

An Empirical Study on Stress Modalities in IT Sector with Special Reference to COVID 19

Saradha M¹, Dara Vijaya Lakshmi², B. Antline Nisha³

¹Associate Professor, School of Applied Sciences, REVA University, Bangalore, India.

²Assistant Professor, School of Management Studies, REVA University, Bangalore, India

³Assistant Professor, Department of Mathematics, St. Joseph's Institute of Technology, Chennai, India.

Email: ishuharisri88@gmail.com

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Abstract

This paper majorly signifies in handling of stress of an individual more emphasized on their cognition mishandled due to external environmental changes and relative compulsive forces acting especially in the context of COVID "19 who are Working from Home rather than working from MNC's. In addition, it describes how to handle individually to get motivated for generating the effective outcomes as on whole productively helpful for an organization. The employees working in different organizations have to deal with the stress. Especially IT professionals are under a great deal of stress due to many reasons. The stress contributes to decreased organizational performance, decreased employee overall performance, decreased quality of work, high attrition rate. Right at this point of time there is no way out to make the industry stress free. With increasing application of technology and new age facilities this kind of pressure is bound to increase. So, the sector has decided to face the problem rather than avoid it. Thus, this paper emphasis on the comparative study of stress impact on their performance work from Home and MNC's Environment Due to COVID "19.

Keywords: Stress, IT professional, Cognition, Uncertainty, Work from Home, MNC Environment.

INTRODUCTION

This Paper primarily emphasizes on stress factor & performance in the correlatively context of uncertainty, Technical situations and Non technical of professionals who are working at respective office desks and the professionals working from Home due to Pandemic. More emphasizes on the context of offending the influence of decision-making and prioritization of tasks internally and sub consciously happening in our cognition, especially in the context of "uncertainty". Irrespective of any domain whether it is a technical or non technical contexts and environments with an implication to an immediate outcome.

People working from home sometimes struggle with productivity. Working away from your co-workers, with only remote online meetings, risks emotional disconnection and apathy. It can also encourage procrastination. So, build in cues to aid your transition into and out of work mode. These can include clear-cut start and finish times, and time put aside for exercise and meals. They can also be routines that you associate with getting started or winding down, such as listening to your favorite podcast, taking a shower, or calling your mom. You might find that it helps to have particular clothes for working at home. Dressing for work can set the right mental tone for the day – and avoid the awkwardness of being dialed in to a virtual meeting.

Since the onset of COVID-19, more people than ever are working from home. This brings both challenges and opportunities and requires a shift in a whole range of working practices.

What is Stress?

Stress is the "wear and tear" of our minds and bodies experience as we attempt to cope with our continuously changing environment. Stress is generally defined as: "An adaptive response to a situation that is perceived as challenging or threatening to the person's well-being."

“Stress is the reaction people have to excessive pressures or other types of demand placed on them.”

According to Richard S. Lazarus, “Stress as a condition or feeling experienced when a person perceives that demands exceed the personal and social resources the individual is able to mobilize.”

Literature Review:

1. NAIR, KRISHNAN (2016) stated that stress in IT sector survey revealed that the respondents are satisfied with the environment where they are working and they are effectively interacting with their team and working towards their targets. The employees are satisfied with the working hours as they are dealing with the night shift and morning shifts. The company can focus on some stress relief programs in order to keep the employees happier and enthusiastic. And they think that the employees are working with medium stress that can improve their working styles.
2. BAHL (2016) revealed that Stress Management at individual level contributes more towards overall management of stress. Employees have awareness on importance of exercise, the finding's state that exercise is not taken seriously by the respondents. Employees are able to balance their stress and effectively balancing their work and interventions.
3. SATPATHY, PATNAIK AND MITRA (2014) studied the stress level in IT sector. The individuals working in the information technology field face more stress because they have to update their knowledge endlessly. The various contributing factors and associated attributes for stress found are- sources of job stress that is linked to job dissatisfaction, job satisfaction is directly related to stress and work culture of organization, significant correlation between organizational climate and job stress, higher stress is directly proportional to quality of work life of IT professionals, direct relationship between stress and job performance, married employees face more stress as compared to Unmarried employees.
4. ANBARASAN AND JAGANATH (2014) Stress was examined at lower level. (Administrative employees, team leaders, employees) Stress was found to be a significant problem and the results were used to find solutions for reducing the stress level problems of employees and thereby suggestions were given to improve the productivity of the company. Each employee as their own and Organization suggestions to minimize the stress level by reducing heavy workload targets, by providing proper training to employees regarding the task they do, to provide a good working environment and ambiance to employees which provides a pleasant feel to the employees, to recognize the work of employees and to reward them for the work they do which motivates the employees to work more effectively.
5. BASHIR, U., & RAMAY, M. I. (2010) examined that relationship between job stress and job performance on bank employees of banking sector in Pakistan. The study tests the purpose model in relation of job stress and its impact on job performance by using (n=144) data of graduate, senior employees including managers and customers' services officers of well reputed growing bank in Pakistan. The results show that job stress significantly reduces the performance of an individual. The results suggest that organization should facilitate supportive culture within the working atmosphere of the organization.

Research Objectives:

- To understand the concept of stress influence on the Cognition of an Individual at MNC environment and at Work from Home Environment.
- To find the causes of stress on their cognition for IT Individual at the MNC environment and at Work from Home Environment.
- To examine the relaxation techniques practiced in the MNC Environment and Work from Home.
- To identify the measure to handle the stress for smooth outcome with an effective performance work from home and MNC environment

Research Methodology:

Primary Research:

Our Primary Research emphasizes on undergoing through the previous review papers and case studies relatively to the current topic, mainly considered the information especially reviewed research done in the 3 top MNC's. On the basis of this data inferences are been relatively made for our paper discussion and contribution how the influence of stress impact on their cognition, steps of respective organization taken to mitigate them. The following are the numbers and data in relative.

Data For Inferences Based On Primary Research				
S.No	Description	Stress Impact	Performance MNC's Environment	Inference Rating
1	Uncertainty	0.25	Good	3 on scale of 10
2	Technical Environment	0.15	Better	7 on scale of 10
3	Non- Technical Environment	0.15	Good	5 on scale of 10
4	Time	0.4	Good	6 on scale of 10

Inferences:

From the above analysis the following are the inferences made relatively which contributes to the secondary research.

1. About 25 % of IT professionals stress impact in context of Uncertainty but their performance is relatively Good due effective process flow design in IT System in MNC's.
2. About 15 % of IT professionals stress impact in the context of Technical Environs but their performance is relatively Better due availability of likely, equally skilled persons among them.
3. About 15 % of IT professionals stress Impact in the context of Non- Technical Environments implied to performance is Good even though having effective management systems because of poor managers.
4. About 40% of IT professionals having stress impact in fulfilling the time lines performance are Good due compulsive force individually.

Secondary Research:

Based on the primary research inference we are here to convey the performance levels of the people here with emphasizing on the persons who are working from home even though they are part of MNC's due to COVID'19. Our research survey concentrated about 65 persons the city of Guntur, AP. During Lock Down and Post Lock Down. The following are the questionnaire made for those to understand their self stress impact on their work performance in deliverables with respect to the contexts prescribed from the primary research analysis.

1. Are you Comfortable in WORK FROM HOME? Y/N
2. Are you facing any work stress in WORK FROM HOME? Y/N
3. If it so in the context of Uncertainty what is your opinion on your performance? Good /Better.
4. If it so in the context of Technical Environment, what is your opinion on your performance? Good /Better.

5. If it so in the context of Non-Technical Environment, what is your opinion on your performance? Good /Better.
6. If it so in the context of fulfilling the Timelines what is your opinion on your performance? Good /Better.

Out of 65 person appropriate answers were been given by 48 persons. On that survey analysis the following date describes for the comparative outcomes Professionals stress impact on their performance in MNC environment and WORK FROM HOME.

Secondary Research Analysis				
S.No	Description	Stress Impact	Performance WFH's Environment	Inference Rating
1	Uncertainty	0.15	Bad	1 on scale of 10
2	Technical Environment	0.25	Good	7 on scale of 10
3	Non- Technical Environment	0.2	Good	5 on scale of 10
4	Time	0.5	Good	6 on scale of 10

Inferences:

1. About 15 % of IT professionals stress impact in context of Uncertainty but their performance is relatively Bad due ineffective process handling design in IT System in WFH Environment.
2. About 25 % of IT professionals stress impact in the context of Technical Environs but their performance is relatively Good due unavailability of likely, equally skilled persons among them.
3. About 20% of IT professionals stress Impact in the context of Non- Technical Environments implied to performance is Good even though having effective management systems because of poor connectivity of mangers
4. About 50% of IT professionals having stress impact in fulfilling the time lines performance are Good due compulsive force indivually and as well as improper infrastructure availability.

Analysis

Real-world data were collected from eight participants – six females and two males, with an age range from 26 to 47 years, on their daily commutes to and from their place of work. All participants were healthy and did not have a history of any disease and were not currently taking any medication that could influence cardiovascular activity.

Raw data was collected via our mobile data collection platform, which consisted of a Smartphone and wearable smart watches that collected raw electrocardiograph (ECG) signals, via a 5-lead ECG unit, and sleep intervals data. The sensors were configured to a sample rate of 600 Hz.

Data was collected over five working days. To take part in the studies, participants had to

- 1) Take the sleep on the same time
- 2) Be alone in the room
- 3) The same routine of works to be carried out

The raw ECG and Sleep intervals data were subjected to extensive preprocessing to identify the stress level. Time domain measures were then calculated from the ECG/Sleep intervals data, including descriptive statistics of the IBI and PPI (average, standard deviation, median, minimum and maximum), as well as heart rate and the root mean square of differences of successive RR intervals (RMSSD).

It measures that were extracted from the Smartphone included Heart rate, Blood Pressure, EEG and Sleep intervals time. These included stress (Work Pressure, Family Issues and Deadlines).

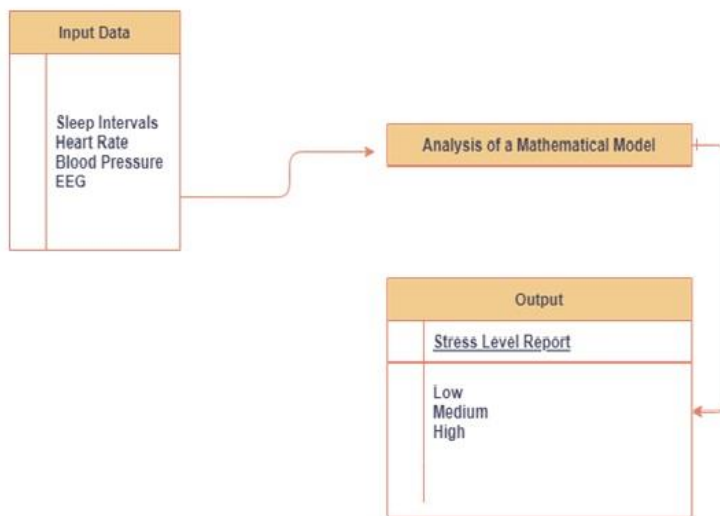


Fig.1: Description of a Model

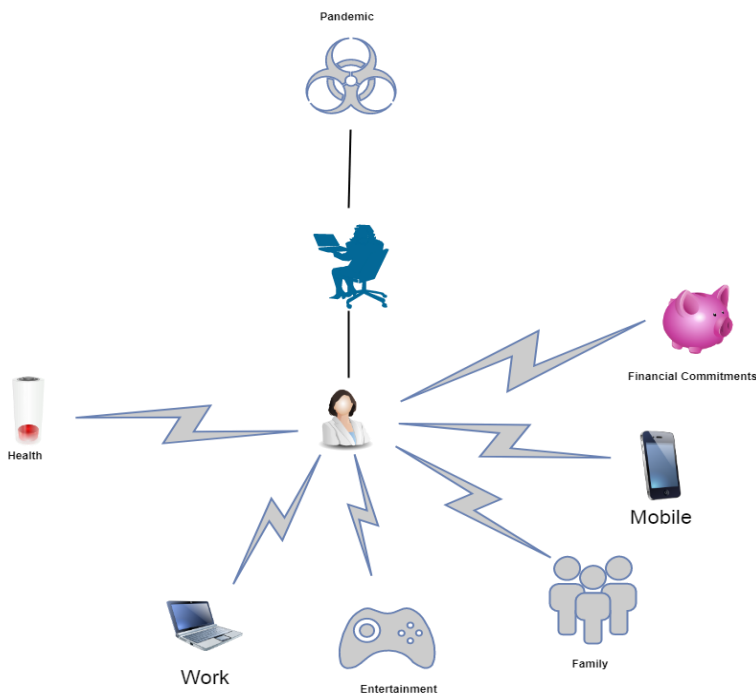


Fig.2: Description of the Stress Level

For single person (random time)

Time	Sleep Stages	Sleep Cycle %
10:00 PM to 1:08 AM	REM	34.56%
1:08 AM to 4:00 AM	DEEP	31.62%
4:00 AM to 5:22 AM	LIGHT	16.54%
5:22 AM TO 7:04 AM	AWAKE	17.28%

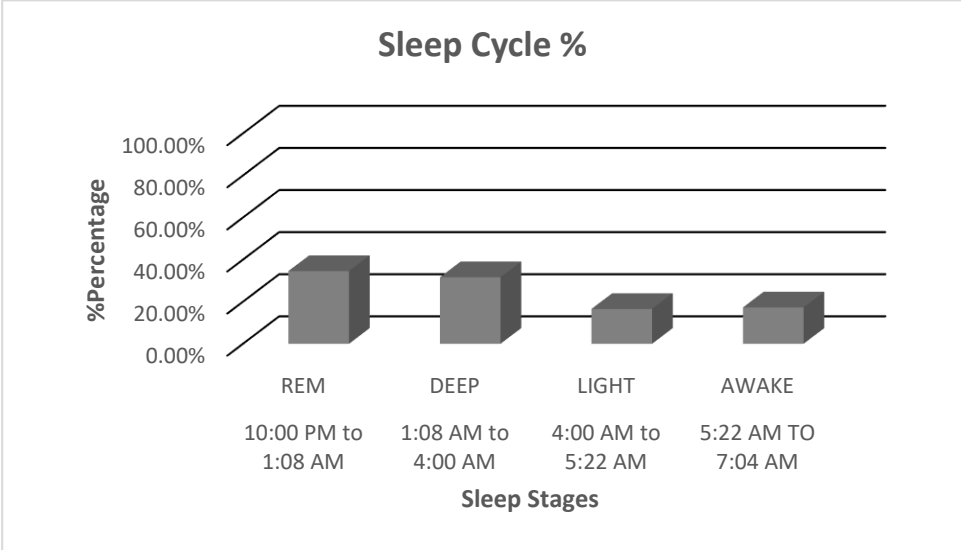


Fig.3: Sleeping Intervals

For Experiment, the Samples of Size 3(persons) has chosen at Random intervals (taken at same hours, though it is not mandatory for them to go to sleep at same time). The reason is in a particular day, the person’s each of the sleep cycle may vary, that is the value of REM or DEEP or LIGHT or AWAKE changes based on the hectic day. So the time period for each person overnight will also change. Then the overall sleep stage time will vary and may possible to effect the person’s graph (% above).

Time	Sleep Stages	Person 1 (%)	Person 2 (%)	Person 3 (%)
10:00 PM to 1:08 AM	REM	34.00%	18.00%	10.00%
1:08 AM to 4:00 AM	DEEP	32.00%	42.00%	39.00%
4:00 AM to 5:22 AM	LIGHT	16.00%	25.00%	32.00%
5:22 AM TO 7:04 AM	AWAKE	18.00%	15.00%	19.00%

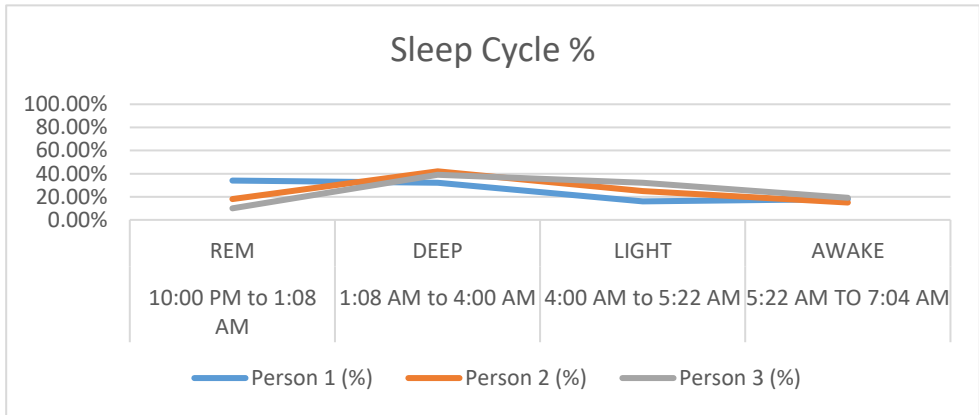


Fig.4: Sleep Cycles

Sleep Stages	Person 1 (%)	Person 2 (%)	Person 3 (%)	Person 4 (%)	Person 5 (%)	Person 6 (%)
REM	34.00%	18.00%	10.00%	14%	22%	8%
DEEP	32.00%	42.00%	39.00%	45%	31%	27%
LIGHT	16.00%	25.00%	32.00%	29%	25%	45%
AWAKE	18.00%	15.00%	19.00%	12%	22%	20%

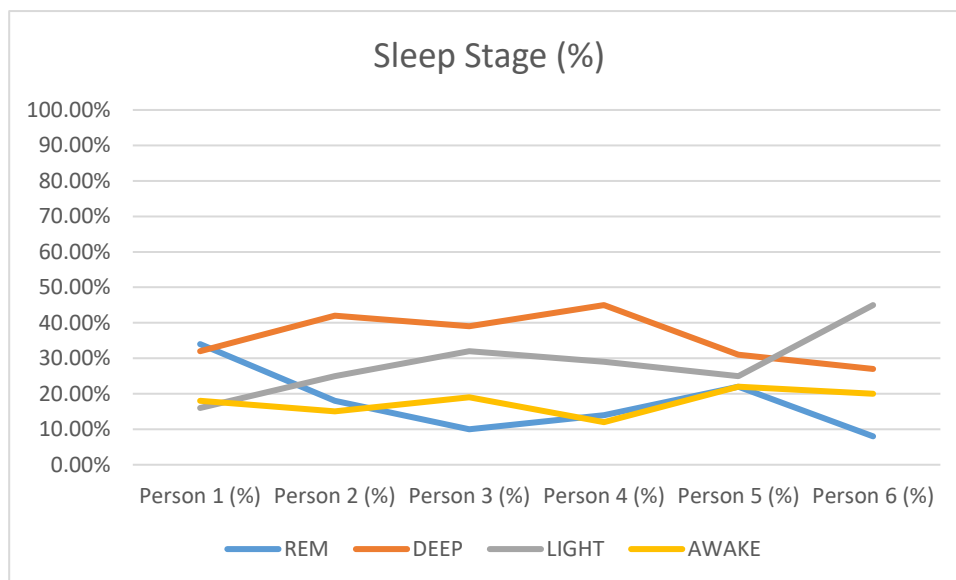


Fig.5: Sleep Stages

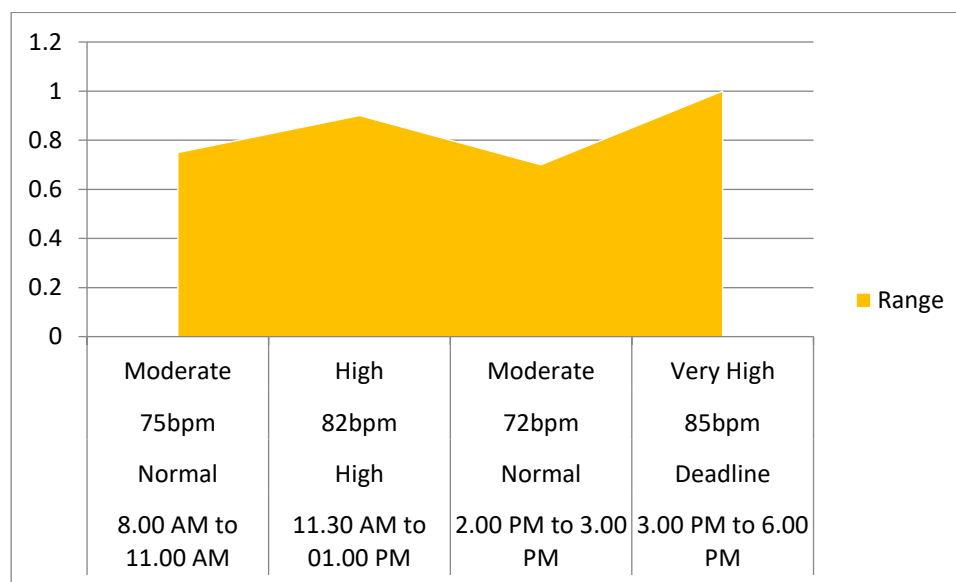


Fig.6: Stress Level

Limitations:

- The research has been done on a very limited number of respondents under a limited period of time.

- Less career opportunities.
- Not satisfied with the pay structure
- Technical problems
- Sometimes no clarity of completion of work.

Conclusion:

The study on stress in IT sector has revealed that the respondents feel that they are satisfied and happy with compatible cognitive relations because high speed and high movable environments which would implicate more productive results at higher rates accordingly.

Finally, out of detailed analysis made from the research concludes the majority of IT Professionals feel more stress comparatively when they are working from Home rather in MNC environment and relative Performance is substantially low when compared to professional rendering their services from their office desks.

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