 (n=28)	26 - 35 (n=44)	Above 35 (n=48)	
1	Ignoring the Problem & Taking Rest	2.02 (0.55)	1.87 (0.60)	1.94 (0.59)	0.57
2	Talking with Family & Friends	2.02 (0.48)	2.11 (0.51)	2.14 (0.46)	0.58
3	Emotional & Irritable to Self	1.84 (0.56)	1.86 (0.58)	1.86 (0.67)	0.02
4	Letting-off tension by other means	2.05 (0.46)	1.88 (0.41)	1.92 (0.47)	1.45
	Overall Stress Management	2.00 (0.39)	1.93 (0.43)	1.98 (0.41)	0.25

**Table-3**  
**Stress Management Strategies of BPO Personnel by Gender**

Q. No	Stress Management Strategies	Gender		t value
		Male (n=65)	Female (n=55)	
1	Ignoring the Problem & Taking Rest	2.02 (0.59)	1.83 (0.56)	1.74*
2	Talking with Family & Friends	2.11 (0.48)	2.09 (0.49)	0.28
3	Emotional & Irritable to Self	1.88 (0.67)	1.84 (0.54)	0.36
4	Letting-off tension by other means	1.93 (0.40)	1.94 (0.49)	0.07
	Overall Stress Management	2.01 (0.40)	1.91 (0.42)	1.31

Figures in brackets are standard deviation.

\*Significant at 10% level

Source: Primary Data

**Table-4**  
**Stress Management Strategies of BPO Personnel by Marital Status**

Q. No	Stress Management Strategies	Marital Status		t value
		Married (n=77)	Unmarried (n=43)	
1	Ignoring the Problem & Taking Rest	1.89 (0.60)	2.01 (0.54)	1.07
2	Talking with Family & Friends	2.10 (0.49)	2.09 (0.47)	0.12
3	Emotional & Irritable to Self	1.81 (0.61)	1.95 (0.62)	1.28
4	Letting-off tension by other means	1.88 (0.45)	2.03 (0.43)	1.89*
	Overall Stress Management	1.93 (0.42)	2.03 (0.38)	1.20

Figures in brackets are standard deviation.

\*Significant at 10% level

Source: Primary Data

**Table-5**  
**Stress Management Strategies of BPO Personnel by Religion**

Q. No	Stress Management Strategies	Religion		t value
		Hindu (n=92)	Non-Hindu (n=28)	
1	Ignoring the Problem & Taking Rest	1.91 (0.54)	2.02 (0.71)	0.88
2	Talking with Family & Friends	2.11 (0.48)	2.08 (0.48)	0.25
3	Emotional & Irritable to Self	1.77 (0.58)	2.14 (0.64)	2.89***
4	Letting-off tension by other means	1.92 (0.43)	1.98 (0.50)	0.66
	Overall Stress Management	1.94 (0.38)	2.05 (0.50)	1.16

Figures in brackets are standard deviation.

\*\*\*Significant at 1% level

Source: Primary Data

**Table-6**  
**Stress Management Strategies of BPO Personnel by Caste**

Q. No	Stress Management Strategies	Caste			F value
		Forward Caste	Other Backward Caste	Scheduled Caste / Scheduled Tribe	
		(n=33)	(n=72)	(n=15)	
1	Ignoring the Problem & Taking Rest	1.90 (0.55)	1.93 (0.58)	1.99 (0.67)	0.12
2	Talking with Family & Friends	2.23 (0.48)	2.08 (0.49)	1.88 (0.35)	2.95*
3	Emotional & Irritable to Self	1.80 (0.65)	1.87 (0.58)	1.93 (0.73)	0.25
4	Letting-off tension by other means	1.89 (0.43)	1.94 (0.47)	1.97 (0.35)	0.19
	Overall Stress Management	1.98 (0.41)	1.97 (0.41)	1.95 (0.45)	0.02

Figures in brackets are standard deviation. \*Significant at 10% level  
Source: Primary Data