Factors Affecting to the Occupational Stress of Doctors (With Special Reference to Anuradhapura District)

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ABSTRACT

Occupational stress is the physical and emotional response which occurs when the requirements of job do not match the capabilities, resources or needs of the worker. Stress affects the quality of results and gives birth to job dissatisfaction. Occupational Stress is one of the major problems in Health care industry. It influences the behaviour of doctor towards his or her co-workers, administration and most importantly towards the patients. Therefore this problem is worth to study and its results highlights that there is a stressful behaviour of doctors while dealing with patients. And also this study reveals the important factors affecting to the stress of doctors in Anuradhapura district. Further it revealed the strategies doctors used to minimize their occupational stress. Health care industry being very sensitive in nature it should be managed the stress of doctors to achieve the objective of service to society.

A survey was conducted and SPSS was used to identify and analyze the factors affecting to the stress of doctors in Anuradhapura district and also the stress management strategies. Statistical tools such as, mean, standard deviation and Regression Analysis was applied to measure the relationship among variables. There were 400 doctors in Anuradhapura and 196 doctors were selected to comply with the 95% confidence level. The results suggest that Role overload, managerial behaviour, intergroup Conflict and Family are highly affected to build the stress of doctors in Anuradhapura District.

KEY WORDS: *Occupational Stress, Health care Industry*

Introduction

Occupational stress played a key role in the work environment of an organization. Health care industry could be identified as one of the major area where this occupational stress was highly prevailing. Among the healthcare occupations, Doctors occupied a prominent place in relation to job stress when compared with other professionals in Health care Industry.

It is a common phenomenon in developing countries that standard number of doctors required for patients cannot be found in the health services. This problem begins with two major reasons.

Firstly education facilities in the so called 3rd world countries are very much limited and the education system normally produces Art graduates. But it cannot produce the required number of technical qualified professionals. In most of the developing countries, higher education is mostly managed by the government. As a result, it is difficult to increase the number of doctors as the private sector involvement is restricted. In Sri Lanka this is very clear. Opinion makers always take a view against the establishment of private medical colleges and stand for a purely government funded system.

Table 1.1 Increases in Number of Doctors in Sri Lanka

Year	Number of doctors	Percent Change
2oo8	15,185	7.41 %
2009	15930	6.67 %
2010	16492	3.40 %
2011	18299	9.87 %
2012	**18252**	**-0.25 %**

Source: Annual Report of the Ministry of Finance and planning 2013

Secondly, health education in most of the developing countries is poor. This can be linked to the health literacy rates of some of the countries compared with developed countries. Therefore the health service of many of the 3rd world countries can always be characterized with a lack of resourceful situation.

Statement of the problem

In this context Sri Lanka's situation can be analyzed. But when Sri Lanka is compared to most South African countries, vital statistics such as mental morality ratio, infant mortality rate and life expectancy are low and almost similar to developed countries. And it takes the 92ndplace from the world (World Health Organization 2012).

The state health care services are free and patients can seek health care from any hospital from district, general, provincial or national hospitals. Because of this many of the patients who can cure themselves with community health practices "make visits to the hospitals". Also many of the people, who can take preventive health care advices from public health officers, unnecessarily go to hospitals for medical treatments. It is in this context we can see fewer doctors, more patient situation leading to occupational stress among doctors. Migration of doctors is also caused to the scarcity of doctors. Not only the above reasons, many factors can be identified which affect to the stress of doctors when referring to the past researches.

The Provincial Department of Health Services of the North Central Provincial Council delivers the healthcare services in two districts namely Anuradhapura and Polonnaruwa. Geographically the province comprises of 10,472sqkm consisting of 1.2 Million population with a population density of 122.5/km2.

General objective

• The general objective of the study is to investigate the factors affecting to the Occupational stress of doctors in Anuradhapura District and identify the Mitigating Strategies they used

Specific objectives

• To identify the Current Level of Occupational Stress of Doctors in Anuradhapura District
• To identify the factors which cause Occupational Stress among Doctors
• To identify the relationship between current Level of Stress and stressors
• To identify the practices used by doctors to mitigate their Occupational Stress and identify the relative importance of each strategy

Review of Literature

Stress

Stress plays a key role in the work environment of an organization. And also it is an undesirable outcome of work in organizations. As is the case with most constructions in use in psychology, researchers employ a wide variety of conceptual definitions of the stress construct (cf. Hart & Cooper, 2001).According to Ivancevich and Matteson, stress is "an adaptive response, mediated by individual differences and/or psychological processes, that is a consequence of any external (environmental) action, situation, or event that places excessive psychological and/or physical demands on a person".

Factors affecting to the Stress

The concept of stress is complexed in structure and involves the perceived stressors, the individual's response to the stressors and the consequences which these stressors have on the individual and the organization (Cooper and Sloan, 1988). According to the research done by Abdul Aziz, Five highest mean scores were for the items on the number of hours worked per week, pressing problems, lack of time for family and personal life, many different activities, and Medicare/insurance paperwork. Interestingly, number of hours on call per week was ranked sixth in terms of its contribution to stress.

High stress feelings in doctors are due to longer working hours which results from high patient volume and leads to stress (Baroda and Arya, 2012).Their study on comparative ratings of all parameters indicates that high patient volume, senior's pressure, high expectations and no appreciation by patients are causes of stress in doctors. It may be observed that 79% of the doctors come under stress in their work due to high patient volume, however it may be noted that the doctors feel less or no stress due to adverse press publicity. Further Baroda and Arya explained that some of the factors leading to develop Stress with the job are: monotonous work, long working hours, and night shifts, to some extent the safety aspect for female doctors. Doctors expressed that they feel stressed while dealing with critical patients and convincing their attendants. It may be observed that doctors have stress due to phone calls during night/early mornings and in dividing time between family and patients. According to the research conducted by Emma, Sinead, Cath and Amanda (2008) on "Hospital Consultants' job stress and satisfaction (HCJSSQ)", have identified 36 stress items and the main 5 stressors are;

1. Feeling overloaded and its impact on home life
2. Feeling poorly managed and resourced
3. Dealing with blame and anger from patients' and relatives'
4. Dealing with changes in clinical practices
5. Encountering difficulties in relationships with hospital staff

All human beings have to face stress in their daily lives. The normal response to stress is adaptive and helps to successfully face the challenges of life. More than 100 years ago, the Scottish Psychologists Yerkes and Dodson discovered a very simple but important law. What they showed was that if a person is subjected to stress, his performance initially increases, but only up to a point. Beyond this point, he becomes overwhelmed by stress and his performance drops. This inverted 'U' is now known as the Yerkes Dodson Law.

Stress is the experience of opportunities or threats that people perceive as important and also perceive they might not be able to handle or deal with effectively (George and Jones, 1996). Further they explained that Stress can be experienced because of both Opportunities and threats. Opportunities such as learning new skills or getting a new job will be able to perform at an acceptable level. When an organization reduces the size of its work force, employees experience Stress because of threats to their financial security, psychological well-being, or career development that downsizing creates (George and Jones, 1996)

Consequences of Stress and stress management

The operating costs certainly rise because of lower productivity, incorrect or random work and mistakes. The employer needs to pay attention on stress factors at the workplace (Yemn and Graham, 2007)

Two cross-cultural studies on stress include a comparison of job satisfaction, stressful and mental health between British and Canadian general practitioners. The findings showed that British doctors had lower job satisfaction, higher work stress, were more depressed with more somatic anxiety and consumed more alcohol than their Canadian counterparts (Rout and Rout, 1997).

Individual Coping Strategies

Today, Self- help remedies, do-it-yourself approaches, weight-loss clinics and diets, health foods and physical exercises are being given much attention in the world (Luthans, 2002). According to Luthans there are some specific techniques that individuals can use to eliminate or more effectively manage the stress.

- Exercise
- Relaxation
- Behavioural Self-control
- Cognitive therapy
- Networking

Organizational coping strategies

Organizational coping strategies are designed by management to eliminate or control organizational level stressors in order to prevent or reduce job stress for individual employees. Luthans stated several strategies as follows;

- Lunch time stress management seminars
- Company-run fitness centers
- Restructuring of jobs and job duties
- Flexible policies
- Employees assistance programmes

Methodology

Figure 1.1 shows one of the most famous models that used to describe the nature of the Stress and Stressors which were introduced by the M. Moffeson and Ivancerich in 1979. The two variables of the research are Stress and Stressors. Among them Stressors (Individual level factors, Group Level Factors, Organizational Factors and Extra Organizational Factors) were held as Independent variables and Stress was held as Dependent variable.

Based on the literary review of the research study several number of factors had been identified as factors that are affecting to the Stress of doctors. Among them, eight main factors were selected to this research study. Based on these eight factors, the questionnaire was developed.

1. Role overload

2. Managerial Behaviour

3. Inter group Conflict

4. Family

To check the Independent variables, Respondents were asked to mention the degree to which each of these factors can make them stressed within their occupational lives. It was measured with questionnaire on Likert Type 5 point scale ranging from 1 to 5.

Dependent variable or current level of stress was measured by using 5 statements. Respondents were asked to mention their existing level of stress considering each of these factors (Stress due to these factors) in a 5 point Likert scale.

Conceptual Framework
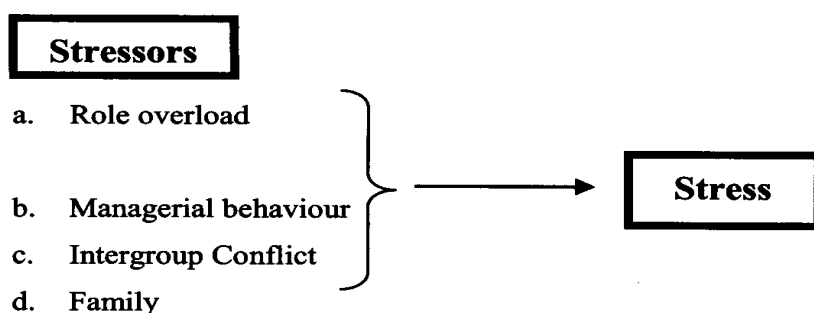
Figure 1.1 Conceptual Frame work (Source: Moffeson M. and Ivancerich, "Organizational Stressors" (1979))

Population and Sampling

Under this study, data was collected from the Doctors who are working at Anuradhapura district. There is one teaching hospital and 54 other hospitals in Anuradhapura District including Base hospitals, Divisional hospitals type A B and C, primary medical centers and MOH offices. Data was collected through questionnaire from doctors in Anuradhapura district.

District Medical Officers, MOH officers, AMOH officers and Medical officers in charge were working in Anuradhapura district and there were 248 doctors in Anuradhapura teaching hospital while 152 were from the other hospitals in Anuradhapura district. Therefore the total population was 400.

Table 1.2 Type and number of hospitals in Anuradhapura district

Type of Hospital	Total Number of doctors in Anuradhapura
Teaching Hospital	248
Base hospitals	53
Divisional hospitals type A	25
Divisional hospitals type B	22
Divisional hospitals type C	27
Primary Medical Centers	7
MOH Office	18
Total	400

As the doctors were busy it was very difficult to collect data from the entire population. Therefore researcher has selected 196 doctors under the 95% confidence level using convenience sampling method and random sampling method.

Data Collection and Analysis

A Likert scale questionnaire was developed to take primary data, and it was designed around opinion statements as a means of exploring respondents' perceptions of a wide range of socio -cultural impacts.

Secondary data is based on sources that already exist. Secondary data collection methods in the current study included; Text books, RDHS reports and other Statistical reports issued by the Government, Web sites and Magazines and articles

The quantitative data collected was initially coded into numerical representations, so that a series of statistical analyses could be performed using the software package Statistical Package for Social Science version 16(SPSS ver. 16).

For analysis purposes, the respondents were asked to rank their responses to the questions according to the Likert scale format. Coding in quantitative analysis differs from qualitative coding in that the raw data is turned into numerical representations to allow statistical analyses to be conducted on the aggregated data. A code was developed for each of the response sets in the questionnaire, and numerical codes were assigned for each response .These responses were then turned into a series of numbers for capture using SPSS for further statistical analysis.

Data analysis was done using SPSS software.

Then 'Regression Analysis' is used to identify the relationship between Current Level of Stress and Stressors.

Results and Discussions

In the empirical survey, current level of stress was measured by using 5statements. Respondents were asked to mention **their existing level of stress** considering each of these factors in a 5 point Likert scale. The descriptive statistics calculated on the variables are presented in the following table.

Table 1.3 Statics of dependant variable

Mean	3.4628
Std. Error of Mean	.03009
Median	3.2857
Std. Deviation	.42122

Source: Developed by Researcher

As indicated by the table 1.3 the mean value of the Stress is 3.2628. It means that the current level of Stress of Doctors in Anuradhapura District is above the average level. The Standard Deviation (SD) was 0.42122 which showed a small dispersion.

This study investigates the factors affecting to the stress of Doctors in Anuradhapura District base on 4Independent variables Role overload, , Managerial behavior, Inter Group conflict and Family which were identified through an extensive revision of theoretical and empirical literature on the underline variable. Respondents were asked to mention **degree to which each of these factors can make them stressed within their occupation.**

Table 1.4 Descriptive statics of Independent Variables

	Mean	Std. Deviation
Role overload	3.2327	.58083
Conflict between groups	2.8988	.69140
Managerial Behavior	3.1480	.93015
Family	3.2466	.79590

Source: Developed by researcher

Mean value of the Role Overload is 3.2327. It means that doctor's stress was high due to workload; Managerial Behavior, Management Style and Family also indicate a mean value which is higher than 3 and a small dispersion from the mean value. It indicates that doctor's stress is high due to the above factors. In other words those factors lead to develop the current level of stress.
Conflict between groups is not much affected to the current level of Stress as it has a mean value less than 3.

Table 1.5: Relationship between Stress and Stressors

Model		Un standardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
	(Constant)	.215	.032		6.740
	Role overload	.248	.009	.342	27.679
	conflict	.189	.009	.310	20.923
	Management Behavior	.013	.007	.030	2.007
	Family Life	.141	.006	.267	23.213
	Adjusted R Square	0.89			
	F - Value	1.303E3			

Source: Developed by Researcher

The correlation analysis used in the section shows that Stress of Doctors correlates with Role overload, Managerial behavior, Inter Group conflict and Family .however, it does not show how each of the independent variable impact to Stress and their strength. Thus, this section aims to investigate the joint impact of the independent variables which were identified as significant factors of Stress. In this purpose multiple regression analysis was performed. The results are given in Table 1.5

Correlation coefficient is usually written as r. The possible value of r range is from -1.00 to +1.00. The closer the coefficient is to an absolute value of 1.00, the greater the degree of relatedness. Values near 0 indicate a very weak linear relationship. A positive value indicates that there is a positive association between variables, and a negative one indicates negative association. The extreme values -1.00 and 1.00 indicate perfect linear relationship.

The adjusted 'R' Square value provides more accurate information about the fitness of the model. According to the output given by SPSS, the Independent variables of the model can predict 89% of the variance in the Dependent variable. Therefore this model can be identified as an accurate model.

The *F*-ratio in the **ANOVA** table tests whether the overall regression model is a good fit for the data. The table 1.5 shows that all the independent variables statistically and significantly predict the dependent variable as the F- value is greater than 1. Therefore all hypotheses can be accepted.

Table 1.6: Hypothesis testing

Hypothesis	Variable	Pearson Correlation	Aggregated Mean	Sig:	Hypothesis test
H1	Role overlord	0.750	3.2327	0.01	Accept
H3	Management Behavior	0.548	3.1480	0.03	Accept
H4	Intergroup Conflict	0.444	2.8270	0.02	Accept
H7	Family life	0.597	3.2466	0.05	Accept

Source: Developed by Researcher

$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4$

X1= Role overload

X2=Managerial behavior

X3=Inter Group conflict

X4=Family

Stress=0.215+0.248(X1)+0.189(X2)+0.013(X3)+0.141(X4)-0.14(X5)

Stress Management

Table 1.7: Strategies used by the doctors to minimize their risk and relative importance of each strategy

	Solution	Mean	Mode
01	Religious Observances	3.88	4
02	Time Management	3.80	4
03	Having a good sleep	3.72	4
04	Acceptance and carryon	3.69	4
05	Music	3.64	4
06	Get the social support	3.59	4
07	Drink alcohol	1.62	1

Source: Developed by the Researcher

According to the details given by doctors working at Anuradhapura District, they are using several Strategies to minimize their occupational Stress. Six factors have a mean value more than 3. All above strategies are accepted except drinking alcohol. Apart from that, further strategies were mentioned by the doctors in Questionnaire. They are

- Play with children

- Trips

- Face book chatting

- Consider it as a social service

Findings and conclusion of the research

The research was implemented to determine the major factors that affect to the stress of doctors in Anuradhapura District and to identify the relationship and relative importance of each factor. And also researcher expected to find the strategies doctors used to minimize their stress and the relative importance of each strategy.

Regression Analysis was conducted to identify the relationship between Stress and Stressors. According to the findings, there is a positive relationship between Role overload, Managerial behaviour, Management style and Family. **Role overload** and **Family life** are the main 2 factors which cause to current level of Stress.

<u>Model</u>

Researcher has identified 8 variables through an extensive revision of theoretical and empirical literature on the underlined variable.

$Y= a+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4$

X1= Role overload

X2=Managerial behavior

X3=Inter Group conflict

X4=Family

Stress=0.215+0.248(X1) +0.189(X2) +0.013(X3) +0.141(X4)

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