International Journal Health and Psychology Research

Vol.4, No.1, pp.1-8, March 2016

Published by European Centre for Research Training and Development UK (www.eajournals.org)

STRESSED BUT NOT DESPAIR: AN ANALYSIS OF COPING ABILITY AMONG NON-TRAUMA PATIENTS PRESENTING AT THE GENERAL OUT PATIENTS CLINIC OF EKITI STATE UNIVERSITY TEACHING HOSPITAL, SOUTH WEST NIGERIA.

Aina FO[1], Kumolalo FB[2], Fadare JO[3]

[1]Department of Family Medicine, Ekiti State University Teaching Hospital, Ado-Ekiti, Ekiti State

[2]Department of Psychiatry, Ekiti State University Teaching Hospital, Ado-Ekiti, Ekiti State

[3]Department of Medicine, Ekiti State University Teaching Hospital, Ado-Ekiti, Ekiti State

ABSTRACT: *Background: Relationship between stress, morbidity, and mortality has been well established. Morbidity or mortality arises when an individual coping ability has been expended. The perceived stress score (PSS) is an instrument that can be used to determine the level of stress and the ability to cope with the existing stressors. Methods: The sample size of 360 was determined using the percentage of the total patients seen over the previous year that were new patients and this was 36%. The sample size was achieved by selecting 30 patients weekly out of an average of 107 new patients per week using a regular interval ratio. Analysis was done by the use of SPSS version 17. Results: The mean stress score for the study sample was 19.59 with the highest score among those coming to the hospital for psychosocial reasons. About seventy per cent (70.8%) of the study population scored above 10 on the stress coping scale. Cigarette smoking and marital status have significant association with stress coping score. Conclusion: The ability to cope with stress was high among the study population. Current smokers have less ability to cope with stress while being married confers higher ability. Recommendation: Smokers need both medical and psychological intervention to help them develop and enhance their stress coping ability. Family issues should be addressed by physicians as being married confer higher ability to cope with day to day stress.*

KEYWORDS: Coping Ability, Non-Trauma Patients, University Teaching Hospital.

INTRODUCTION

Stress is a common expression and every living creature is faced with stress in life, either internally or externally. One of the most important characteristics of a living organism is the ability to adapt. Charles Darwin theory of natural selection as regards evolution was based on evolved adaptation that aided organisms in surviving[1,2].

Stress has been known to be related to morbidity and mortality. Stress disorder has been classified as acute stress disorder and post-traumatic stress disorder and both are characterized by an experience overwhelming traumatic event[5].

Whenever a patient presents to the physician, it is usually with symptoms and a diminished ability to deal with the fate he/she has suffered. It is said that consistent companion of the patient in this process is stress generated by a biomedical dysfunction that the patient then

brings to the physician. The patient outcome can be determined by how he/she responds to the stress associated with such problem[6].

Physician's awareness of the impact of stress on the overall problem presented by the patient is critical for determining the appropriate cause of treatment. For example there is a center in the hypothalamus that controls the reproductive function. Excessive stress reverberates on the hypothalamic system, thereby disrupting the hypothalamo-pituitary-gonadal pathway. This ultimately causes failure in spermatogenesis[3,4].. Therefore, failure to address stress issues in such a patient will render any form of therapy an effort in futility.

In 1948, Cohen and colleagues developed a 14-item English version of the Perceived Stress Scale (PSS-14) as a global measure of stress[7]. Other versions of the PSS have also been developed like the 10-item version (PSS-10) and 4-item version (PSS-4). However, various studies have demonstrated that the PSS-10 not only provides an adequate measure of perceived stress and similar correlations with smoking and health related measures as the complete version, but has also shown a higher reliability among Chinese patients[8,9]. The PSS is considered to be a brief scale measuring perceived stress that can be administered in few minutes[10]. The PSS 10 was used in this work.

The reason for encounter for each patient was classified according the international classification of primary care – 2nd Edition (English version) (ICPC-2-E). The ICPC-2-E was approved by the international classification Committee of World Organization of National Colleges, Academics and Academic Associations of General Practitioner`s and Family Physicians (WOMCA) 1998. Each chapter of the ICPC-2 is further divided into 7 components with component 1, dealing with symptoms and complaints, component 2, diagnostic screening and preventive procedure, component 3, medication, treatment and procedure, component 4, test result, component 5, administrative, component 6, referral and reason for encounter and lastly component 7, diseases diagnosis. In this study, reason for encounter was classified using component 6, and this was used to group the reason for encounter into general and unspecified symptoms (GUS); Blood and Blood forming organs and immune mechanism; digestive; Eye; Ear; Cardiovascular; Musculoskeletal; Neurological; Psychological; Respiratory; Pregnancy, childbearing, family planning; female genitalia; male genitalia; social problems[11,12].

METHODOLOGY

Setting of the study – This is a descriptive, cross sectional study conducted among non-trauma patients presenting for the first time at general outpatient clinic of Ekiti State University Teaching Hospital, Ado-Ekiti. It is part of larger study.

Study population – All consenting patients presenting for the first time at the affected clinic were recruited until the required sample size was obtained.

Sample size – The sample size for this study is derived using the formula $n= P (1-P) (z/d)^2$

Where n is the required sample size, p is the percentage of the total number of patients seen in the previous year that were new patients which was 36%, z = confidence level at 95% (standard value of 1.98), d = margin of error at 5% (standard value of 0.05).

The total number of patients seen over the previous year was 14,063 and this is more than 10,000.

$N = (0.36)\ (1\text{-}0.36)\ (1.96/0.05)^2 = 354.04$

Therefore the minimum sample size for this study should be 354.

Sampling Technique – From an average of 107 new patients per week, a total of 30 patients were selected weekly using a regular interval ratio over a 3 month period (Sept-Oct 2016).

Perceived stress score of respondents was assessed using the 10-item version (PSS-10) which consist of six negative and four positive items. Each item is rated on a five-point scale from O=never, to 4= very often, covering the preceding month. The positive items are scored in a reversed order to obtain the perceive stress score. High scores indicate greater level of stress. To obtain the coping ability the positive items were scored in the normal order from 1-5. The questionnaire asked participants to rate how often they had felt certain ways over the past month.

Data Collection - An interviewer administered questionnaire was used to collect information on the socio-demographic characteristics of the patients. Information on health risk factors like smoking, alcohol intake and exercise were also obtained. Specific questions on their perceived stress over the previous one month was also obtained using PSS – 10. Weight and height were taken to determine their body mass index (BMI).

Exclusion criteria – Patients who are referred from another hospital with chronic illness were excluded from the study.

Data analysis – Data collected was analyzed using statistical package for social science version 17 software.

Frequency tables and diagram in form of chart were generated for relevant variables. Mean and standard deviation (SD), proportions and percentages were determined as applicable. Further analysis was by liner regression model. The level of significance of this study was set at 5% ($P<0.05$).

RESULTS

Three hundred and sixty subjects comprising of 138(38.3%) male and 222(61.7%) female were recruited into this study. The mean age for the subjects was 42.14±14.87 years with a mean body mass index (BMI) of 25.0±3.16.

Fifty-five percent (55.6%) were married at the time of the study and forty-four (44.7%) were educated up to tertiary institution level. The mean stress score was highest among those coming to the hospital for psychosocial reasons while 70.8% score above 10 on the stress coping scale. Cigarette smoking and marital status have significant association with stress coping score.

Table IBASE LINE CHARACTERISTICS OF THE SUBJECTS

Variables	Frequency	Percentages
Sex:		
Male	138	38.3
Female	222	61.7
Marital Status		
Separated	5	1.4
Divorced	15	4.2
Widowed	47	13.1
Single	93	25.8
Married	200	55.6
Ethnicity:		
Hausa	14	3.9
Igbo	68	18.9
Yoruba	278	77.2
Religion:		
Muslim	45	12.5
Christianity	315	87.5
Level of Education:		
No formal	16	4.4
Primary	49	13.6
Secondary	134	37.2
Tertiary	161	44.7
Employment Status:		
Not Employed	90	25.0
Employed	270	75.0
Monthly Income:		
<#7,500.00	80	22.2
≥#7,500.00	280	77.8
	Frequency	Mean (SD)
Age in years	360	42.14 (14.87)
BMI	360	25.0 (3.16)
Stress Score	360	19.59 (8.46)

Table II: Reasons for encounter according to ICPC-2-E classification and their mean stress score

Diagnosis	Frequency	%	Mean	Std. Dev.
Psychological	31	8.6	25.9	6.7
Digestive	55	15.3	21.4	10.0
General	69	19.2	18.2	7.9
Urological	14	3.9	18.1	8.3
Endocrime	14	3.9	16.6	9.3
Female genitalia	24	6.7	17.8	6.9
Child bearing	13	3.6	21.9	6.2

Musculoskeletal	33	9.2	17.3	8.7
Cardiovascular	15	4.2	17.8	9.1
Respiratory	25	6.9	14.7	7.1
Blood	6	1.7	24.0	6.8
Skin	21	5.8	21.5	7.7
Neurological	11	3.1	19.5	7.6
Eye	3	0.8	16.7	11.2
Ear	12	3.3	19.3	4.8
Male genitalia	11	3.1	20.9	6.0
Social problems	3	0.8	32.7	7.1

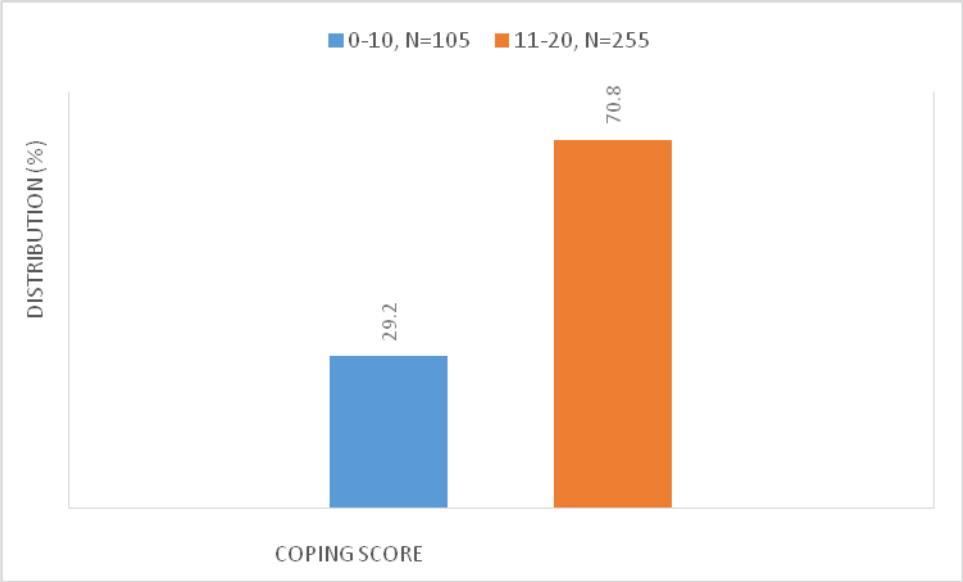

Figure 1: Bar chart showing the distribution of respondents according to stress coping score

Regression analysis of covariates

	B	S.E.	Wald	df	Sig.	OR	95% C.I.for EXP(B)	
							Lower	Upper
Employment Status	-.485	.325	2.230	1	.135	.615	.326	1.164
Income	-.476	.326	2.134	1	.144	.622	.328	1.176
Smoking			5.765	2	.056			
Smoking (never)	2.244	1.042	4.643	1	.031	9.433	1.225	72.644
Smoking (in the past)	2.570	1.081	5.656	1	.017	13.063	1.571	108.594
Marital status (presently Married)	.721	.244	8.738	1	.003	2.057	1.275	3.317
Constant	-2.534	1.060	5.714	1	.017	.079		

DISCUSSION

The overall mean stress score for the study population was 19.59 while the mean stress score was higher among those whose reasons for encounter fell under the psychological and social groups (25.9 and 32.7) respectively.

Ajetumobi et *al* have suggested that psychosomatic symptoms may be the primary expression of psychological distress while perceived stress has been reported in literature to have significant positive association with psychosomatic problems[13, 14,15]. The high mean stress score among the two groups may underscore the relationship between psychological and social state of an individual and the importance of biopsychosocial model of care.

Cigarette smoking has a significant association with stress coping score in this study. Those who have quitted smoking and those who never smoked have better ability to adapt (P=0.017, OR =13.06 and, P=0.031, OR =9.433) respectively than those who were smoking at the time of the study. The higher coping score among previous smokers could be due to the possibility of having received psychological intervention during the quitting process. On the other hand, those who never smoked are the ones who probably have not exceeded the limit of their coping ability since stress has been said to be a trigger of smoking and increases the frequency of smoking behaviour[16,17,18].

Being married conferred about 2-fold tendency to score higher on the stress coping scale compared to those who were divorced, widowed or separated (P=0.003, OR =2.057). It has been said that compared to married people, the unmarried have higher levels of depression, anxiety and other forms of psychological distress[19,20,21,22]. Marriage provides social support of all forms, particularly the emotional element which has been said to decrease depression, anxiety, sickness, and mortality[23,24].

CONCLUSION

A high proportion of the study population scoring high on the coping ability scale was regarded as portraying a resilient population in view of the overall high mean stress score. This work has demonstrated marriage as a possible resource while smoking could be a hindrance to ability to cope with stress.

Cigarette smokers should be exposed regularly to psychological intervention while focusing on identifying the existing stressors; as this may enhance their ability to quit smoking if properly managed.

Finally, attention should be paid more to family issues because sustenance of marriage may lead to less morbidity and mortality. A biopsychosocial model of care is also highly recommended.

REFERENCES

[1] Charles D. The origin of species, 1859 ISBN 0-375-75156-7

[2] Goldsmith TC. The evolution of aging: How new theories will change the future of medicine. Available at http://www.azinat.com/aging/AgingBook.pdf
[3] Saalu C. Risky lifestyles and male infertility. *Medi-Link J*. 2006; 7(67): 37-38.
[4] Shenker JG, Metro D, Shenker E. Stress and human reproduction. *Eur J Obst Reprod Biol*. 1992; 45: 1.
[5] Greist JH, Jefferson JW. In: Porter RS, Kaplan JL (Eds); The Merks Manual of diagnosis and therapy (19th Ed): Merk & Co. Inc. Whitehouse Station. NJ: 1500-1502.
[6] Lieberman JA, Stuart MR. Practicing biopsychosocial Medicine. In: Rackel RE (Ed); Textbook of family Medicine 7th Ed. Saunders Philaldephia: 42-46.
[7] Cohen S, Kamara T, Memelstein R. A global measure of perceived stress. *J Health Soc Behav* 1983;24;385-396.
[8] Doris YPL, Tai-hing L, Sophia SCC. Three versions of perceived stress scale: validation in a sample of Chinese cardiac patients who smoke. *BMC. Public Health* 2010, 10:513 assessed via-www.biomedcentral.com/1471-2458/10/513.
[9] Remor E. Psychometric properties of a European Spanish version of the perceived stress scale (PSS). *The Spanish Journal of Psychology* 2006;9(1):86-93.
[10] Cohen S, Williamson G: Perceived stress in a probability sample of the United States. In the Social Psychology of Health. Edited by: Spacapan S, Oskamp S. New bury park, CA:Sage; 1988:31-68.
[11] World Health Organization International Classification of Primary Care Second edition ICPC-2-E 2012. Available at http://www.who.int//classification/icd/adaptation.globafamilydoctor.com.wice.
[12] International Classification of Primary Care-2nd Edition. Oxford: Oxford University Press, 1998. Available at: http://www.icgp-ie/speck/asset.
[13] Ajetumobi OA, LAdipo MMA, Adetunji A, Shabi M. Perceived Family related stressors and clinical manifestations of patients with psychosomatic morbidity attending general outpatient clinic University College Hospital. *NJFP* 2015;6(2):1-9.
[14] Rosendal M, Olesen F, Fink P. Management of medically unexplained symptoms. *BMJ* 2005;330:4-5.
[15] Boss P. Family stress management: A contextual approach. Second edition. Thousand Oaks, CA: sage.
[16] Cohen s, Kamara T, Memelstein R. a global measure of perceived stress. *J Health soc Behav* 1983; 24:385-396.
[17] Cohen S, Litchtenstein E. Perceived stress, quitting smoking, and smoking relapsed. *Health psychol* 1990;9(4):466-478.
[18] Shiffman S, Hickox M, Party JA, Gnys M, Richards T, Kassel JD. Individual differences in the context of smoking relapse episodes. *Addict Behav* 1997;22:797-811.
[19] Ross CE, Mirowsky J, Goldstein K. The impact of family on health: The decade in view. *J of marriage family* 1990; 52(4):1059-1078. Available at http://www.jstor.org/stable/353319.
[20] Bowling A. mortality after bereavement: A review of the literature on survival periods and factors affecting survival. *Social science and medicine*.24:117-124.
[21] Gore S, mangiorie TW. Social role, sex role, and psychological distress. *J health and Soc Beh* 1983: 24; 300-312.
[22] Gove WR, Hughes M, style BC. *Journal of Health and Social Behaviour* 1983; 24(2): 122-131
[23] Gerstel N, Riessman CK, Rosenfield S. Explaining the symptomatology of separated and divorced women and men: The role of material conditions and social networks. *Social forces* 64:84 – 101.

[24] Blazer DG. Social support and mortality in an elderly community population. *Am J Epid* 1982; 115:684-694.