



THE APPLICATION OF DATAMINING FOR STRESS MANAGEMENT IN THE IT INDUSTRY, COIMBATORE CITY

V. Rajesh

Ph.D Research Scholar, Dept. of Management, Karpagam University, Coimbatore.

Dr. L. Manivannan

Associate Professor, Dept. of Corporate Secretaryship, Erode Arts College, Erode.

ABSTRACT

The study looks at the factors that lead to stress and how individuals can manage stress in their daily life. The study asserts that the first key step within job stress management is to know when one is suffering from chronic stress. Further the study discusses the benefits of talking to a friendly listener who remains calm and listens in a way that makes one feel understood, and also highlights the role of one's attitude in handling unexpected situations. Ultimately, the study shows how job stress management is about organization and simplifying one's life down to the most basic elements. Stress refers to an individual response to a disturbing factor in the environment and the consequence of such reaction. Stress is mostly understood to be negative. But it has positive dimension also. Positive stress is called Eustress. Data mining is the Powerful new technology which supports the modern management to take a fair business decisions and solutions and supports to be a leader in their field and also helps to have healthy workforce. Data mining is the Knowledge discovery from data (KDD)

Key Words: *Stress, Data Mining, Stress Management, Organizational Factors, Personal Factors.*

INTRODUCTION

Stress is something that normally occurs very often when a person perceives a situation as threatening one or when deals something unusual. With the intense demands of home and work life, many people are experiencing stress. Since stress itself can be effected by a myriad of factors and oftentimes is amplified from the stress level experienced in another situation the overall effect is that one can never know the exact nature of one's stress level. The aim of stress management is to help, balance the various aspects of one's life, so that they are not completely overwhelmed by stress, that your work, your relationships and your leisure are all balanced with the physical, intellectual and emotional aspects of your life. People who effectively manage stress consider life as a challenge rather than a series of irritations, and they feel that they have control over their lives, even in the face of certain setbacks.

A strange new disease has found its way into lives of people of this industrialized nation of the world. The most common disease is headache. Not only is this, but diseases like heart attack, high Blood Pressure, stomach disorders, and skin diseases very common to the people in the present world. These have become the effects of stress and have become most common in many of the organizations, now-a-days. Stress refers to an individual's response to a disturbing factor in the environment and the consequence of such reaction. Stress is mostly understood to be negative. But it has positive dimension also.

Data mining is the Knowledge Discovery from Data (KDD). It is the tool and powerful technology which produces valuable information to the organization and helps to notice the unnoticed. Every organization have data ware houses, if it is retrieved in time with the data mining it would yield excellence in its functions. Data mining tool is used in this study to discover the stress among employees, stressors and supports the organization to have a healthy and efficient employees and stress free environment.

POSITIVE AND NEGATIVE SIDE OF STRESS

There is a positive stress is called Eustress. It refers to the healthy, positive, constructive outcome of stress events like getting unexpected and unavoidable promotions, winning huge amount of cash prizes etc. Generally eustress is the stress experience that activates and motivates people to achieve their goals and succeed in their life's challenges.

The negative side of stress is called distress has attracted much attention and concern as it adversely stints the employees' mental, physical health and their performance.

EFFECTS OF STRESS

Stress may lead to absenteeism and may affect the health of employees. Work stress may lead to low production and this may affect the total output of the organization.

SOURCES OF STRESS

Stress is inevitable in human lives. It is not always damaging (or) bad, a mild stress may lead to decrease the employee's activity and performance but a high level of stress has harmful consequences on both employee and organization.

There are three broad categories usually bring stress in the work place:

- i) Lack of group cohesiveness.
- ii) Lack of social support
- iii) Interpersonal and inter group conflict.
 - a. Role conflict.
 - b. Role ambiguity.
 - c. Work load.
 - d. Life events.
 - e. Personality traits.

OBJECTIVES OF THE STUDY

1. To identify the causes of stress among the employees
2. To find the consequences of stress among the employees
3. To measure the level of stress among the employees
4. To give the strategy for managing the stress among the employees

RESEARCH METHODOLOGY

The research methodology is systematically used to solve the research problems. It may be understood as a science of studying how research is done scientifically. In this, we study various steps that are generally adopted by the researcher in studying his/her research problem along with the logic behind them. It is necessary for the researcher to know not only the research, but also methodology.

Research Design: Descriptive research design is used for this study.

Sample Design: A sample design is a definite plan for obtaining a sample from a given population. If refers to the technique the researcher would adopt in selecting item for the sample design is determined before data are collected.

Size of sample: The total number of respondents selected for the study is 120.

Area of the Study: The total area of the study is Coimbatore city

Sampling Technique: Simple random sampling technique was adopted by the researcher to collect the data from the respondents.

Data collection: Both primary and secondary data are used for this study.

Data Analysis: The collected data are tabulated and arranged in suitable tables. The data are analyzed with percentage analysis and other statistical tools, from which inferences are drawn.

Tools Used in the Study: The following statistical tools are used in the study for purpose of analysis.

1. Percentage Analysis
2. Weighted Average Method

Limitations of the Study

1. Time is a major limitation. Extensive study is not possible mainly due to the time constraint.
2. Some of the respondents do not co-operate with the researcher.
3. The study is purely based on the opinion of the respondents, which may be biased at the time.

- The study was conducted in Coimbatore city, and hence the results are most appropriate to the area only.

DATA ANALYSIS AND INTERPRETATION EDUCATIONAL QUALIFICATION OF THE RESPONDENTS

Educational Qualification	No .of respondents	Percentage
Diploma holders	24	20
Professionals	30	25
Graduates	41	34
Others	25	21
Total	120	100

Source: Primary Data

Inference

The above table shows that out of 120 respondents, 20% of respondents are Diploma holders, 25% of respondents are professionals, 34% of respondents are Graduates, 21% of respondents are having some other qualifications.

MONTHLY INCOME OF THE RESPONDENTS

Monthly income	No .of respondents	Percentage
Below Rs.10000	18	15
Rs.10001-20000	29	24
Rs.20,001-30,000	40	34
Above 30,000	33	27
Total	120	100

Source: Primary Data

Inference

The above table shows that out of 120 respondents, 15% of respondents earn below Rs.10,000, 24% of respondents earn Rs.10001-20000, 34% of respondents earn Rs.20,001-30,000, 27% of respondents earn above Rs.30,000 monthly.

EXPERIENCE OF THE RESPONDENTS

Experience	No .of respondents	Percentage
Less than 1 year	23	19
1-2 years	36	30
2-3 years	18	15
Above 3 years	43	36
Total	120	100

Source: Primary Data

Inference

The above table shows that out of 120 respondents, 19% of respondents are having Less than 1 year experience, 30% of respondents are having experience of 1-2 years, 15% of respondents are having experience of 2-3 years and 36% of respondents are having more than 3 years of experience.

ORGANIZATIONAL FACTORS INFLUENCING STRESS

Factors	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5	Rank-6
Superior's order	18	8	28	17	36	13
Interpersonal relationship	12	7	19	39	17	26
Working environment	21	24	24	24	11	16
Over time	17	16	10	18	31	28
Over load	28	8	22	13	16	33
Monotonous work	24	57	17	9	9	4

Applying weighted average method:

Assume W1 as 5, W2 as 4, W3 as 3, W4 as 2, and W5 as 1 and WT as Weight age Total.

WAM = Weight age total / total weight, where WAM is weight age average.

$$\begin{aligned} \text{Weight age total} &= [(R1*W5) + (R2*W4) + (R3*W3) + (R4*W2) + (R5*W1)] \\ &= [(6*18) + (5*8) + (4*28) + (3*17) + (2*36) + (1*13)] \\ &= 396 \end{aligned}$$

CALCULATION OF WEIGHTED AVERAGE

Factors	w-1	w-2	w-3	w-4	w-5	w-6	WAM total	WAM	Rank
Superior's order	114	285	68	27	18	4	546	26	1 st
Interpersonal relationship	168	40	88	39	32	33	400	19.08	3 rd
Poor Working environment	102	80	40	54	62	28	366	17.43	5 th
Over time	126	120	96	72	22	16	452	21.52	2 nd
Over load	72	35	76	117	34	26	360	17.4	6 th
Monotonous work	108	40	112	51	72	13	396	18.86	4 th

Source: Primary Data

Inference

The above table reveals that the rank 1 organizational factor which influences stress is superior's order, rank 2 factor goes to overtime, rank 3 factor goes to interpersonal relationship, rank 4 to monotonous work, rank 5 goes to poor working environment, and the rank 6 goes to overload.

PERSONAL FACTORS INFLUENCING STRESS

Factors	Rank-1	Rank-2	Rank-3	Rank-4
Family factors	21	28	54	17
Dependents pressure	33	15	15	57
Financial position	31	22	33	34
Illness	35	55	18	12

Applying weighted average method:

Assume W1 as 4, W2 as 3, W3 as 2, W4 as 1, and WT as Weight age Total.

WAM = Weight age total / total weight, where WAM is weight age average.

$$\begin{aligned} \text{Weight age total} &= [(R1*W4) + (R2*W3) + (R3*W2) + (R4*W1)] \\ &= [(4*21) + (3*28) + (2*54) + (1*17)] \\ &= 293 \end{aligned}$$

CALCULATION OF WEIGHTED AVERAGE

Factors	w-1	w-2	w-3	w-4	W.total	WAM	Rank
Family factors	140	165	36	12	353	35.3	1 st
Dependents pressure	124	66	66	34	290	29	3 rd
Financial position	132	45	30	57	264	26.4	4 th
Illness	84	84	108	17	293	29.3	2 nd

Source: Primary Data

Inference

The above table reveals that the rank 1 personal factor which influences stress is family factors, rank 2 goes to illness, rank 3 factor goes to dependents pressure and the last rank to financial position.

EFFECT OF STRESS

Factors	Rank-1	Rank-2	Rank-3	Rank-4	Rank-5	Rank-6
Body pain	23	14	22	18	25	18
Heart attack	26	13	20	16	15	30
Nervousness	13	25	26	28	6	22
Absent mind	16	18	12	27	32	15
Blood pressure	14	12	25	18	23	28
Headache	28	38	15	13	19	7

Applying weighted average method:

Assume W1 as 6, W2 as 5, W3 as 4, W4 as 3, W5 as 2 and W6 as 1 and WT as Weight age Total.

WAM = Weight age total / total weight, where WAM is weight age average.

$$\begin{aligned} \text{Weight age total} &= [(R1*W6) + (R2*W5) + (R3*W4) + (R4*W3) + (R5*W2) + (R6*W1)] \\ &= [(23*6) + (14*5) + (22*4) + (18*3) + (25*2) + (18*1)] \\ &= 418 \end{aligned}$$

CALCULATION OF WEIGHTED AVERAGE

Factors	w-1	w-2	w-3	w-4	w-5	w-6	W.total	WAM	Rank
Body pain	168	190	60	39	38	7	502	23.90	1 st
Heart attack	84	60	100	54	46	28	372	17.71	6 th
Nervousness	96	90	48	81	64	15	394	18.76	5 th
Absent mind	78	125	104	84	12	22	425	20.24	2 nd
Blood pressure	156	65	80	48	30	30	409	19.48	4 th
Headache	138	70	88	54	50	18	418	19.95	3 rd

Source: Primary Data

Inference

The above table reveals that the rank 1 effect of stress is body pain, rank 2 goes to absent mind, rank 3 goes to head ache, rank 4 to blood pressure, rank 5 goes to nervousness, and the rank 6 goes to heart attack.

RESPONDENTS PREFERED REMEDIES TO REDUCE STRESS

Reduce stress by	No .of respondents	Percentage
Going to movies	23	19
Get together	20	17
Visit friends/ Relatives	28	23
Music	30	25
Others	19	16
Total	120	100

Source: Primary Data

Inference

The above table shows that out of 120 respondents, 19% of respondents reduce stress by going to Movies, 17% of respondents reduce stress by attending Get together, 23% of respondents reduce stress by visiting Friends/Relatives, 25% of respondents reduce stress by Listening music and 16% of respondents reduce stress by Others things.

RESPONDENTS PREFERENCES FOR REDUCING WORK STRESS

Factors	Highly satisfied	Satisfied	Neutral	Dissatisfied	Highly dissatisfied
Indoor games	52	43	18	6	1
Counseling	44	51	16	4	5
Motivation	37	45	25	5	8
Meditation	16	34	41	25	4
Yoga	6	16	29	45	24

Applying weighted average method:

Assume W1 as 5, W2 as 4, W3 as 3, W4 as 2, and W5 as 1 and WT as Weight age Total.

WAM = Weight age total / total weight, where WAM is weight age average.

Weight age total = [(R1*W5) + (R2*W4) + (R3*W3) + (R4*W2) + (R5*W1)]

$$= [(52*5) + (43*4) + (18*3) + (6*2) + (1*1)]$$

$$= 499$$

CALCULATION OF WEIGHTED AVERAGE

Factors	w-1	w-2	w-3	w-4	w-5	WAM.total	WAM	Rank
Indoor games	30	64	87	90	24	295	19.67	5 th
Counseling	80	136	123	50	4	393	26.2	4 th
Motivation	185	180	75	10	8	458	30.53	3 rd
Meditation	220	204	48	8	5	485	32.33	2 nd
Yoga	260	172	54	12	1	499	33.27	1 st

Source: Primary Data

Inference

The above table reveals that the rank 1 preference for reducing work stress is yoga, rank 2 goes to meditation, rank 3 preference goes to motivation, rank 4 to counseling, and the rank 5 goes to indoor games.

FINDINGS

1. It is found that 24% of the respondents are in the age group of 25-30 years.
2. It is found that 69% of the respondents are Male.
3. Majority 70% of the respondents are married.
4. It is found 33% of the respondents are earning above Rs. 30,000/ per month.
5. Majority 36 % of the respondents are having above 3 years of experience.
6. Majority 26% of the respondents agree that they complete work in the specified time.
7. It is found that, Superior's order gives more stress to respondents.
8. It is found that Family factor is the factor which influences stress more.
9. It is found that Body pain is the most common effect of stress.
10. It is found that 23% of the respondents visit friends & Relatives to reduce stress in Weekend/holidays.

CONCLUSION

Stress refers to an individual's response to a disturbing factor in the environment and the consequence of such reaction. Stress is mostly understood to be negative. Uncared stress may lead to various physical and psychological problems and which may disturb the employees' personal as well as professional life too. Stress created by the family factors may be overcome by the support of family members and the relatives as and when



required. Work stress or organizational stress has to be overcome by the support of management by providing job rotation, changes in the work schedule, periodical counseling, yearly picnics and tour, yoga related trainings, financial assistance with reasonable interest etc. Human resources are the real asset of every organization. If it is healthy (both physically and psychologically) that organization may reach its goal with very less struggles.

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