



**ASSESSMENT OF LIFE STYLE AMONG THE DOCTORS WORKING IN DENTAL AND  
MEDICAL COLLEGES IN PATNA, BIHAR**

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**ABSTRACT**

Health is a key determinant of development and precursor of economic growth. ‘Health is Wealth’ is a time tested adage. Health becomes more relevant when it comes to professionals whose job is to provide people with services that maintain an optimum state of mental, physical and social well-being. Sedentary life styles have serious consequences on public health and reflect poor self – esteem and a lower health related quality of life. Health care professionals differ from general population in regards to the nature of their work, stress and burnout. Hence this study was done to know if Health care professionals ‘Practice what they preach others.’ **Aim:** To assess the lifestyle among the doctors working in dental and medical colleges in Patna, Bihar. **Methodology:** A descriptive cross-sectional study was conducted among 140 doctors working in dental and medical colleges of Patna, Bihar. Simple random sampling was done. A close-ended structured questionnaire was used for data collection. Data were collected, compiled & tabulated using Microsoft excel and analyzed by Chi-square test with  $p < 0.05$  as significant.

**Results:** Out of 140 subjects, 56% were males and the rest 44% were females. Physical activity was more among dental doctors 47.1%. The habit of tobacco consumption and smoking was 80.5% among medical male doctors and 65.1% among dental male doctors. Majority of the 34% of the dental doctors expressed the reason why individuals did not get involved in physical activities was due to lack of time. Stress was more among dental doctors.

**Conclusion:** The study revealed that medical and dental doctors had sedentary job. Their mental well being, physical activities are not up to the mark and should be improved to foster the whole health care system for individual and community benefits.

**KEYWORDS:** Lifestyle, Sedentary, Medical, Dental and Mental Wellbeing.

**INTRODUCTION**

“Health is Wealth” is a time tested adage. Health becomes more relevant when it comes to professionals whose job is to provide people with services that maintain an optimum state of mental, physical, and social well-being. Healthcare professionals differ from general population in regards to the nature of their work, stress, burnout etc, which begs the need to have a robust state of health for the ones who provide it to others. It was initiated to see if healthcare professionals “practice what they preach others”.<sup>[1]</sup>

The preliminary data from a WHO study on risk factors suggest that inactivity or sedentary lifestyle is one of the ten leading global causes of death and disability. More

than two million deaths each year attribute to physical inactivity. Sedentary life styles increase all causes of mortality, double the risk of cardiovascular diseases, diabetes and obesity and substantially increase the risk of colon cancer, high B.P, osteoporosis, depression and anxiety.

In the promotion of health, the WHO chose “MOVE FOR HEALTH” as the theme for the World Health Day 2002. The importance of physical activity in maintenance of health is a well known factor among doctors. Individual behaviour and lifestyle can induce adverse changes in the biochemical and physiological properties of the body and these can lead to the

development of poor physical functioning many injuries, chronic diseases and overall mortality.<sup>[2]</sup>

As health professionals, we often focus our efforts on providing care for our patients without taking proper care of ourselves. Sedentary work, which the dental profession demands, causes repeated strain in muscles, tendons and other body tissues, which could lead to the development of musculoskeletal disorders.<sup>[3]</sup>

The World Health Organization predicts that by 2020, two third of all disease worldwide will be the result of poor lifestyle choices. The public health and financial burden that accompany the millions of people with obesity and associated non-communicable chronic diseases continues to rise despite the strong scientific evidence supporting healthy behaviors as an effective means of prevention and treatment.

The study was done to see if healthcare professional's lifestyle was good by chiefly examining their diet, exercise and mental wellbeing along with other aspects which affect their lifestyle e.g. Sleep, physical activities and working hours.<sup>[4]</sup>

#### METHODOLOGY

A descriptive cross-sectional study was conducted among the doctors working in dental and medical colleges from June 2017 to August 2018 in Patna. Ethical approval for the study was obtained from the Institutional Review Board, Buddha Institute of Dental Sciences and Hospital, Patna and Informed Consent was obtained from the participants.

A total sample of 140 doctors working in dental and medical colleges was surveyed. All dental and medical doctors working in Patna was selected by simple random sampling method. Doctors who are practitioners, teaching faculty or both were included in the study; whereas doctors not willing to participate in the survey were excluded from the study.

The data was collected using close-ended self-administered 33-item questionnaire constructed from previous studies. The questionnaire had two major parts; the first part consisted of socio-demographic data variables such as age, gender, educational qualification. The second part consisted of questions regarding lifestyles of doctors.

The feasibility and validity was tested by a pilot study. Questionnaires were circulated among the dental and medical doctors with prior permission from the concerned authority of the selected colleges and the aim of the study was explained. The doctors were given the survey form in their respective departments. The participants were asked to respond to each item according to the response format provided in the questionnaire. Doctors identities were kept confidential and questionnaire were collected on the same day. The

time allocated for completion of the questionnaire was 10-15minutes.

The data obtained were compiled and entered in MS Excel sheet and analyzed using Graph Pad (version 5). The recorded values were represented as number (n) and percentage (%). Chi – Square test was applied to analyze the association between two parameters and level of significance that is 'p' value of less than 0.05 was considered as significant.

#### RESULTS

In the present study, of the total 140 subjects selected, 56% were males and 44% were females. In which 25.5% and 24.5% were medical male and female doctors whereas among dental 30.5% and 19.5% were male and female doctors in the age group of 20-50 years. The distribution of study subjects according to Gender and Educational qualification is shown in (Table-1).

In the present study, an overall 41% of the doctors used tobacco. Among the medical doctors, 41.4% used tobacco while among dental doctors 40% used tobacco. When the results were statistically compared between medical and dental doctors the results were statistically significant with P value 0.0001. (Table-2).

Distribution of study subjects according to whether the job is mentally stressful or not is shown in (Table-3), in which an overall total of the study subjects, 63.5% of the doctors' job was mentally stressful. Among the medical 31.4% of the doctors job was mentally stressful, while among dental 41.4% of the doctors job was mentally stressful and the rest 10% of the doctors couldn't relate that their job is mentally stressful or not.

In the present study, an overall total of the study subjects, 44.2% of the doctors had mild and moderate stress level whereas 11.4% had severe stress. Among the medical doctors 21.4% had mild, followed by 20 % moderate stress and 7.14% had severe stress while among dental doctors 31.4% had mild stress, 24.2% of the doctors had moderate stress and 5.7% had severe stress. When the results were statistically compared between medical and dental doctors, the results were statistically significant with P value- 0.0432. Distribution of study subjects how they rate their stress level is shown in (Table-4).

In the present study, an overall (45.7%) of the doctors overcome stress by watching Movie/TV, followed by (20.7%) overcome stress by using internet, mobile. 14.3% overcome stress by engaging in social life (party with friends); 7.8% by getting engaged in sports; 6.4% overcome stress by yoga/meditation and the rest (4.3%) overcome stress by any other means. The results were statistically significant with P value-0.035. Distribution of study subjects according to how they overcome stress is shown in (Table-5).

In the present study, an overall total (47.1%) of the doctors were involved in walking/jogging/running, followed by (25%) that were involved in gym, followed by (12.1%) involved in sports, followed by (7.1%) were involved in any other physical activity and the rest 8.6% did not do any physical activity at all. The results were statistically significant with P value-0.056 (Table-6).

In the present study, an overall 45.7% of the doctors did not get involved in physical activities due to lack of time, followed by 24.2% due to lack of interest, and the rest 22.1% and 7.8% is due to lack of facilities or due to any other reasons (Table-7).

The present study shows an overall distribution of the study subjects according to the nature of job in (Graph 1). An overall total (68.50%) of medical and dental doctors had sedentary nature of job, followed by (20%) of medical and dental doctors had active job whereas the rest (11.40%) of the doctors had physically demanded job respectively.

In the present study, an overall total of the study subjects in which majority 60.70% of the medical and dental doctors experienced body ache due to long working hours whereas 28.50% did not experienced any type of body ache and the rest 10.70% of the doctors sometimes ended up having body ache due to work. (Graph-2).

**Table 1. Distribution of subjects according to Gender and Educational Qualification.**

Educational Qualification/Gender	Medical (MBBS +)	Dental (BDS +)	Total
Male	36 (25.5%)	43 (30.5%)	79 (56%)
Female	34 (24.5%)	27 (19.5%)	61 (44%)
<b>Total</b>	<b>70 (50%)</b>	<b>70 (50%)</b>	<b>140 (100%)</b>

**Table 2-Distribution of study subjects according to whether they consume tobacco or not.**

Tobacco Consumption	Medical			Dental			Over all Total
	Male	Female	Total	Male	Female	Total	
Yes	29 (41.4%)	0	29 (41.4%)	28 (40%)	0	28 (40%)	57 (41%)
No	7 (10%)	34 (48.5%)	41 (58.5%)	15 (21.4%)	27 (38.5%)	42 (60%)	83 (59.2%)
<b>Total</b>	<b>36 (51.4%)</b>	<b>34 (48.5%)</b>	<b>70 (100%)</b>	<b>43 (61.4%)</b>	<b>27 (38.5%)</b>	<b>70 (100%)</b>	<b>140 (100%)</b>

**Test of Significance- Chi-square-81.27, df-3, P value-0.0001**

**Table 3. Distribution of study subjects according to whether the job is mentally stressful or not.**

Whether the job is mentally stressful or not	Medical			Dental			Over all Total
	Male	Female	Total	Male	Female	Total	
Yes	22 (31.4%)	22 (31.4%)	44 (62.8%)	29 (41.4%)	16 (22.8%)	45 (64.2%)	89 (63.5%)
No	10 (14.2%)	9 (12.8%)	19 (27.1%)	10 (14.2%)	8 (11.4%)	18 (25.7%)	37 (26.4%)
Don't know	4 (5.7%)	3 (4.2%)	7 (10%)	4 (5.7%)	3 (4.2%)	7 (10%)	14 (10%)
<b>Total</b>	<b>36 (51.4%)</b>	<b>34 (48.5%)</b>	<b>70 (100%)</b>	<b>43 (61.4%)</b>	<b>27 (38.5%)</b>	<b>70 (100%)</b>	<b>140 (100%)</b>

**Test of Significance- Chi-square-12.23,, df-6, P value-0.0632**

**Table 4. Distribution of study subjects according to how they rate their stress level.**

How they rate their stress level	Medical			Dental			Over all Total
	Male	Female	Total	Male	Female	Total	
Mild	12 (17.1%)	15 (21.4%)	27 (38.5%)	22 (31.4%)	13 (18.5%)	45 (64.2%)	62 (44.2%)
Moderate	20 (28.5%)	14 (20%)	34 (48.5%)	17 (24.2%)	11 (15.7%)	28 (40%)	62 (44.2%)
Severe	4 (5.7%)	5 (7.14%)	9 (12.8%)	4 (5.7%)	3 (4.2%)	7 (10%)	16 (11.4%)
<b>Total</b>	<b>36 (51.4%)</b>	<b>34 (48.5%)</b>	<b>70 (100%)</b>	<b>43 (61.4%)</b>	<b>27 (38.5%)</b>	<b>70 (100%)</b>	<b>140 (100%)</b>

**Test of Significance- Chi-square-6.354, df-6, P value-0.0432**

**Table 5. Distribution of study subjects according to how they overcome stress.**

How they overcome stress	Medical			Dental			Over all Total
	Male	Female	Total	Male	Female	Total	
Watching TV/Movie	15 (21.4%)	18 (25.7%)	33 (47.1%)	17 (24.2%)	14 (20%)	31 (44.2%)	64 (45.7%)
Engage in sports	5 (14.7%)	0	5 (7.1%)	4 (5.7%)	2 (2.8%)	6 (8.5%)	11 (7.8%)
Engage in social life (party with friends)	7 (10%)	3 (4.2%)	10 (14.2%)	7 (10%)	3 (4.2%)	10 (14.2%)	20 (14.3%)
Use of internet, mobile, etc	6 (8.5%)	7 (10%)	13 (18.5%)	12 (17.1%)	4 (5.7%)	16 (22.8%)	29 (20.7%)
yoga / meditation	2 (2.8%)	3 (4.2%)	5 (7.1%)	1 (1.4%)	3 (4.2%)	4 (5.7%)	9 (6.4%)
Any other.....	1 (1.4%)	2 (2.8%)	3 (4.2%)	2 (2.8%)	1 (1.4%)	3 (4.2%)	6 (4.3%)
Do nothing	0	1 (1.4%)	1 (1.4%)	0	0	0	1 (0.7%)
<b>Total</b>	36 (51.4%)	34 (48.5%)	<b>70</b> <b>(100%)</b>	43 (61.4%)	27 (38.5%)	<b>70</b> <b>(100%)</b>	<b>140</b> <b>(100%)</b>

**Test of Significance- Chi-square-13.25, df-15, P value-0.035**

**Table 6. Distribution of study subjects according to the physical activity they are involved.**

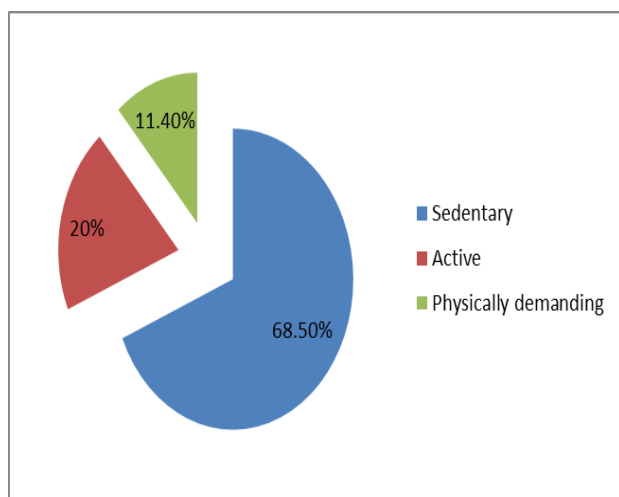
Physical activity they are involved	Medical			Dental			Over all Total
	Male	Female	Total	Male	Female	Total	
Gym	11 (15.7%)	4 (5.7%)	15 (21.4%)	15 (21.4%)	5 (7.1%)	20 (28.5%)	35 (25%)
Walking/Jogging/Running	18 (25.7%)	15 (21.4%)	33 (47.1%)	20 (28.5%)	13 (18.5%)	33 (47.1%)	66 (47.1%)
Sports	4 (5.7%)	3 (4.2%)	7 (10%)	4 (5.7%)	6 (8.5%)	10 (14.2%)	17 (12.1%)
No activity at all	0	9 (12.8%)	9 (12.8%)	1 (1.4%)	2 (2.8%)	3 (4.2%)	12 (8.5%)
Any other	3 (4.2%)	3 (4.2%)	6 (8.5%)	3 (4.2%)	1 (1.4%)	4 (5.7%)	10 (7.1%)
<b>Total</b>	36 (51.4%)	34 (48.5%)	<b>70</b> <b>(100%)</b>	43 (61.4%)	27 (38.5%)	<b>70</b> <b>(100%)</b>	<b>140</b> <b>(100%)</b>

**Test of Significance- Chi-square-18.56, df-12, P value-0.056**

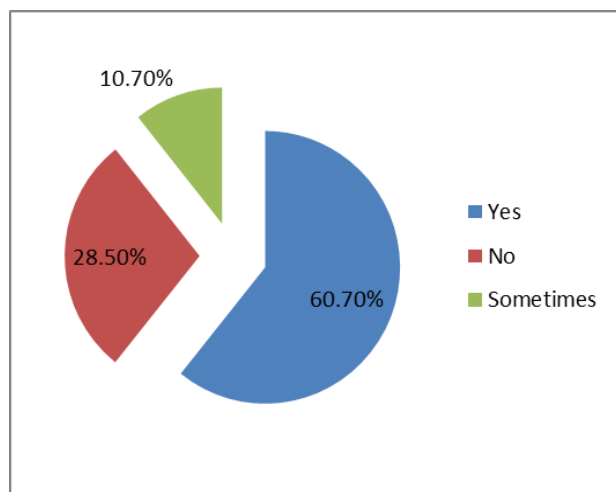
**Table 7. Distribution of study subjects according to reasons why individuals would not want to get involved in physical activities.**

Reasons why individuals would not want to get involved in physical activities	Medical			Dental			Over all Total
	Male	Female	Total	Male	Female	Total	
Lack of interest	4 (5.7%)	15 (21.4%)	19 (27.1%)	5 (7.1%)	10 (14.2%)	15 (21.4%)	34 (24.2%)
Lack of time	20 (28.5%)	10 (14.2%)	30 (42.8%)	24 (34.2%)	10 (14.2%)	34 (48.5%)	64 (45.7%)
Lack of facilities	9 (12.8%)	7 (10%)	16 (22.8%)	10 (14.2%)	5 (7.1%)	15 (21.4%)	31 (22.1%)
Any other	3 (4.2%)	2 (2.8%)	5 (7.1%)	4 (5.7%)	2 (2.8%)	6 (8.5%)	11 (7.8%)
<b>Total</b>	36 (51.4%)	34 (48.5%)	<b>70</b> <b>(100%)</b>	43 (61.4%)	27 (38.5%)	<b>70</b> <b>(100%)</b>	<b>140</b> <b>(100%)</b>

**Test of Significance- Chi-square-16.35, df-9, P value-0.032**



**Graph. 1.** Shows the overall distribution of study subjects according to the nature of job.



**Graph. 2:** Shows the overall distribution of study subjects according to whether they end up having body ache because of work.

## DISCUSSION

Healthy lifestyle habits including regular physical activity, a balanced diet and refraining from smoking and excessive tobacco consumption have been shown to reduce the overall mortality from non-communicable diseases (NCD).

The 2010 (NCD) report published by the Ministry of Health, presents alarming data regarding the lifestyle of doctors have the privilege and responsibility of taking a frontline role in promoting healthy lifestyle habits because they have daily opportunities to consult with their patients. Doctors with healthy practices are more likely to discuss related preventive measures with their patients, while doctors with unfavorable lifestyle habits are less proactive in giving advice that they do not follow themselves.

Healthcare workers represent an important group in which to study individual health behaviors, both because they are more knowledgeable than others about health

care choices and because they serve as role models for patients. For this purpose it was necessary to know the lifestyle and habits followed among doctors working in dental and medical colleges.

This data will assist the working doctors to understand the prevailing situation and plan to have a healthy lifestyle. Thus, the study aimed to assess the lifestyle among the doctors working in dental and medical colleges in Patna, Bihar. This study was a descriptive cross-sectional survey.

In the present study, a total of 140 subjects participated in the study, of which 56% were males and the rest 44% were females which is consistent with the fact that, the health care professionals is largely occupied by male doctors.

In the present study 41% of the subjects consumed tobacco which is in accordance to the study conducted by Ahmad W *et.al.*<sup>[1]</sup> Veereesh D J *et.al.*<sup>[2]</sup> which may be due to job stress, long working hours, better socio economic status, ease of availability, family history of smoking are some of the few reasons for consuming smoked form of tobacco, but in contrary to the study done by Aghaj M Net.*al.*(39.8%), Mohsn *et.al.*(6%), and Karan *et.al.*(45.2%).

In this study, 63.5% of the male and female participants said 'Yes' that their job is mentally stressful due to the fact that doctors are constant by treating patients of varying severity and clinical presentation. Doctors are the backbones of this entire and obviously overloaded system, those in clinical department have to work round the clock. The fact that the working period is a stressful and overwhelming time during long working hours which was similar to the study conducted by Veereesh D J *et.al.*<sup>[2]</sup> Sahasrabuddhe G A *et.al.*<sup>[3]</sup>

In this study, 44.2% of the medical and dental doctors had mild and moderate stress level which is in accordance to the study conducted by Abdulghani M H *et.al.*<sup>[10]</sup> Mohsn B *et.al.*, due to more number of working hours, sleeping fewer than 6hrs, family problems which is similar to the study conducted by Samia B *et.al.*, and 11.4% of the medical and dental doctors had severe stress level which is in contrast to the study conducted by Abdulghani M H *et.al.*<sup>[10]</sup> (34.9%) reasons family problems, work load, feeling depressed and worrying.

Majority of the medical and dental doctors 45.7% overcome stress by watching TV/Movie, which is similar to the study conducted by Veereesh D J *et.al.*<sup>[2]</sup> and Singh A *et.al.*<sup>[4]</sup> reason can be justified by the fact that doctors are more likely to have recreation through TV as of their busy schedule they do not get much time after the work.

In the present study, majority of the medical and dental doctors 47.1% are involved in walking/running/jogging

which is in accordance to the study conducted by Veereesh D J et.al.<sup>[2]</sup> reason can be justified that physical activity is a fundamental means of improving the physical and mental health of individual.

45.7% of the medical and dental doctors did not get involved in physical activity due to lack of time, lack of interest and lack of facilities which is in accordance to the study conducted by Veereesh D J et.al.<sup>[2]</sup> and Singh A et.al.<sup>[4]</sup>

Majority of the medical and dental doctors 68.5% had sedentary nature of job which is in accordance to the study conducted by Singh A et.al.<sup>[4]</sup> The findings from this study indicate that the majority of the professionals involved in very little physical activity and sedentary lifestyle of dental Health care professionals is a major threat to the present and future health of the professionals.

Present study revealed that 66.6% of male and 61.7% of female medical doctors and 55.88% of male and 59.2% of female dental doctors had more back ache because of long working hours which is in accordance to the study conducted by Ahmad W et.al.<sup>[1]</sup> and Veereesh D J et.al.<sup>[2]</sup> where it was 68.8% of male, 62.5% of female medical doctors and 55.2% of male and 58% of female dental doctors. The reason was not doing any physical activity and long working hours in their sedentary lifestyle habits.

## CONCLUSION

It can be concluded from present study that healthcare professionals do not practice what they preach. Their mental wellbeing, diet and exercise habits are not up to the mark and should be improved to foster the whole healthcare system for individual and community benefits. Back ache experienced by the doctors was inversely proportional to their physical activity and habit of consumption of tobacco among doctors (more than 50%) is directly proportional to the stress.<sup>2</sup>

The sedentary lifestyle of dental health care professionals is a major threat to the present and future health of the professionals by which the entire community could be prone to an epidemic of chronic disease. Therefore, it is the need of the hour for health professionals, including oral health care providers, to set an example for others to follow-making the vision a reality.<sup>4</sup>

Medical doctors should pay more attention towards implementation of healthy lifestyle habits. Workshops during medical life regarding healthy habits will be helpful and have positive effect on them. Levels of perceived stress are high in medical and dental doctors and the most stress were related to family problems.<sup>9</sup>

This study is also useful for encouraging the college faculty and staff to work in collaboration and to develop

appropriate support services and counseling to reduce stress during the working hours.

## REFERENCES

1. Ahmad W, Taggart F, Shafique M S, Muzafar Y, et.al. Diet, Exercise and Mental-Wellbeing Of Healthcare Professionals (Doctors, Dentists And Nurses) In Pakistan, 2015-17Sep; 1-13.
2. Dr. Veereesh D.J, Dr. Pratap K.V.N.R, Dr. Reddy C.V.K, et.al. Assessment of Life Style among the Doctors working in J.S.S. Institutions, Mysore. Journ of the Indian Assoc. of Public Health Dentistry, 2011; 17(2): 670-673.
3. Singh A and Purohit B. Physical Activity, Sedentary Lifestyle, and Obesity among Indian Dental Professionals. Jour of Physical Activity and Health, 2012; (9): 563-570.
4. Phillips E, Pojednic R, Polak R, Bush J, et.al. Including Lifestyle Medicine In Undergraduate Medical Curricula. Med Educ, 2015Feb; 20:1-3.
5. Sahasrabuddhe A G, Suryawanshi S R, Bhandari S R. Stress among Doctors Doing Residency: A Cross-Sectional Study At A Tertiary Care Hospital In The City Of Mumbai. National Journal of Community Medicine. Jan-Mar, 2015; 6(1): 21-24.
6. Borgan S M, Jassim G A, Marhoon Z A and Ibrahim M H. The Lifestyle Habits and Wellbeing of Physicians in Bahrain: A Cross-Sectional Study BMC Public Health, 2015; 15: 655.
7. Kim J J, Sharma M, Ortendahl J. Healthcare and Lifestyle Practices of Healthcare Workers: Do Healthcare Workers Practice What They Preach. JAMA INTERN MED, 2013; (173)3: 242-244.
8. Chilukuri H, Bachali S, Naidu N J, et.al. Perceived Stress amongst Medical and Dental Students. AP J Psychological Med. July-Dec, 2012; 13(2): 104-107.
9. Dr.Pavanchand D, Dr. Radhakumari P, et.al. Assessment of healthy life style habits among medical students, Andhra Medical College, Visakhapatnam. J of Dent and Med Sc (IOSR-JDMS). 2014Dec; 13(12): 27-30.
10. Abdulghani M H, Irshad M, et.al. Prevalence of Stress in Junior Doctors during Their Internship Training: A Cross-Sectional Study of Three Saudi Medical Colleges' Hospitals. Journ of Dovepress. Neuropsychiatric Disease and Treatment, 2014; 10: 1879-86.
11. Iwuala O S, Ayankogbe O O, et.al. Obesity among Health Service Providers in Nigeria: Danger to Long Term Health Worker Retention. Jour of Pan African Med., 2015; 22(1).
12. Guidelines for Medical and Dental Students: Medical council Malta. July 2010; 1-12.
13. Adem M A, Gebremariam T E, et.al. Assessment of Knowledge, Attitude and Practices Regarding Life Style Modification among Type 2diabetic Mellitus Patients Attending Adama Hospital Medical College, Oromia Region, Ethiopia. Global Journ of Medi Research, 2014; 14(7): 37-48.

14. Darviri C, Alexopoulos C E, et.al. The Healthy Lifestyle and Personal Control Questionnaire (HLPCQ): A Novel Tool for Assessing Self-Empowerment through A Constellation Of Daily Activities. *BMC Public Health*, 2014; 14(995): 1-10.
15. Roshana S, KH B, et.al. Basic Life Support: Knowledge and Attitude of Medical/Paramedical Professionals. *World J Emerg Med.*, 2012; 3(2): 141-45.