

OCCUPATIONAL STRESS AMONG HEALTH PROFESSIONALS IN AHMADU BELLO UNIVERSITY TEACHING HOSPITAL (A.B.U.T.H), SHIKA, ZARIA, NIGERIA

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Abstract

This study was carried out to survey occupational stress among health professionals in Ahmadu Bello University Teaching Hospital (ABUTH), Shika, Zaria. The study was aimed at investigating the differences in perception of stress among different health professionals in ABUTH. The descriptive survey design method was used. Questionnaires were distributed based on availability to the different clusters of health professionals in the study group. A sample size of 107 was used comprising 45 nurses, 48 doctors, 5 pharmacists, 3 physiotherapists and 6 medical lab scientists. The findings showed that most of the respondents (36.5%) were within the age range of 31 – 40 years and very few of them were aged 55 years and above. More than fifty six percent (56.7%) of the total respondents were males. Seventy five percent (75%) of the respondents stay long (7-10hours) at work which could be a contributing factor to the development of occupational stress in them. Most of the respondents (90.4%) were identified to be stressed due to work overload because the number of health professionals available to carry out a particular function is inadequate. Eighty percent (80%) of respondents exhibit anger and irritability while twenty seven percent (27%) engaged in absenteeism when they are stressed up. A lot of respondents (78.8%) combat these signs and symptoms of stress by the use of physical exercise. The following measures were recommended to help prevent stress at work: respondents should ensure that the workload is in line with their capabilities and resources, jobs should be designed so that they provide meaning, there should be positive stimulation and opportunities for workers to use their skills, workers' roles and responsibilities should be clearly defined, communication within the work place should be clear and unambiguous, there

should also be opportunities for career development and future employment prospects.

Key-words: Occupational stress, Health professionals, Work place, Burn-out and Work load.

INTRODUCTION

Stress is viewed as involving an interaction of person and environment and that the extent to which such interaction is stressful depends on several factors.¹ Also there is potential for stress when an environmental situation is perceived as presetting a demand which threatens to exceed the person's capabilities and resources meeting it. Moreso, stress can be defined as a complex set of reactions made by a person under pressure and it maybe conceptualized as a pattern of disruptive psychological and physiological functioning that occurs when an environmental event is appraised as a threat to important goals and one's ability to cope.^{2,3}

Occupational stress can be defined as harmful physical and emotional responses that occur when the requirements of the job do not match the capabilities, resources or needs of the worker and this can lead to poor health and even injury.⁴

Researches have revealed that occupational stress among workers may be linked with various

ailments such as ulcer, hypertension, stroke, heart attack, headache, cancer, etc. It could, therefore, be seen from these effects of stress that it is undesirable in any work organization.

Since Freudenberg⁵ used the term burnout, it has mainly been used to describe a state of physical and emotional exhaustion whose characteristics have been mostly applied to human service professionals, within which health professional are included. However, nowadays there is a trend to consider burnout as a specific form of occupational stress or a subclass of stress effects in individuals.^{6, 7}

Since the late 1960s, an intensive debate has developed around the structure of industrial work and the various problems associated with it, wasted leisure time⁸, low job satisfaction and increased morbidity and mortality rate have all been shown to be associated with bad job design and other related problems at work. Also, it is recognized that an increasing number of the conditions faced by the medical and social services appear to be caused or overrated by problems experienced at work. These are, therefore, increasingly seen as a threat not only to the quality of working life but to the quality of life in general.

Stress arises when an individual estimates that environmental demands override his or her own adjustment resources⁹. Hence, given extent empirical evidence on the relationship between stress and several negative psychological disorders, it would be interesting to identify those

work situations which are potentially powerful stressors as well as the nature of their consequences among occupations. Such matters constitute the objectives of this work.^{11, 12, and 13}

Following Ullrich and Fitzgerald's¹³ framework, stress was evaluated through a series of problematic or conflictive work situations, and through a list of psycho-physiological symptoms; a problem situation loss was expected to reflect the subjective stress level experienced by a professional which could be a good predictor of state of health.

Statement of the problem

The primary concern of workers in the health sector is the effective administration of welfare, healthcare and counseling services to the consumers of health care service. In ABUTH, different health professionals have different roles within the hospital setting. While the nurses, doctors, pharmacists and physiotherapists are concerned with the process of diagnoses and treatment of actual or potential health problem, the other health professionals are mainly administrative, management and support staff. The difference in function notwithstanding different categories of workers must operate together to achieve goals and objectives of the hospital. However, workers in this setting cannot be said to have fully achieved satisfaction in their day to day activities because their work situation is prone to stress. Intrinsic stressors in the hospital include work pressure, work overload, time pressure, working hours, lack of facilities, the necessity to work fast and to expend a lot of

physical and mental energy. Hence, a survey of occupational stress among professional health workers in ABUTH is imperative so as to identify those factors intrinsic or extrinsic that can be counter productive.

Aim of the study

The aim of this study is to investigate the differences of perception of stress among the level of different health professionals in ABUTH. The specific objectives of the study include:

1. To determine the presence of occupational stress among health professionals in ABUTH.
2. To examine the personal (intrinsic factors responsible for the development of stress among health professionals in ABUTH.
3. To examine work factors responsible for the development of stress among health professional in the teaching hospital.
4. To assess the effect of stress on the health status of professional health workers in the setting.
5. To evaluate adaptive mechanisms that relieve stress among the health professionals in the hospital.

Significance of the study

The findings of this study may serve as a useful instrument and guide to workers of ABUTH, as well as serve as reference for further research. The findings may help to illuminate the influence of stress factors on job especially in hospital

environment and suggest appropriate techniques for coping with work-stress. This will help health professionals to achieve the goals and objectives of effective administration of welfare, healthcare and counseling services to the consumers of healthcare.

LITERATURE REVIEW

The human body has a natural chemical response to threat or demand, commonly known as the 'flight or fight' reaction which includes the release of adrenalin. Once the threat or demand is over, the body can return to its natural state. A stressor is an event or set of conditions that causes a stress response. Stress is the body's physiological response to the stressor, and strain is the body's long-term reaction to chronic stress.¹⁴

The 'burnt out phenomenon', a terminology made popular by Felton consists of a triad of emotional exhaustion, depersonalization (treating patients as if they were objects) and low productivity/achievements.⁹ It is particularly common in health professionals under stress. Several factors determine whether an individual experience stress at work or other situations –

- Subjects' perception of the situation,
- Past experience,
- Personality,
- Social support.

Nevertheless, work stress and burnout remain significant concerns among health professionals, affecting both individuals and organizations. For the individual, regardless of whether stress is perceived positively or negatively, the neuro-

endocrine response yields physiologic reactions that may ultimately contribute to illness.¹³ In the health care organization, work stress may contribute to absenteeism and turnover, both of which detract from the quality of care. Hospitals in particular are facing a workforce crisis. The demand for acute care services is increasing concurrently with changing career expectations among potential health care workers and growing dissatisfaction among existing hospital staff.¹⁰

The concept of occupational stress is often confused with challenge, but these concepts are not the same. Challenge energizes us psychologically and physically and it motivates us to learn new skills and master our jobs. When a challenge is met, we feel relaxed and satisfied. Thus challenge is an important ingredient for healthy and productive work. The importance of challenge in our work lives is probably what people are referring to when they say "a little bit of stress is good for you". Some situations are different, the challenge has turned into job demands that cannot be met, relaxation has turned to exhaustion, and a sense of satisfaction has turned into feelings of stress. In short, the stage is set for illness, injury and job failure.⁴ Greenglas¹⁵ careful review considers that, although women may more frequently experience multiple sources of stress, they are consistently seen to be less affected by them. Despite biological differences in susceptibility to stress, it is obvious that there are different roles exposing each gender to different stressors and different coping strategies.¹⁶

With respect to the influence of years of experience on stress, there are no conclusive data in the literature that guarantee the acquisition of new coping strategies, nor the appropriateness of acquired responses. Some authors have suggested a hypothetical critical period, between the first 2 and 5 years of professional experience, during which emotional exhalation could affect personal and professional competence, as well as decisions related to job itself.¹⁷

According to one school of thought, differences in individual characteristics such as personality and coping style are most important in predicting whether certain job condition will result in stress. In other words, what is stressful to one person may not be a problem from someone else. This view point leads to prevention strategies that focus on workers and ways to help them cope with demanding job conditions.⁴

METHODOLOGY

Area and population of study

The study was carried out at Ahmadu Bello University Teaching Hospital, Shika-Zaria. The hospital was established as an Institute of Health in 1967 under Ahmadu Bello University law commanding act enacted by the former Northern Nigeria region government. The Federal Government took over the affairs of all teaching hospitals in the country in 1976. ABUTH was later controlled by the Federal Ministry of Health. The Institute of Health was confined to work closely with the Faculty of Medicine, Ahmadu Bello University-Zaria. The harmonious relationship has been of tremendous benefit to both staff and

students of both institutes. The hospitals were located at Kaduna, Zaria and Malumfashi. The administrative head quarters on the main campus, ABU Samaru has moved to the permanent site, Shika Zaria since April 1997 while the three main hospitals were permanently moved to the permanent site, Shika Zaria in 2006. The population of study includes all the health professionals in ABUTH, Zaria. These are the Medical doctors, Nurses, Pharmacists, Physiotherapists, medical lab scientists. The intern health professionals in the various categories above are also included in this study. The total population was 1,040 health professionals.

Sample size and sampling procedure

A sample size of 107 respondents was used who were selected based on the allocation of 10% to each cluster of health professionals (with the Nurses, Medical doctors, Pharmacists, Physiotherapists, and Medical laboratory scientists forming a cluster each). The sample consisted of 45 nurses, 45 doctors, 5 pharmacists, 3 physiotherapists and 6 medical laboratory scientists. Questionnaires were administered to the respondents who were selected randomly from the total population. It consisted of both open and closed ended questions comprising of socio-demographic characteristics of the respondents, factors that contribute to the development of stress, signs and symptoms of stress, and ways of combating stress. A pilot questionnaire was constructed based on frequently mentioned problems encountered by the health staff. The pilot questionnaire was then

given to a group of professionals whose comments led to the final construction of the final questionnaire administered to the target population. 104 questionnaires were returned.

Technique of data analysis

The data collected were analyzed using descriptive statistical measures like frequency distribution table and percentages.

RESULTS

The data in table 1 showed the socio-demographic characteristics of the respondents. More than thirty six percent (36.5%) of the respondents are between the ages of 31-40 years, while 32.7% were aged 41-50 years, 17.3% were aged 21-30 and 13.5% were aged 51 and above. Also 56.7% of the respondents were males and 43.3% were females. Seventy-five percent (75%) of the respondents were married and 25% were single. Sixty-one percent (61%) of the respondents had a professional degree while 42% had only diplomas.

The table also reveals that the number of years spent in service in which 38.5% had spent a maximum of 5 years in service, while 25.0% have spent 6-15 years in service, 21.1% had spent between 16-25 years in service and 15.4 had spent not less than 26 years in service. On the hours spent at work per day, 75% of the respondents worked between 7-10 hours per day, 9.6% worked between 11-12 hours per day, 8.7% worked not less than 13 hours per day and 6.7% worked between 4-6 hours per day.

TABLE 1: Socio-Demographic Characteristics (N=104)

SNO	Variable	Frequency	Percentage (%)
1	Age (years)		
	21-30	18	17.3
	31-40	38	36.5
	41-50	34	32.7
	51 and above	14	13.5
2	Sex		
	Male	59	56.7
	Female	45	43.3
3.	Marital status		
	Married	78	75.0
	Single	26	25.0
4.	Literacy level		
	Diploma	42	40.4
	Degree	61	58.7
	Others	1	0.9
5.	Professional career		
	Nurse	45	43.3
	Doctor	45	43.3
	Pharmacist	5	4.8
	Physiotherapist	3	2.8
	Medical Lab Scientist.	6	5.8
6.	Number of years spent in service		
	5 years and below	40	38.5
	6-15 years	26	25.0
	16-25 years	22	21.1
	26 years and above	16	15.4
7.	Present position held in the profession		
	Intern	16	15.4
	Regular	25	24
	Consultant	4	3.9
	(No) Nursing Officer	9	8.7

	(SNO) Senior Nursing Officer	3	2.8
	(PNO) Principal Nursing Officer	20	19.2
	(ACNO) Chief Nursing Officer	9	8.7
	(CNO) Chief Nursing Officer	4	3.9
	Others	14	13.4
8.	Number of hours spend at work per day		
	4-4 hours	7	6.7
	7-10 hours	78	75.0
	11-12 hours	10	9.6
	13 hours and above	9	8.7
9.	Condition of the working environment		
	Very good	14	13.5
	Good	38	36.5
	Fair	49	47.1
	Bad	3	2.9

Table 2 shows the respondents perception on the factors that contribute to the development of occupational stress. More than eighty-seven percent (87.5%) of the respondents identified long work hours as a major contributory factor to the development of occupational health. Other factors identified include infrequent rest breaks(64.4%), poor communication in the organization (71.2%), too much responsibilities (75%), ward round (48.1% against 51.9% that

believed it did not contribute to stress development), deterioration in the patients condition (50%) while 64.4% identified intrinsic problems like family as another factor that contribute to the development of occupational health. More than eighty percent (80.8%) of the respondents did not identify supervision of students in practical experience as a factor that contribute to the development of occupational stress.

Table 2: Factors that Contribute to the Development of Occupational Stress

s/no	Factors	Stressful							Not stressful						
		N	D	P1	P2	M	Total	%	N	D	P1	P2	M	Total	%
1	Long work hours	38	42	4	2	5	91	87.5	7	3	1	1	1	13	12.5
2	Infrequent rest breaks	28	32	3	2	2	67	64.4	17	13	2	1	4	37	35.6
3	Hectic and routine task that have little inherent meaning	27	31	4	2	5	69	66.3	18	14	1	1	1	35	33.7
4	Non utilization of workers skills	24	15	2	2	2	45	43.3	21	30	3	1	4	59	56.7
5	Lack of participation of workers in decision making	28	22	3	3	4	60	57.7	17	23	2	0	2	44	42.3
6	Poor communication in the organization	32	35	4	2	1	74	71.2	13	10	1	1	5	30	28.8
7	Lack of family friendly policy in the organization	27	26	4	2	2	61	58.7	18	19	1	1	4	43	41.3
8	Lack of support and help from co-workers	24	28	3	-	3	58	55.8	21	17	2	3	3	46	44.2
9	Too much responsibilities	36	34	2	1	5	78	75.0	9	11	3	2	1	26	25.0
10	The necessity to work fast and expend a lot physical and mental energy	37	37	4	1	3	82	78.8	8	8	1	2	3	22	21.2
11	Inadequate number of health professionals available to carryout a particular function	40	42	4	2	6	94	90.4	5	3	1	1	-	10	9.6
12	Supervision of students in practical experience	18	10	-	-	2	20	19.2	37	35	5	3	4	84	80.8
13	Ward round	22	23	3	1	1	50	48.1	23	22	2	2	5	54	51.9

14	Inability to use available equipment	17	26	3	1	3	50	48.1	29	19	2	2	3	54	51.9
15	Job insecurity and lack of opportunity for growth advancement and promotion	29	23	3	2	6	63	60.6	16	22	2	1	-	41	39.4
16	Rapid changes for which workers are unprepared	25	20	3	2	3	53	51.0	20	25	2	1	3	51	49.0
17	Dangerous physical conditions	30	28	3	3	3	67	64.4	15	17	2	0	3	37	35.6
18	Deterioration of patients condition	26	20	2	1	3	52	50.0	19	25	3	2	3	52	50.0
19	Intrinsic problems like family or financial problems	27	33	2	3	2	67	64.4	18	12	3	0	4	37	35.6

Key: N=Nurses, D= Doctors, P1=Pharmacists, P2=Physiotherapists, M= Medical Laboratory Scientists, %= Percentages.

Table 3 shows certain signs and symptoms grouped into physical symptoms, mental symptoms, and emotional symptoms as well as personal behavioural signs perceived by the respondents as symptoms of occupational stress. More than sixty-nine percent (69.2%) of the respondents identified headaches as a sign of occupational stress, 59.6% and 51.0% identified muscle cramps and high blood pressure as other physical signs of the stress respectively. More than seventy percent (70.2%) of the respondents

identified forgetfulness as a mental symptom of occupational stress and 65.4% identified disorganized thinking as another mental symptom. Anger and irritability were identified by majority of the respondents (76.9%) as an emotional symptom of occupational stress whereas 62.5% identified being frustrated as another emotional symptom. More than seventy percent (72.1%) identified low motivation and 50% identified loss of clarity of goals both as personal behavioural signs of occupational stress.

Table 3: Signs and Symptoms of Occupational Stress

s/n o		Yes							No						
		N	D	P1	P2	M	Total	%	N	D	P1	P2	M	Total	%
1	Physical symptoms														
	-Headaches	35	30	3	-	4	72	69.2	10	15	2	3	2	32	30.8
	-Muscles cramps	35	21	2	2	2	62	59.6	10	24	3	1	4	42	40.4
	-High blood pressure	32	16	2	-	3	53	51.0	13	29	3	3	3	51	49.0
	-Ulcers	27	14	1	1	1	44	42.3	18	31	4	2	5	60	57.7
	-Reduced immunity	23	29	2	1	2	57	54.8	22	16	3	2	4	47	45.2
2	Mental symptoms														
	- Forgetfulness	32	33	2	2	4	73	70.2	13	12	3	1	2	31	29.8
	- Disorganized thinking	30	28	5	1	4	68	65.4	15	17	-	2	2	36	34.6
	- Unable to prioritize	23	26	2	-	5	56	53.9	22	19	3	3	1	48	46.1
3	Emotional symptom														
	- Anger and irritability	34	37	3	2	4	80	76.9	11	8	2	1	2	24	23.1
	- Helpless	18	18	2	-	1	39	37.5	27	27	3	3	5	65	62.5
	- Frustrated	26	33	2	2	2	65	62.5	19	12	3	1	4	39	37.5
4	Personal behavioral sign														
	- Low motivation	31	36	2	2	4	75	72.1	14	9	3	1	2	29	27.9
	- Absenteeism	11	14	1	-	1	27	26.0	34	31	4	3	5	77	74.0
	- Lost clarity of goals	21	23	3	3	4	52	50.0	24	22	2	2	2	52	50.0

Key: N=Nurses, D= Doctors, P1=Pharmacists, P2=Physiotherapists, M= Medical Laboratory Scientists, %= Percentages.

The data from table 4 shows the various ways the respondents used in combating stress. More than seventy-eight percent (78.8%) identified that stress could be combated and prevented

using physical exercise. Relaxation, diet and nutrition, and humor, were also identified by the respondents as ways by which occupational stress could be combated and prevented.

Table 4: Presence of diseases that may elevate signs and symptoms of stress

Are you suffering from any disease(s) that may elevate the signs and symptoms of stress you perceive?	Percentage (%)
Yes	15
No	89
Total	104

Table 5: Combating and preventing stress

S/NO	VARIABLE	YES							NO						
		N	D	P1	P2	M	Total	%	N	D	P1	P2	M	Total	%
1	Diet and nutrition	21	27	5	2	3	58	55.8	24	18	-	1	3	46	44.2
2	Relaxation	23	28	4	2	5	62	59.6	22	17	1	1	1	42	40.4
3	Physical exercise	35	36	4	2	5	82	78.8	10	9	1	1	1	22	21.2
4	Time management	24	37	3	2	3	69	66.3	21	8	2	1	3	35	33.7
5	Social support	31	36	5	2	6	80	76.9	14	9	-	1	-	24	23.1
6	Humor	35	35	3	2	6	81	77.9	10	10	2	1	-	23	22.1
7	Spiritual	19	19	1	2	5	46	44.2	26	26	4	1	1	58	55.8

Key: N=Nurses, D= Doctors, P1=Pharmacists, P2=Physiotherapists, M= Medical Laboratory Scientists, %= Percentages.

DISCUSSION

The result of this study indicates that most of the respondents (36.5%) are within the age group of 31- 40 years, and 51.6% of the respondents were males. Greengals¹⁵ states that although females are more exposed to multiple sources of stress, they seem to be consistently less affected by them. The result of this study might however be due to the fact that males dominate all the other health professions used in this study. Further findings in the study show that majority of the respondents were degree holders. This is also similar to the findings of David et al¹⁸ in Calabar. This might be due to the fact that professions such as medicine, pharmacy, physiotherapy all require a minimum of a degree to practise. Also the results show that 75% of the respondents spend about 7-10 hours at work per day. This might be another contributory factor to the development of stress among the health professionals. More than forty-one percent (41.7%) of the respondents identified their work environment as fair, while 2.9% said that their work environment was not fair. This is similar to

the report of NIOSH⁴, which states that unpleasant environmental condition is a constitutional stress. Also it has been seen during the course of the study that inadequate number of health personnel to carry out a particular task was identified by the respondents (90.4%) to be a factor that contribute to the development of occupational stress. This was reported in the work of Bjorkstein et al¹⁹ who stated that work overload and time pressure are frequently mentioned by medical personnel as factors that contribute to stress. It may be assumed that inadequate number of health personnel will obviously encounter a lot of work that is not commensurate to their effort and ultimately lead to the development of work stress. As regards intrinsic factors such family and financial problems that contribute to the development of occupational stress, 64.4% of the respondents answered on the affirmative. Also 50% of the respondents identified that deterioration of patient's condition as another factor that also causes occupational stress. This could be due to the fact that as a patient's condition worsens, more energy is been

expended to ensure or attempt to stabilize his/her condition. It was also found out that poor communication was a source of stress to the respondents (72.6%). This is similar to the works of Torrado²⁰ who identified that the relationship between resident doctors and other staff serve as source of stress especially during practicals as well as training. He further stated that certain professionals tend to give inadequate feedback and this lead to the residents losing confidence in them and hence putting more pressure to the residents.

As regards manifestation of the signs and symptoms of stress, it was seen that 80% of the respondents tend to exhibit anger and instability, while 27% of them exhibited absenteeism. This is similar to the work of Chiesman²¹ & Bartlett²². Jones et al²³ found out that monopoly tend to manifest in absenteeism without proper supervision. Workers when left alone without proper supervision or when the workload surpass their input, they may tend to manifest anger or absenteeism as a sign of occupational stress. Other symptoms identified by the respondents include headache (69.2%), muscle cramps (59.6%) as well as forgetfulness (70.2%).

It was also seen from the study that 85.6% of the respondents are not suffering from any condition that may elevate the signs and symptoms of stress as against 14.4% that identified that they had such conditions. This indicates that the symptoms of stress manifested by majority of the respondents are work-related and not as a result

of disease condition. The respondents identified various ways that they adopted with stress management which include physical exercise (78.8%), humour (77.9%), diet and nutrition (55.8%), while 44.2 % identified spiritual support as means of coping with stress.

Summary

This study was carried out to survey occupational stress among health professionals in Ahmadu Bello University Teaching Hospital (ABUTH), Shika, Zaria. The study was aimed at investigating the differences in perception of stress among different health professionals in ABUTH. The findings show that most of the respondents are within the age range of 31 – 40 years and very few of them are aged 55 years and above. Majority of the respondents were males. Also majority of the respondents were identified to stay long hours at work which may be a contributing factor to the development of occupational stress in them. Most of the respondents were identified to be stressed due to work overload because the number of health professionals available to carry out a particular function is inadequate. Majority of respondents also exhibit anger and irritability while a few of them engaged in absenteeism when they are stressed up. A lot of respondents were identified to combat the signs and symptoms of stress by the use of physical exercise.

Conclusion

In conclusion, the respondents are of the opinion that occupational stress could be managed

through good nutrition, adequate rest and recreation, employment of more health professionals, and also good remunerations. Also work places should ensure that the workload for workers is in line with their capabilities and resources, jobs should be designed so that they provide meaning, there should be positive stimulation and opportunities for workers to use their skills, workers roles and responsibilities should be clearly defined, communication within the work place should be clear and unambiguous, there should also be opportunities for career development and future employment prospects.

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Nurses are an integral component of the health care system, and it is important that we recognize the over 2.7 million registered nurses for the significant work that they do.

Nathan Deal

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