JOB STRESS OF WORKING NURSES : CAUSES AND CONSEQUENCES-A STUDY AT NORTH BENGAL MEDICAL COLLEGE, DARJEELING

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ABSTRACT

Job stress is an important phenomenon in an employee's working life. The tremendous work pressure in an organization may lead to job stress which may, in turn, lead to some serious consequences. Physiological, psychological and behavioral consequences may generate high blood pressure, heart diseases, hypertension, alcoholism and may even lead to death. In today's fast world, people are running for success. Due to a high degree of competition, organizations are putting too much pressure on employees for better performance. However, due to some causes like lack of infrastructure, lack of support from top management, role conflict, lack of training, etc., employees are not always in a position to respond to the high expectations of them. And, this mismatch leads to high frustration and stress. A study has been done on the staff nurses working in the North Bengal Medical College and Hospital in the Darjeeling District of West Bengal with a view to assessing the job stress on them and different consequences they are facing. A questionnaire was developed by using the ORS Scale suggested by Pareek and was distributed, in a random manner, among 68 nurses.The questionnaire comprises 50 questions. 10 role stress variables have been used to find out the causes of job stress and the dependency of these variables on the consequences of job stress. Multiple Regression Analysis was done to find out these causes of job stress and the consequences that follow. This study has tried to respond to the issues like influence of role stress variables on job stress and the impact of role stress variables on physiological, psychological and behavioral consequences.

Introduction

Stress is the result of a mismatch between a person and his/her environment and the perceived inability to cope with the constraints or demands encountered (Harrison, 1976). Stress arises from an opportunity, demand, constraint, threat or challenge when the outcome of the event is important and uncertain (Robbins, 2003, p.577). Stress is caused by internal or external demands that upset the balance of an individual and affect his/her physical and psychological well being (Lazarus and Cohen 1977). Uncertainties and unexpected changes are common in

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our lives. People often do not behave as we expect. Major events are often beyond our control and things do not work out as we want. Stress is therefore unavoidable in human life (Pestonjee, 1999, pp.15-34).

Stress is a subject which is hard to avoid. Different people have different views about it as stress can be experienced from a variety of sources. The concept of stress was first introduced in the life sciences by Hans Selye in 1936.There is a general agreement that a high percentage of diseases afflicting mankind are psychosomatic and that their primary causes are our thoughts attitudes and beliefs.

When we speak of psychosomatic nature of disease we basically mean that the major source of the disease lies in one's emotional, mental or perceptual and behavioral habits. In other words the way that we have been conditioned to react to our environment has resulted in internal physiological changes which either evolve into disease or allow disease states to exist. Brown (1977) pointed out that which disease occurs and which internal process is involved, is the consequence of a very complex interaction of psychological, constitutional or genetic and environmental factors. The pattern will be unique for each individual. For example one person may suppress anger and eventually develop the mental dysfunction of depression; another may suppress anger and eventually develop the migraine headaches. However even though the development of the specific psychosomatic disease is unique to each individual the underlying principles are the same. Emotional stress leads to psychological and this results in an eventual breakdown (disease) of the target organ system. Udupa (1977) reported that psychosomatic diseases appear to progress through four distinct phases:

q   Psychic phase : This phase is marked by mild but persistent psychological and behavioral symptoms of stress such as irritability, disturbed sleep, loss of appetite, etc.

q   Psychosomatic phase : If the stress condition continues these symptoms become more pronounced, along with the beginnings of generalized physiological symptoms such as occasional hypertension and tremors.

q   Somatic phase : This phase is marked by increased function of the organs, particularly the target, or   involved organ. At this stage one begins to identify the beginnings of a disease state.

q   Organic phase : This phase is marked by the full involvement of a so-called disease state with physiological changes such as ulcerated stomach or chronic hypertension becoming manifest.

Sources of Job Stress

Though occupational stress initially arises from constituent factors of job and its psycho-physical environment, these factors are not inherently stressors. Infact, personal characteristics of the employee and his cognitive appraisal of the job factors in the framework of his capacity and resources determine the extent of stress he would experience from a job factor or situation. This is the reason that we can only hypothetically predict the potency of the job factors or situations for causing stress, but we cannot categorize or generalize any work-setting variable as a universal stressor. However some job factors or work conditions such as extreme heat or cold, chronic dangers, demotion, losses of job, etc. are likely to cause stress to majority of the workers. But stress resulted from these factors also vary from one worker to another. The pressures caused from the job factors, in fact, are mediated by the personal characteristics of the focal worker. Moreover certain psychological and behavioral specialties of the employee also become consistent sources of stress to him. Thus we can broadly classify all the sources of occupational stress in two categories i.e. individual characteristics and work setting variables.

Role Stress

Stress resulting from occupation of an organizational role is known as Organizational Role Stress (ORS). ORS construct developed by Pareek (1983) is relevant for the study of role stress in organizations. It comprises the following ten types of role stress.

- **Inter-Role Distance (IRD)** is the result of conflict experienced between different roles played by the role occupant.

- **Role Stagnation (RS)** is experienced when the role occupant is given a new role without adequate preparation. He/she does not accept the new role and keeps on stagnating in the old role which is more familiar and comfortable.

- **Role Expectation Conflict (REC)** is the result of conflicting expectations from different role senders.

- **Role Erosion (RE)** arises when some of the important functions of the role are performed by others or when the credit for achievements is given to others.

- **Role Overload (RO)** is the result of too many or too high expectations.

- **Role Isolation (RI)** is experienced when the role occupant feels cut off from the channels of communication.

- **Personal Inadequacy (PI)** is the result of lack of knowledge, skills or expertise experienced by the role occupant.

m   Self-Role Distance (SRD) arises when a role occupant has to do what he/she does not like, when his/her special knowledge and skills are not utilized or when there is a conflict between the images/needs/values of the role and the role occupant.

m   Role Ambiguity (RA) arises from the lack of clarity about role expectations.

m   Resource Inadequacy (RIn) is the result of lack of external resources (human resources, buildings, infrastructure, materials, machines, tools, equipments, books, documents and information) required for performing the role.

Consequences of Stress

Physiological/Physical Consequences

According to Srivastav (1999) "The relationship of mind and body has fascinated philosophers and scientists throughout the history. It was believed that a person's mental state and physical activities were parts of the individual as a whole". Researchers in health and medical sciences have concluded that stress could create changes in metabolism, increased heart and breathing rates, increased blood pressure, and bring on headaches, and induce heart attacks. In the following section each of the reported symptoms of the respondents on seven different Physiological problems are analyzed. These are:

- l   Tension and Headache
- l   Weakness
- l   High Blood Pressure
- l   Heart Pounding
- l   Indigestion
- l   Constipation
- l   Muscle Aches

Psychological Consequences

On the basis of self-report the identified Psychological problems of the respondents have been analyzed in this section. The role elements of a job, an employee associated with is the main source of his/her mental state. Researchers like French and Caplan et al., (1975), Christopher (1982), and many other have identified role variables to affect various Psychological states of the role occupants. Srivastav (1985) has established the relationship between role stress and mental ill health in his extensive study on different group of working people. Srivastav and Jagdish (1983) identified role conflict as a major factor negatively correlated with psychological well being of the supervisory personnel. Bannerjee (1996) in his work with employees of service department has established relationship between role stress and mental

health of the concerned job occupants. Some symptoms of psychological consequence are

- Not satisfied with the job
- Bored with job
- Anxiety
- Depression
- Irritation Feeling
- Feel Sense of Low Self Respect
- Feel Sense of no attachment
- Feel Fatigue
- Feel Low Satisfaction
- Feel of Sexual Frustration

Behavioral Consequences

Robins (1998) describes behavioral consequences as follows: "Behavioral related stress symptoms include changes in productivity, absence and turnover as well as changes in eating habits, increased smoking or consumption of alcohol, rapid speech, and sleep disorder.

- Feel like doing strikes
- Feel like early retirement
- Feel Burnout
- Smoking
- Alcohol Consumption
- Remain absent
- Less adjustment with colleagues
- Frequency of Accidents or Errors from Nurses side

Objectives of the Study

- To study the organizational Role Stress levels amongst the working nurses of the Medical College and Hospital.

- Is there any physical consequence of the staff nurses due to IRD, RS, REC, RE, RO, RI, PI, SRD, RA, RIn variables of role stress?

- Is there any psychology consequence of the staff nurses due to IRD, RS, REC, RE, RO, RI, PI, SRD, RA, RIn variables of role stress?

- Is there any behavioral consequence of the staff nurses due to IRD,RS, EC, RE, RO, RI, PI, SRD, RA, RIn variables of role stress?

Methodology

Sample size, Data Collection and Questionnaire

An attempt was made to collect information from the nurses working in North Bengal Medical College and Hospital in Darjeeling District of West Bengal. During the period of survey 68 staff nurses out of 264 who are working in that Hospital chosen randomly and a questionnaire is given to them.

An Organizational Role Stress (ORS) Questionnaire consisting of 50 questions was prepared on the lines suggested by Pareek (1993) and the same was translated in Bengali. According to Pareek an ORS scale is used. ORS scale is a 5-point scale indicating how true a particular statement is for the role. The respondent is asked to assign'0' to a statement if she never or scarcely feels this way;'1' to a statement if she occasionally feels this way and '4' if she very frequently feels this way. Hence the score of each role stress may range between 0 to 20 and the total ORS score may vary between 0 to 200.The ratings of the respondents may be added row wise to give the scores on the 10 role stress dimensions. According to Pareek (1983a and 1983c), the ORS scale can be used for several purposes. For example it can be used to investigate the nature and dynamics of role stress in various organizations and to develop interventions for the use of individuals, groups and organizations. The ORS is certainly one of the best instruments available today for measuring a wide variety of role stresses.

Hypotheses

H_{01} : Psychological problem is not correlated with the combination of the variables (IRD, RS, REC, RE, RO, RI, PI, SRD, RA, RIn) of role stress.

Justification of this Hypothesis is that to check out the impact of ten role stress variables on Psychological consequences combinedly.

H_{02} : Physical problem is not correlated with the combination of the variables (IRD, RS, REC, RE, RO, RI, PI, SRD, RA, RIn) of role stress.

Justification of this Hypothesis is that to check out the impact of ten role stress variables on Physical consequences combinedly.

H_{03} : Behavioral problem is not correlated with the combination of the variables (IRD, RS, REC, RE, RO, RI, PI, SRD, RA, RIn) of role stress.

Justification of this Hypothesis is that to check out the impact of ten role stress variables on Behavioral consequences combinedly.

Findings and Analysis

Causes of Job Stress

After sample survey the responses got from the nurses the Mean, Standard Deviation and Coefficient of Variation for ten different variables and their implications are discussed in these tables given below: -

TABLE-1

Rank of ORS Variables

From this table we get the Role Overload (RO) factor which is the most important factor having the highest percentage of maximum score from the maximum ORS possible score. Thus it gets rank 1 which impacts most on stress level of the staff nurses. However the standard deviations of Role Erosion (RE) factor and Personal Inadequacy (PI) factor are very low which tells that the deviation of the individual scores from the mean score is minimum (3.09 & 2.49) which signifies that the scores are consistent and it tells that the two factors are also very important factors which cause stress on the nurses.

Measures of ORS

In this section the overall score of ORS will be discussed to measure the stressfulness of the nurses of North Bengal Medical College. For this purpose the following scales have been followed as suggested by Srivastav (1999).

1. Respondents scoring less than 50% of the total score (4×50=200) i.e. 99 or below are assumed to have low stress or below are assumed to have low stress or no stress.

2. Respondents scoring more than 50% of the total score (4×50=200) i.e. 100 or more but below 140 (70%) are assumed to be moderately stressful.

3. Respondents scoring 70% or more of the total Score (4×50=200) i.e. 140 (70%) and above are considered to be highly stressful.

68 Staff Nurses respond to the questionnaire .The numbers of ORS questions are 50 in total. In addition to that there are other questions in relation to respondents profile, their physical problems, psychological problems etc.

The ORS measurements of all these staff are found out with various variables attached to the same .A general picture can be drawn from these measures that how extensively the nurses are stressful and what other factors are responsible for such stressfulness. Other factors here considered are pay scale, qualification, age etc.

TABLE-2

Distribution of ORS score of the total sample population

ORS Score	No of nurses	Percentage (%)
0-99	60	88.24
100-139	08	11.76
140 & Above	NIL	NIL
Total	68	100

Respondents scoring less than 50% of the total score (4C50=200) I, e. 99 or below are assumed to have low stress or no stress. From this table we get that 11.76 percentages of the nurses are lying in a moderately stressful zone.

TABLE-3

Basic Pay-wise distribution of ORS Score of Nurses

ORS Score	Rs. 7500 & More	(%)	Rs. 6500 & More	(%)	Rs. 4000 & More	(%)	Total	(%)
0-99	12	17.65	18	26.47	30	44.12	60	88.24
100-139	2	2.94	1	1.47	5	7.35	8	11.76
140 & Above	NIL	NIL	NIL	NIL	NIL	NIL	NIL	NIL
Total	14	20.59	19	27.94	35	51.47	68	100.00

Table 3 shows that out of 68 nurses 14 belonging to the basic pay of Rs. 7500 and 2 nurses are in the moderate or high stressful area. Table shows that 19 nurses belonging to the Basic pay range of Rs. 6500 and 1 employee of them is in the high stressful area. Table shows that the 35 nurses lie in the Basic pay range of Rs 4000 & more out of which 5 nurses are in the moderate or high stress zone. From the figures in the table it seems that the nurses falling in the medium and lowest category of Basic pay are more stressful than the employees falling in highest category.

TABLE-4
Experience –wise distribution of ORS Score of Nurses

Yrs of Experience	ORS		ORS		ORS	
	0-99	%	100-139	%	Total No	%
0-4	08	11.76	02	2.94	10	14.70
5-9	22	32.35	04	5.88	26	38.23
10-14	21	30.88	02	2.94	23	33.82
15-19	08	11.76			08	11.76
20-24	01	1.47			01	1.47
24-29						
30-34						
35 and above						
Total	60	88.24	08	11.76	68	100

Table 4 depicts that the nurses working for 15-19 yrs and 20-24 yrs seem to be low stress full than the other groups. Nurses of 0-4, 5-9,10-14 yrs experience are more stress full than the other groups. It depicts that increasing of experiences helps to cope up with the stress in a better way.

TABLE-5
Educational Qualification-wise distribution of ORS score

Table 5 depicts that out of 68 nurses 35 having the qualification of 12th standard pass and 33 of them having the qualification of Graduation. Out of 35 nurses of 12th standard 4 of them are in high stress zone and out of 33 nurses having graduation, 4 of them are in the high stress zone.

TABLE-6
OTHER CAUSES OF JOB STRESS

Table 6 depicts that there are some other causes of job stress of the working nurses. Out of 68 respondents all of them demanded for more training. They demanded for reward system for good performance. More than 50 percent of the nurses are not happy with their salary and

promotion structure. Most of them are not happy with their superior. They are not happy at all regarding their infrastructural facility. So these are the other causes for the occupational stress among nurses.

Impact of Job Stress on Physiological, Psychological and Behavioral Consequences

H_{01} Hypotheses Testing

The scores of ten role stress variables are taken as independent variables and the scores of psychological consequence are taken as dependent variables. A multiple regression analysis is done to find out the multiple correlation coefficient R and the co-efficient of determination R^2.

After data analysis by SPSS-12 through multiple regression method we have got these tables given below…

Model Summary 1   Table-7

From this table the calculated multiple correlation for H_{01} (which is the main Hypothesis) is R=0.689 and the Co-efficient of determination (the proportion of total variation explained by the multiple regression equation) $R^2 =0.475$

Here R is significant at 5% as well as 1% level of significance, which states that the Hypothesis -H_{01} is rejected.

That is there is a correlation between psychological problem and the role stress variables.

H_{02} Hypotheses Testing

The scores of ten role stress variables are taken as independent variables and the scores of physical consequence are taken as dependent variables. A multiple regression analysis is done to find out the multiple correlation coefficient R and the co-efficient of determination R^2.

Model Summary 2   Table-8

From this table the calculated multiple correlation for H_{01} (which is the main Hypothesis) is R=0.786 and the Co-efficient of determination (the proportion of total variation explained by the multiple regression equation) R^2 =0.551

Here R is significant at 5% as well as 1% level of significance, which states that the Hypothesis -H_{02} is rejected.

That is there is a correlation between physical problem and the role stress variables.

H_{03} Hypotheses Testing

The scores of ten role stress variables are taken as independent variables and the scores of behavioral consequence are taken as dependent variables. A multiple regression analysis is done to find out the multiple correlation coefficient R and the co-efficient of determination R^2.

Model Summary 3   Table-9

From this table the calculated multiple correlation for H_{01} (which is the main Hypothesis) is R=0.792 and the Co-efficient of determination (the proportion of total variation explained by the multiple regression equation) R^2 =0.626

Here R is significant at 5% as well as 1% level of significance, which states that the Hypothesis -H_{03} is rejected.

That is there is a correlation between behavioral problem and the role stress variables.

The findings suggest that a good number of ORS stress variable is causing Physical, Psychological and Behavioral consequences to the staff nurses of North Bengal Medical College and Hospital. Now the question arises how to reduce the level of stress of the nurses. Issues like excessive work pressure, lack of training, harsh behavior from authority, lack of infrastructure, lack of communication, present pay structure etc are creating stress among the nurses.

So work redesign, supportive infrastructure, establishing social recognition of the nursing staff, regular counseling, strong training system, computerization, clear expectation from job etc can minimize stress of the nurses.

Today private nursing homes are doing a great deal of business in health sector. The

infrastructures are good in private nursing homes. Govt hospitals should be equipped with the good infrastructure as available in private nursing homes.

Conclusion

The role of an individual worker in an organization has two-fold aspects: Role Demand and Role Performance. Role Demand is the state of condition that constantly determines the exact role of the workers in a system. Workers in a system are defined with the role demand assigned to them. Role Performance on the other hand is the portion of role demand actually met by a worker. Role performance as such could be measured by the disposition of an employee made while he/she is at work. The imbalances between those two role factors in many cases are inevitable and thus produce stress for the individuals in many occasions. Today the number of patients who have been affected by stress are many. Most of them need counseling by the experts. Good organizations understand the need for counseling today to get the motivated workforce. They are conducting assessment centers for the psychological treatment of their employees. To cope up with the occupational stress, employees should listen music regularly, should exercise regularly, and communicate to their superiors regarding any problem, should spend as much time as possible with their family members.

References

- Bhatta(Sen), Mandira et.al.(2006),"Stress in the Organizational context", The ICFAI Journal of Organizational Behavior,Vol.V,No.1,pp.32-40

- Brough, Paula (2004),"Comparing the influence of traumatic and organizational stressors on the psychological health of police, fire and ambulance officers", International Journal of Stress Management,Vol.11,No.3,pp.227-244

- Chirayath, Susan (2006),"Stress and Coping Mechanisms of Female Cashew Workers: A Study", The ICFAI Journal of Organizational Behavior, Vol.V, No.4, pp.50-64

- Ganesh, M.P. (2006), "Work Motivation and Occupational Stress among Executives from Software and Manufacturing Industries: An Empirical Study", ICFAI Journal of Organizational Behavior, Vol V,No.1,pp.49-61

- Jain, M., Misra P., and Kothari, S. (2002),"Type A/B behavior pattern and occupation as predictors of occupational stress" Indian Journal Of Industrial Relations, Vol 37,No.4

- Kang, L.S and Singh, R. (2004),"Managing Organizational Stress: A study in electronic industry", Indian Journal of Industrial Relations, Vol.39, No.4.

- Marilyn L. Fox, Deborah J. Dwyer, and Daniel C. Ganster (1993), "Effects of Stressful job demands and control on Physiological and attitudinal outcomes in a hospital setting", Academy of Management Journal, Vol.36, No.2, 289-318

- Srivastava A.K. (1990), "Moderating Effort of Job attitudes on occupational stress-mental health relationship", Indian Journal of Applied Psychology, Vol.27, pp.98-102

- Srivastava A.K. (2006), "Coping Strategy for Role Stress Across Management Levels", ICFAI Journal of Organizational Behavior, Vol. V, No.3, pp.65-73

- Stephan J. Motowidlo, John S. Packard, and Michael R. Manning (1986), "Occupational Stress: Its Causes and Consequences for Job Performance", Journal of Applied Psychology, Vol 71, No.4, 618-629

- Vanitha, V. et.al (2006), "A Study on Organizational commitment and Stress among Information Technology Professionals", The ICFAI Journal of Organizational Behavior, Vol. V, No.1, pp.73-79