International Journal of Trend in Scientific Research and Development (IJTSRD)
Volume 5 Issue 5, July-August 2021 Available Online: www.ijtsrd.com e-ISSN: 2456 – 6470

Stress: An Undetachable Condition of Life

Jayshree N. Tolani[1], Dr. Nitinkumar D. Shah[2]

[1]Research Scholar, Department of Statistics, School of Sciences, Gujarat University, Ahmedabad, Gujarat, India
[2]Guide, Head, Department of Statistics, Prin. M. C. Shah Commerce College, Navgujarat Campus, Opp. Gujarat Vidhyapith, Ashram Road, Gujarat University, Ahmedabad, Gujarat, India

ABSTRACT

Stressful life events affects human body, which may lead to cardiovascular diseases and effect metabolism and immune system. Recent studies showed increase in stress levels in developing countries. This study aimed to determine the stress levels in MBBS students. The objectives of the study are (a) To determine the current stress level, (b) To assess relation between stress level and lifestyle of college students. The present study was carried out in Ahmedabad City of Gujarat State. A total of 400 medical students were included in the study, which were selected using multi-stage sampling aged between 18 years to 25 years. Students were questioned regarding their socioeconomic and life-style parameters. The results showed that physical activity such as walking, exercise, yoga, meditation etc. were associated to stress levels. College students showed high stress levels with more satisfaction were mostly smokers. Their major reason for eating junk food and smoking was, increase in stress. Conclusion: Majority of students suffered from moderate stress levels. Despite of having stress they were happy and satisfied with life with less/no internet addiction. Spirituality and stress scales had a positive correlation as most of the students were averagely/highly spiritual. Discriminant function can be used to determine the stress level of a person using age, BMI, internet addiction, spirituality, happiness scale and life satisfaction scale of that person.

KEYWORDS: *Stress, Life Satisfaction, Internet Addiction, Happiness, Spirituality*

How to cite this paper: Jayshree N. Tolani | Dr. Nitinkumar D. Shah "Stress: An Undetachable Condition of Life" Published in International Journal of Trend in Scientific Research and Development (ijtsrd), ISSN: 2456-6470, Volume-5 | Issue-5, August 2021, pp.1385-1394, URL: www.ijtsrd.com/papers/ijtsrd45054.pdf

IJTSRD45054

INTRODUCTION

Unpleasant life occasions can influence the human body reacts through actuating the thoughtful sensory system and the hypothalamic-pituitary-adrenal axis, which may influence cardiovascular, metabolic, and immune system. (McEwen 1998, Goodkin et al. 2001, Stratakis et al. 1995). Existing medical surveys have highlighted the part of stress as a vital hazard in physical and mental disorders that attain the reasons of disease and deaths especially in developed countries (Tennant 2000, Martins et al. 2008). Mental wellbeing statistics are essential for examining and assessing the physical condition level of communities. Few causes are: (i). mental medical issues play a very important role in the total load of disability in the inhabitants, specifically among youths (Stratakis et al. 1995); (ii). they are dominant in developing nations, for example, around 36 percentage of the young Iranian inhabitants, experienced elevated stress level (Roohafza et al. 2009). Mental anxieties are additionally connected with gigantic increment of mortality all in all populace, which can't be completely clarified by strange reasons for death, for example, suicide (Huppert et al. 1995, Kouzis et al. 1995). This abundance mortality because of normal causes in individuals with mental stresses could be mostly clarified by the relationship between mental stresses and unhealthy ways of life (Neeleman et al. 1998). Perceived stress is a unique multidimensional idea, with a wide range of causative and helpful variables. The observations include clinical, physical, mental, and psychosocial viewpoints (Moore et al. 1996).

Medical students suffer through several worries throughout their conversion from beginner to a skilled and well-experienced physician. There is a developing assemblage of proof that as a result of

broad research, in the clinical sciences there is a quick extension in clinical information that medical students are accepted to comprehend and have the option to use in various conditions in their professional life (Baig et al. 2016). By and large, the medical students have elevated levels of pressure that could be because of the day by day life stressors and the additional worry of scholastic weight, absence of unwinding time, expansiveness and profundity of material to be learned, and repeated developmental and summative assessments in a serious situation (Sohail 2013). One of the research studies reported stress (62%) and burnout (75%) in preclinical medical students (Fares et al. 2016). Stress and burnout among medical students are usual problem with probable severe private and professional impacts (Bugaj et al. 2016). The environment of medical education is considered as troublesome and time-requesting, and greater responsibility and commitment are required. All around, various investigations have reported stress among undergrad medical students to be 25.6% - 78% (Fares et al. 2016, Sreedevi et al. 2016, Konjengbam et al. 2015). A minor degree of stress is useful and empowers the students to perform better. On the other hand, significant levels of pressure may cause impressive mental and physical glitches like poor scholarly execution, stress-related anxiety, depression, drug use, and even suicide (Gomathi et al. 2012, Dafalla et al. 2016, Siddiqui et al. 2016). There are different sorts of stressors, which negatively affect mentally, the learning procedure, and scholastic advancement. Past reports have sorted stressors into three significant groups: academic, psychosocial, and health-related (Shah et al. 2010, Sreeramareddy et al. 2007). Many research articles have recognised academics, gender, marital status, and age as significant stressors (Sreedevi et al. 2016, Shah et al. 2010, Brahmbhatt et al. 2013, Yussuf et al. 2013).

A few investigations led in Arab nations, for example, Egypt (60%) (Fawzy et al. 2017), Sudan [half] (Dafaalla et al. 2016), Lebanon (62%) (Fares et al. 2016), and barely any examinations in Saudi Arabia (72%) (Saniet et al. 2012), (53%) (Rahman et al. 2013), and (63%) (Abdulghani et al. 2011), demonstrated significant levels of stress among medical students. The present study investigated the perceived stress level as well as reasons and sources of stress among medical students at the different medical colleges at Ahmedabad City, Gujarat, India. Our results may help medical academicians, parents of medical students to implement tactics that might improve in relieving adaptable causes of stress and stressors.

Materials and Methods

A cross sectional study was conducted in medical colleges of Ahmedabad city. A total of 400 students were enrolled or taken in the study using multistage sampling. One college was selected from each zone [east, west, north and south], conveniently. 100 medical students from each college were enrolled for the study from last year i.e. 3rd year conveniently the purpose of the study was disclosed before participation and confidentiality was maintained (Cigna's Well Being Survey, 2018)

The following codes were used in the method below to calculate the sample size.

p = expected prevalence of stress which equals 89% (0.89)

L= allowable error and equals 10% of p (0.089)

So, the sample size was determined as below:

$$\text{Sample Size} = \frac{4 \times p(1 - p)}{L^2} = 47.48 \approx 48$$

Therefore, the required sample size for the study was 47.48 ≈ 48. To round –off the sample size 320 students [80 from each college] were selected randomly for formation of discriminant function and remaining 20 for cross validation of discriminant model formed.

The students who were willing to participate filled the form. Students were asked to fill the self-administered questionnaire consisting the questions regarding socio-demographic profile, perceived stress scale [PSS] developed by Cohen of al (The Perceived Stress Scale, 1983). The PSS was designed to assess the level of stress in individuals. The PSS is a 14-item scale that consist of questions regarding participants stressful thoughts or feelings associated to conditions in their living in last month. Each element is measured on a 5-point Likert scale from "0: never" to "4: very often". The PSS score ranged from 0 to 56, the higher score the greater stress(The Perceived Stress Scale, 1983).

To measure satisfaction level of medical students' satisfaction with life scale was used. It is a 5-item scale intended to measure the intellectual judgments of one's life satisfaction. Participants specify how much they agree or disagree with each of the 5-item using a 7-point scale that varies from 7-strongly agree to 1 strongly disagree. The higher the score, more the person is satisfied with the life he/she is having. (Diener 1985).

Subjective happiness scale [also known as General Happiness Scale] was used to check happiness score of the medical students. It is a 4-item scale designed

to measure subjective happiness. Each item is rated on a 7-point Likert scale varying from 1 to 7. The elevated the score, happier the person. (Lyubomirsky et al. 1999).

To find out, how much spiritual a person is, a questionnaire was used, designed by Washington University's psychiatrist Robert Cloninger, author of Feeling Good: The Science of Well-being. The questionnaire consists of 20 questions, for which the answer should be either true or false. The scoring is done as 'true: 1'& 'false:0'. The higher the score the more is spirituality. (Cloninger, Quiz: How Spiritual Are You?)

Internet addiction was checked using 'Internet addiction Test (IAT)' developed by Dr. Kimberly Young. It is a dependable and legitimate measure of addictive use of internet. It is a 20 item-scale that measures mild, moderate and severe level of internet addiction based on 6-point Likert scale, where '0: Does not apply', '1: Rarely', '2: Occasionally', '3: Frequently', '4: Often', '5: Always'. Total scores indicate the level of internet addiction. The higher is score, the greater is level of addiction. (IAT; Young, 1998).

Other questions regarding socioeconomic and life-style parameters were also included in the study. Data were entered into MS Excel and analysed using IBM SPSS Statistics for Windows, Version 20.0. Armonk, NY: IBM Corp. For statistical significance, Cramer's V association was applied. Cramer's V varies from 0 (corresponding to no association between the variables) to 1 (complete association) and P values were retrieved accordingly from Cramer's V. $P < 0.05$ was considered as statistically significant difference at 95% confidence level.

Results

TABLE I Descriptive Statistics & association between Explanatory variables and Perceived Stressed Scale (PSS)

Variables		Perceived Stress Scale categories				Cramer's V [P-Value]
		Low	Moderate	High	Total	
		No. [%]	No. [%]	No. [%]	No. [%]	
Gender	**Female**	0	133	13	146	**0.17 [0]**
		0	91.09	8.9	36.5	
	Male	12	242	0	254	
		4.7	95.27	0	63.5	
Smoker	**Yes**	12	301	13	375	**0.123 [0.05]**
		3.7	92.33	4	93.8	
	No	0	74	0	24	
		0	100	0	6	
Occupation (Working for money/ Non-working)	**Only studying**	0	121	0	121	0.17 [0]
		0	100	0	30.3	
	Studies + working	12	254	13	279	
		4.3	91.03	4.7	69.8	
Place of Stay during College	**Home**	0	133	13	146	**0.272 [0]**
		0	91.09	8.9	36.5	
	Hostel	12	242	0	254	
		4.7	95.27	0	63.5	
Father's Occupation	**Business**	0	96	0	96	**0.341 [0]**
		0	100	0	24	
	Others	0	24	0	24	
		0	100	0	6	
	Govt. Service	0	73	0	73	
		0	100	0	18.3	

	Doctors	12	132	0	144	
		8.3	91.66	0	36	
	Private Service	0	50	13	63	
		0	79.36	21	15.8	
Mother's Occupation	**Business**	0	12	0	12	**0.094 [0.61]**
		0	100	0	3	
	Doctor	0	12	0	12	
		0	100	0	3	
	Govt. Service	0	24	0	24	
		0	100	0	6	
	Housewife	12	291	13	316	
		3.8	92.08	4.1	79	
	Others	0	24	0	24	
		0	100	0	6	
	Private Service	0	12	0	12	
		0	100	0	3	
Average Internet Usage per day	**0-3 hours**	0	144	0	144	**0.165 [0.01]**
		0	100	0	36	
	4-6 hours	12	195	13	220	
		5.5	88.63	5.9	55	
	7-10 hours	0	24	0	24	
		0	100	0	6	
	11 hours and more	0	12	0	12	
		0	100	0	3	
Commonest place of Internet Usage	**College**	0	73	0	73	**0.13 [0.05]**
		0	100	0	18.3	
	Home	12	241	13	266	
		4.5	90.6	4.9	66.5	
	Library/Lab	0	12	0	12	
		0	100	0	3	
	Others	0	49	0	49	
		0	100	0	12.3	
Most Common Gadget for Internet Usage	**Cell phone**	12	351	13	376	**0.046 [1]**
		3.2	93.35	3.5	94	
	Laptop	0	12	0	12	
		0	100	0	3	
	Tablet	0	12	0	12	
		0	100	0	3	
Usual Login Status	**always online**	12	121	13	146	**0.241 [0]**
		8.2	82.87	8.9	36.5	
	cannot say	0	72	0	72	
		0	100	0	18	
	logged in and off occasionally	0	182	0	182	
		0	100	0	45.5	
Commonest mode of internet access	**Broadband**	0	12	0	12	**0.57 [0.59]**
		0	100	0	3	
	Mobile Data	12	339	13	364	
		3.3	93.13	3.6	91	

	Wi-Fi	0	24	0	24	
		0	100	0	6	
Commonest purpose for using internet	**Academics**	0	98	0	98	**0.232 [0]**
		0	100	0	24.5	
	Entertainment	0	120	13	133	
		0	90.22	9.8	33.3	
	Social Media	12	157	0	169	
		7.1	92.89	0	42.3	
Average monthly expenditure on internet	**> Rs. 401**	0	60	13	73	**0.305 [0]**
		0	82.19	18	18.3	
	Rs. 151 – 400	12	170	0	182	
		6.6	93.4	0	45.5	
	up to Rs. 150	0	145	0	145	
		0	100	0	36.3	
Internet Addiction	**Yes**	12	339	0	351	**0.493 [0]**
		3.4	96.58	0	87.8	
	No	0	36	13	49	
		0	73.46	27	12.3	
Physical Activity	**1.Active**	12	218	13	243	**0.208 [0]**
		4.9	89.71	5.3	60.8	
	2. Non-Active	0	157	0	157	
		0	100	0	39.3	
Satisfaction with Life Scale	**Extremely Dissatisfied**	0	12	0	12	**0.532 [0]**
		0	100	0	3	
	Dissatisfied	0	12	0	12	
		0	100	0	3	
	Neutral	0	13	13	26	
		0	50	50	6.5	
	Slightly satisfied	0	109	0	109	
		0	100	0	27.3	
	Satisfied	0	133	0	133	
		0	100	0	33.3	
	Extremely satisfied	12	96	0	108	
		11	88.88	0	27	
Spirituality [Category]	**Highly skeptical, resistant to developing spiritual awareness**	0	12	0	12	**0.167 [0.02]**
		0	100	0	3	
	A practical empiricist lacking self-transcendence	0	12	0	12	
		0	100	0	3	
	Spiritually average; could develop more spiritual life if desired	0	134	0	134	
		0	100	0	33.5	
	Spiritually aware, easily lost in the moment	0	24	0	24	
		0	100	0	6	
	Highly spiritual a real mystic	12	193	13	218	
		5.5	88.53	6	54.5	

Table 1 indicates the bifurcation based on prevalence of the perceived stressed scale (PSS) in variables. Males (95.27%) were moderately more stressed than females (91.09%), but none of the males were highly stressed while 8.9% females were highly stressed. Most of the students (93.75%) were non-smokers. 69.75% of the students used to study and work. 63.5% medical students were hostelites. Most of the student's fathers were doctors (36%), 24% student's fathers were businessman, 18.25% were government employees, 15.75 % were

private sector employees and remaining 6% worked as real estate brokers, farmers, online traders, and children of single mothers. While many student's mothers were housewives (79%), 3% were doctors, 3% businesswomen, 6% belonged to government sector, 3% to private sector and 6% were doing various works like sewing, painting, Zumba trainers, home-based beauty parlors for earning. 55% of the students used on an average 4 - 6 hours internet daily. From the tabulated data, most common place for students (66.5%) was home, with cellphone (94%) as the most common gadget for using internet. Most of the students (45.5%) preferred to log-in and log-off occasionally depending on the type of website and work for which they are using internet, may be the reason is for security purpose. 91% of the students used mobile data for internet usage with the commonest purpose being social media (42.25%). Highest number of students i.e. 45.5% spent approximately Rs. 151 - 400/month on internet recharges. 87.75% students were found Internet Addicted (Young's Internet Addiction Test was used to measure the addiction). 48.25% students self-rated that their health as 'very good'. 60.75 % students were physically active. 48.25% of the students self-rated that they were very satisfied with the quality of life they lived, on the other hand only 27% of the students were found to be extremely satisfied depending on the Satisfaction with Life Scale. 54.5% students were found to be highly spiritual, while 33.5% were found averagely spiritual.

Gender, Occupation, place of stay during college, father's occupation, average internet usage per day, usual log-in status, average monthly expenditure on internet, internet addiction, self-rated health, physical activity, self-rated life satisfaction, Satisfaction with Life Scale, Spirituality were found statistically significantly associated Perceived Stress Scale; while smokers, mother's occupation, commonest place of internet usage and most common gadget for internet usage were not found statistically significantly associated with Perceived Stress Scale using Cramer's V test at 5% level of significance using SPSS.

TABLE II Correlation of Stress with Age, BMI, Internet Addiction, Happiness Scale, Life Satisfaction and Spirituality

Spearman's rho Correlation		
Correlations	**Correlation Coefficient**	**P-Value**
Age * Stress Total	-0.150	0.007
BMI * Stress Total	0.112	0.046
Number of other family members using internet * Stress Total	-0.038	0.496
Internet Addiction * Stress Total	0.160	0.004
Subjective Happiness Scale * Stress Total	0.022	0.006
SWLS [Life Satisfaction] * Stress Total	0.119	0.033
Spirituality Total * Stress Total	0.192	0.001

Table 2 shows Correlation of Stress with Age, BMI, Internet Addiction, Happiness Scale, Life Satisfaction and Spirituality. Spearman's rho correlation was used to calculate the correlation as the variables used were scale parameters developed by different scientists. From table 2 it can be observed that as the obesity (BMI), Internet Addiction, Subjective Happiness, Life Satisfaction and Spirituality increases; stress increases at 5% level of significance. And number of family members using internet does not correlate with stress level.

TABLE III Discriminant Function for the Stress Determination.

Independent Variables	Function		P-Value
	1	2	
Age [completed years]	0.122	0.063	**0.000***
BMI	-0.036	0.096	
Number of other family members using internet [number only]	-0.635	0.255	
Internet Addiction	-0.015	0.064	
Subjective Happiness Scale	0.157	0.143	
SWLS	-0.017	-0.031	
Spirituality Total	0.071	0.067	
[Constant]	-3.609	-9.469	

TABLE IV Classification Results

		PSS cat	Predicted Group Membership			Total
			Low	Moderate	High	
Original	Count	Low	9	0	0	9
		Moderate	11	275	16	302
		High	0	0	9	9
	%	Low	100.0	0	.0	100.0
		Moderate	3.6	91.1	5.3	100.0
		High	0	0	100.0	100.0
Cross-validated	Count	Low	9	0	0	9
		Moderate	11	263	28	302
		High	0	0	9	9
	%	Low	100.0	0	.0	100.0
		Moderate	3.6	87.1	9.3	100.0
		High	.0	.0	100.0	100.0

320 observations were used for formation of discriminant functions. 91.6% of original grouped cases were correctly classified. 87.8% of cross-validated grouped cases were correctly classified. In cross validation, each case is classified by the functions derived from all cases other than that case. The functions formulated are given below

TABLE V Functions at Group Centroids

PSS category	Function	
	1	2
Low	3.085	1.215
Moderate	-.041	-.104
High	-1.717	2.265
Unstandardized canonical discriminant functions evaluated at group means		

Remaining 80 observations which were not used for the Discriminant function formation were cross validated using Group Centroids and were plotted using scatter diagram.

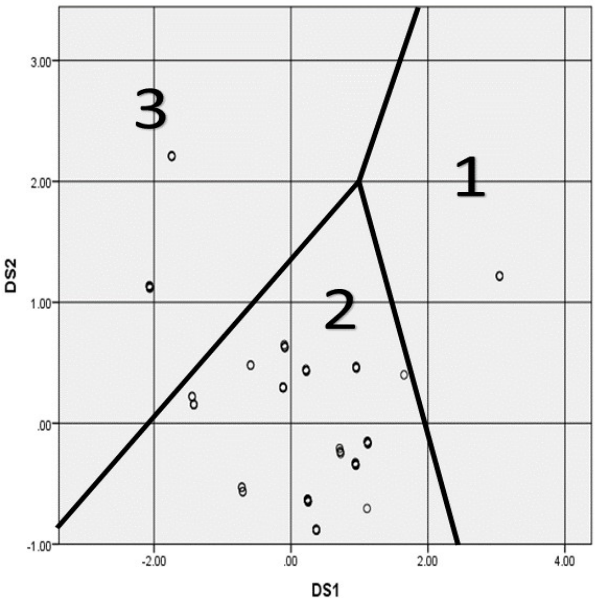
From the scatter diagram it was found that 9 out of 80 observations were mis-classified, i.e. 88.75% of the observations were correctly classified.

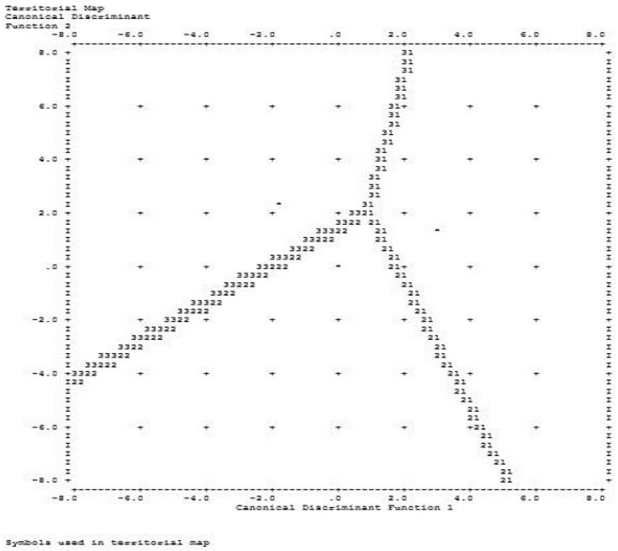
TABLE VI ACCURACY OF DISCRIMINANT FUNCTION

Original Class	Predicted class			
	Low	Moderate	High	Total
Low	3	0	0	3
Moderate	0	64	**9**	73
High	0	0	4	4
Total	3	64	13	**80**

88.75% new observations are correctly classified.

The below figure gives the classification of the new cases fitted in the model with reference to the territorial map constructed by using the discriminant scores of the cases used to formulate the discriminant function.





Conclusion

This study showed the new face of the medical college students of Ahmedabad city, Gujarat. Majority of the students suffered from moderate stress levels. Physical activity such as walking, exercise, yoga, meditation etc. were negatively associated to stress levels. Their major reason for smoking was, increase in stress, due to family conflicts, academics, and surrounding atmosphere. Despite of having stress they were happy and satisfied with life with less/no internet addiction and obesity. Spirituality and stress scales had a positive correlation as most of the students were averagely/highly spiritual.

For the data used, we have applied discriminant analysis technique to classify stress levels based on these independent variables viz. Age, BMI, Internet Addiction, Happiness Scale, Life Satisfaction and Spirituality and found 87.8% were correctly classified and for the new data, the same model was fitted, and it classified 88.75% observations correctly. So, from this study it can be recommended; Discriminant function fits good & can be used to determine the stress level of a person using age, BMI, internet addiction, spirituality, happiness scale and life satisfaction scale of that person.

References

[1] McEwen, Bruce S. "Protective and damaging effects of stress mediators." New England journal of medicine 338.3 (1998): 171-179..

[2] Goodkin, Karl, et al. "Physiological effects of bereavement and bereavement support group interventions." Handbook of bereavement research: Consequences, coping, and care.. American Psychological Association, 2001. 671-703.

[3] Stratakis, Constantine A., and George P. Chrousos. "Neuroendocrinology and pathophysiology of the stress system." Annals of the New York Academy of Sciences 771.1 (1995): 1-18.

[4] Tennant, Christopher. "Work stress and coronary heart disease." European Journal of Cardiovascular Prevention & Rehabilitation 7.4 (2000): 273-276.

[5] Coetzee, Melinde, and Nico Martins. "Organisational culture, employee satisfaction, perceived leader emotional competency and personality type: An exploratory study in a South African engineering company." SA Journal of Human Resource Management 5.2 (2007): 20-32.

[6] Roohafza, Hamidreza, et al. "Association of socioeconomic status and life-style factors with coping strategies in Isfahan Healthy Heart Program, Iran." Croatian medical journal 50.4 (2009): 380-386.

[7] Huppert, Felicia A., and Joyce E. Whittington. "Symptoms of psychological distress predict 7-year mortality." Psychological medicine 25.5 (1995): 1073-1086.

[8] Kouzis, A., William W. Eaton, and P. J. Leaf. "Psychopathology and mortality in the general population." Social Psychiatry and Psychiatric Epidemiology 30.4 (1995): 165-170.

[9] Adams, Henry E., and Patricia B. Sutker, eds. Comprehensive handbook of psychopathology. Springer Science & Business Media, 2007.

[10] Moore, Kathleen A., and Cary L. Cooper. "Stress in mental health professionals: A

theoretical overview." International journal of social psychiatry 42.2 (1996): 82-89.

[11] Baig, Mukhtiar, et al. "Perceptions, perceived barriers, and practices of physicians' towards evidence-based medicine." Pakistan journal of medical sciences 32.1 (2016): 49.

[12] Sohail, Nudrat. "Stress and academic performance among medical students." J Coll Physicians Surg Pak 23.1 (2013): 67-71.

[13] Fares, Jawad, et al. "Extracurricular activities associated with stress and burnout in preclinical medical students." Journal of epidemiology and global health 6.3 (2016): 177-185.

[14] Bugaj, T. J., et al. "Psychosocial burden in medical students and specific prevention strategies." Mental Health & Prevention 4.1 (2016): 24-30.

[15] Sreedevi, Arepalli, et al. "Study on stress among first-year medical students of Kurnool Medical College, Kurnool." Int J Med Sci Pub Health 5 (2016): 852-855.

[16] Konjengbam, Shantibala, et al. "Psychological morbidity among undergraduate medical students." Indian journal of public health 59.1 (2015): 65.

[17] Gomathi, Kadayam G., Soofia Ahmed, and Jayadevan Sreedharan. "Psychological health of first-year health professional students in a medical university in the United Arab Emirates." Sultan Qaboos University Medical Journal 12.2 (2012): 206.

[18] Dafaalla, Mohamed, et al. "Depression, anxiety, and stress in sudanese medical students: a cross sectional study on role of quality of life and social support." Am J Educ Res 4.13 (2016): 937-42.

[19] Jahan, Firdous, et al. "Perception of stress, anxiety, depression and coping strategies among medical students at Oman Medical College." World Family Medicine Journal: Incorporating the Middle East Journal of Family Medicine 99.3719 (2016): 1-8.

[20] Sharifirad, Gholamreza, et al. "Stress among Isfahan medical sciences students." Journal of research in medical sciences: the official journal of Isfahan University of Medical Sciences 17.4 (2012): 402-406.

[21] Shah, Mohsin, et al. "Perceived stress, sources and severity of stress among medical undergraduates in a Pakistani medical school." BMC medical education 10.1 (2010): 1-8.

[22] Sreeramareddy, Chandrashekhar T., et al. "Psychological morbidity, sources of stress and coping strategies among undergraduate medical students of Nepal." BMC Medical education 7.1 (2007): 1-8.

[23] Brahmbhatt, Krutarth R., et al. "Perceived stress and sources of stress among medical undergraduates in a private medical college in Mangalore, India." Int J Biomed Adv Res 4.2 (2013): 133-5.

[24] Yussuf, A. D., et al. "The correlates of stress, coping styles and psychiatric morbidity in the first year of medical education at a Nigerian University." African Journal of Psychiatry 16.3 (2013): 206-215.

[25] Fawzy, Mohamed, and Sherifa A. Hamed. "Prevalence of psychological stress, depression and anxiety among medical students in Egypt." Psychiatry research 255 (2017): 186-194.

[26] Sani, M., et al. "Prevalence of stress among medical students in Jizan University, Kingdom of Saudi Arabia." Gulf Med J 1.1 (2012): 19-25.

[27] Rahman, AG Abdel, et al. "Stress among medical Saudi students at college of medicine, King Faisal University." Journal of Preventive Medicine and Hygiene 54.4 (2013): 195.

[28] Abdulghani, Hamza M., et al. "Stress and its effects on medical students: a cross-sectional study at a college of medicine in Saudi Arabia." Journal of health, population, and nutrition 29.5 (2011): 516.

[29] The Perceived Stress Scale (PSS) by State of New Hampshire Employee Assistance Program, 1983 https://das.nh.gov/wellness/docs/percieved%20stress%20scale.pdf

[30] Diener, E. D., et al. "The satisfaction with life scale." Journal of personality assessment 49.1 (1985): 71-75.

[31] Lyubomirsky, Sonja, and Heidi S. Lepper. "A measure of subjective happiness: Preliminary reliability and construct validation." Social indicators research 46.2 (1999): 137-155.

[32] Quiz: How Spiritual Are You? by C. Robert Cloninger, Sansone family Center for Wellbeing, Washington University, St. Louis,

Mo. http://web.pdx.edu/~tothm/religion/Spiritual%20Quiz.pdf.

[33] Internet Addiction Test, Dr. Kimberly Young, 1998. http://cyberpsy.ru/wp-content/uploads/2018/02/iat-manual.pdf

[34] Cigna's 360 Well Being survey, 2018.