

Assessment of Internet Addiction among Undergraduate Medical Students: A Cross-Sectional Study in a Medical College of Kolkata

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ABSTRACT

Introduction: Internet use is an important activity of the young generation for academic learning, for maintaining social relationship and for entertainment. Sometimes, internet use by students reaches an exaggerated stage to call it an addiction because it jeopardises their psychological stability.

Aim: The present study was conducted among undergraduate medical students to assess the pattern of internet use to classify levels of internet addiction and to find out possible associated factors related to internet addiction.

Materials and Methods: This descriptive, cross-sectional study was conducted among the undergraduate students of 1st and 3rd semester batches of College of Medicine and Sagore Dutta Hospital (CMSDH), Kamarhati, West Bengal, India, from November to December, 2015. The relevant data were collected by complete enumeration. The Young's Internet Addiction Test (IAT) questionnaire was used. Final population size was 155, out

of 203 students. Data were analysed using SPSS version 20.0. Proportion and chi-square test were used wherever applicable.

Results: Two participants were found to have severe internet addiction whereas 54.2% had mild to moderate addiction. Factors such as male gender, average duration of internet use per day and amount of money spent by them for internet use were found to be significantly associated with internet addiction. Other factors like religion, place of permanent residence, place of present stay, occupation of parents, educational status of parents, socioeconomic status were not significant statistically.

Conclusion: Internet addiction has become a vital problem for medical students. Students should be counselled about the hazard of internet addiction. Duration of internet use must be restricted by parents and authorities. Parents should also delimit amount of pocket money for their childrens and should also monitor the monthly income and expenditure pattern of them.

Keywords: Behaviour, Online communication, Questionnaire, Young generation

INTRODUCTION

One of the important features of modern society is the increased effect of online communication tools, especially the internet, on people. There is no doubt that this effect is higher on young people than the others in society [1]. Internet addiction is one of the important social problems arising out of excessive internet use.

Internet addiction commonly refers to an individual's inability to control his or her use of the internet (including any online related, compulsive behaviour), which eventually causes one's marked distress and functional impairment in daily life [2]. The problem of internet addiction was introduced by Ivan Goldberg for the first time in 1995. In 1996, Young investigated whether problematic behaviour of internet use is addictive or not [3,4]. Young linked excessive internet use most closely to pathological gambling, a disorder of impulse control in Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) and adapted the DSM-IV criteria to relate to internet use in the IAT developed by her [4]. Internet Addiction Disorder (IAD) causes neurological complications, psychological disturbances, and social problems. Surveys in the United States and Europe found high prevalence rates between 1.5% and 8.2%, respectively [5].

Easy access and social networking are two important promoting factors for addicting behaviour [6]. Among the determinants of internet addiction, important ones are being male, living in metropolitan areas, not living with biological parents, low parental involvement, parental unemployment, low educational levels of parents, being so young when using internet for the first time, overusing of social and game network sites [7,8]. Parental conflict and inadequate supervision on unessential internet use have been found as the main risk factors of internet addiction from another study [9].

Internet use is growing in leaps and bounds in India. According to internet and mobile association of India, approximate number of urban active internet users was 42 million in 2008 compared to 5 million in 2000. With approximately 120 million internet users in 2011, India now ranks third regarding the size of digital population in the world. The number of internet users in India has grown five fold since 2005 [2].

The understanding that the internet use can be a disorder is still in its initial stages in India. There are limited numbers of studies estimating how common the issue of internet addiction is in India [2]. In a study conducted by Chatoth VM et al., it was found that prevalence of internet addiction (moderate and severe) among undergraduate medical students was 18.9%, thereby revealing medical students as a particularly vulnerable group [10]. However, there is paucity of such type of study especially among medical students in Eastern India. The aim of present study is to assess the pattern of internet use, to classify levels of internet addiction among students according to Young's IAT and to find out factors, if any, associated with internet addiction among these students.

MATERIALS AND METHODS

This descriptive, cross-sectional study was conducted among the students of 1st and 3rd semester batches of CMSDH, Kamarhati, West Bengal, India, from November to December, 2015. Only the students of 1st and 3rd semester batches of the college were selected as the study population because the attendance of

students of other semester was irregular at the time when the study was conducted, owing to their upcoming examination. Complete enumeration method was adopted for the students of above mentioned semester.

A total of 203 students were identified. A predesigned, semistructured, self administered questionnaire was used for data collection. It consisted of sociodemographic information and patterns of internet use. It also contained Young's IAT questionnaire [11]. The IAT consists of 20 questions to evaluate the respondent's level of internet addiction. Each of the questions was scored using five point Likert scale. The minimum score is 0 and maximum score is 100. For the sake of the study, three types of internet user group such as mild (score 20-49), moderate (score 50-79) and severe (80-100) are identified based on level of addiction in accordance with the above mentioned scale. The questionnaire was pretested on 10 students taking five from each semester group. Excluding these 10 students, a total of 193 students were invited for the study. On the prefixed dates and time and at the prefixed venue, the title and objectives of the study was read out in front of the students of 1st and 3rd semester separately. Verbal consent was taken from all the students who were present. A total of 34 students did not participate in the study. The questionnaire was explained to the participants. Each of the participants was handed over a copy of the self administered questionnaire. 20 minutes was allotted to all participants to read and fill up the questionnaire. Each of the questionnaire was meticulously scrutinised. After excluding those 34 students who were not participated, a total of 159 students were identified for data collection procedure. There were four incompletely filled up questionnaires. These four questionnaires were canceled and data from the remaining 155 completely filled up questionnaires were analysed. Therefore, the final population size was 155. Ethical clearance for conduction of the study was obtained from the institution.

STATISTICAL ANALYSIS

Data were collated, analysed and presented using SPSS version 20.0 (Chicago, Illinois). Data were presented in the form of simple proportion. Chi-square test was applied and p-value of 0.05 has been considered level of significance.

RESULTS

Among the 155 participants, majority were Hindu by religion and 86 (55.5%) were male students. Total 120 (77.4%) of them were from urban areas but at the time of data collection, about 45% were residing at their college hostel. Fathers of 72 (46.5%) students were servicemen whereas mothers of 133 (85.8%) were homemakers. Fathers of 129 (83.2%) students were graduate and above or

Sociode	Total, n (%)	
Candar	Male	86 (55.5)
Gender	Female	69 (44.5)
	Hindu	130 (83.9)
Religion	Muslim	23 (14.8)
	*Others	2 (1.3)
Place of permanent residence	Urban	120 (77.4)
	Rural	35 (22.6)
Place of present stay	Own home	83 (53.5)
	Hostel	69 (44.5)
	Others	3 (1.9)
	Service	72 (46.5)
	Business	42 (27.1)
Occupation of the father	Doctor	17 (10.9)
Occupation of the father	Other professional degree holder	7 (4.5)
	Retired	4 (2.6)
	[†] Others	13 (8.4)

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	Homemaker	133 (85.8)						
Occupation of the mother	Service	17 (10.9)						
	Business	2 (1.3)						
	Doctor	3 (1.9)						
	Illiterate	3 (1.9)						
	Middle school completed (V-VIII)	2 (1.3)						
Educational status of father	Secondary	6 (3.9)						
	Higher secondary	15 (9.7)						
	Graduate and above	113 (72.9)						
	[‡] Professional degree	16 (10.3)						
	Illiterate	5 (3.2)						
	Primary school completed (I-IV)	2 (1.3)						
Educational status of mother	Middle school completed (V-VIII)	7 (4.5)						
	Secondary	16 (10.3)						
	Higher secondary	25 (16.1)						
	Graduate and above	96 (61.9)						
	[‡] Professional degree	4 (2.6)						
	≥6277	111 (71.6)						
Socioeconomic status (according to modified BG Prasad's Scale, updated on December 2016)	3139-6276	20 (12.9)						
	1883-3138	10 (6.4)						
	942-1882	8 (5.2)						
	≤941	6 (3.9)						
[Table/Fig-1]: Distribution of students according to different sociodemographic variables (n=155).								
*Others include paying guest, home of relatives 'Others include farmers, workers and factory workers 'Professional degree for fathers and mothers: MBBS, MD, MS, M.Tech, diploma in mechanical engineering, LLB, MBA, CA								

had any professional degree. A total of 72% of the respondents belonged to Class I socioeconomic status according to modified B.G. Prasad socioeconomic scale (Updated on December 2016) [Table/Fig-1]. Regarding the purpose of internet use, 78.7% of them used it for online chatting and 61.9% of them had a habit of social networking [Table/Fig-2].

According to IAT among the students, it was found that 54.2% of the total respondents were having mild to moderate addiction to internet while two students were found to be severely addicted [Table/Fig-3]. Significant associations (p<0.05) with internet addiction were found with male gender, average duration of





Others: Internet surfing for any other reason excepting those which are mentioned specifically

Level of internet addiction	Total, n (%)			
Severe (80-100 points)	2 (1.3)			
Moderate (50-79 points)	30 (19.4)			
Mild (20-49 points)	54 (34.8)			
No addiction	69 (44.5)			
[Table/Fig-3]: Distribution of students according to the level of internet addiction (n=155).				

	Variables	Mild, n (%)	Moderate, n (%)	Severe, n (%)	Normal, n (%)	Total, n (%)	Significance (Fisher's exact)
Conder	Male	31 (36.1)	22 (25.5)	02 (2.3)	31 (36.1)	86 (100.0)	χ=8.668,
Gender	Female	23 (33.3)	08 (11.6)	00 (0.0)	38 (55.1)	69 (100.0)	df=3 p-value=0.03
Religion	Hindu	48 (36.9)	26 (20.0)	01 (0.8)	55 (42.3)	130 (100.0)	χ=9.4, df=6, p-value=0.15
	Muslim	04 (17.4)	04 (17.4)	01 (4.3)	14 (60.9)	23 (100.0)	
	Others	02 (100.0)	00 (0.0)	00 (0.0)	00 (0.0)	02 (100.0)	
Place of	Urban	41 (34.2)	25 (20.8)	02 (1.7)	52 (43.3)	120 (100.0)	χ=1.42,
residence	Rural	13 (37.1)	05 (14.3)	00 (0.0)	17 (48.6)	35 (100.0)	df=3, p-value=0.70
Durantalana	Own home	25 (30.2)	19 (229)	00 (0.0)	39 (46.9)	83 (100.0)	χ=7.41, df=6, p-value=0.28
of stay	Hostel	27 (39.1)	10 (14.5)	02 (2.9)	30 (43.5)	69 (100.0)	
	Paying guest, home of relatives, others	02 (66.7)	01 (33.3)	00 (0.0)	00 (0.0)	03 (100.0)	
	Illiterate	00 (0.0)	00 (0.0)	00 (0.0)	01 (100.0)	01 (100.0)	χ=11.830, df=18, p-value=0.856
	Primary school completed (I-IV)	01 (50.0)	00 (0.0)	00 (0.0)	01 (50.0)	02 (100.0)	
Educational	Middle school completed (V-VIII)	00 (0.0)	01 (50.0)	00 (0.0)	01 (50.0)	02 (100.0)	
status of father	Secondary	00 (0.0)	02 (33.3)	00 (0.0)	04 (66.7)	06 (100.0)	
	Higher secondary	04 (26.7)	04 (26.7)	00 (0.0)	07 (46.6)	15 (100.0)	
	Graduate and above	42 (38.5)	21 (19.3)	01 (0.9)	45 (41.3)	109 (100.0)	
	Professional degree	07 (35.0)	02 (10.0)	01 (5.0)	10 (50.0)	20 (100.0)	
		01 (33.3)	01 (33.3)	00 (0.0)	01 (33.4)	03 (100.0)	
	Primary school completed (I-IV)	00 (0.0)	00 (0.0)	00 (0.0)	02 (100.0)	02 (100.0)	
Educational status of mother		04 (10.0)	00 (32.0)	02 (0.0)	11 (44.0)	23 (100.0)	χ=22.666, df=15, p-yalue=0.091
status of motifici		09 (09.1)	17 (17.0)	00 (0.0)	11 (47.0)	23 (100.0)	ui=10, p value=0.001
	Graduate and above	37 (37.7)	17 (17.3)	00 (0.0)	44 (44.9)	98 (100.0)	
	Professional degree	03 (75.0)	01 (25.1)	00 (0.0)	00 (0.0)	04 (100.0)	
	≥6,277	43 (38.7)	24 (21.6)	01 (0.9)	43 (38.8)	111 (100.0)	
Per capita	3,139-6,276	07 (35.0)	02 (10.0)	0 0 (0.0)	11 (55.0)	20 (100.0)	χ=15.306 df=12, p-value=0.225
monthly income of the family (Rs)	1,883-3,138	02 (20.0)	01 (10.0)	01 (10.0)	06 (60.0)	10 (100.0)	
	942-1882	01 (12.5)	01 (12.5)	00 (0.0)	06 (75.0)	08 (100.0)	
	≤941	01 (16.7)	02 (33.3)	00 (0.0)	03 (50.0)	06 (100.0)	
Tatal duration	≤2	07 (23.3)	07 (23.3)	00 (0.0)	16 (53.4)	30 (100.0)	χ=13.503, df=9, p-value=0.141
of internet use	3-5	25 (35.2)	10 (14.1)	01 (1.4)	35 (49.3)	71 (100.0)	
(years)	6-8	16 (50.0)	09 (28.1)	00 (0.0)	07 (21.9)	32 (100.0)	
	≥8	06 (27.3)	04 (18.2)	01 (4.5)	11(50.0)	22 (100.0)	
	_≤2	33 (32.7)	14 (13.9)	00 (0.0)	54 (53.5)	101 (100.0)	
Average duration of internet use	3-5	16 (42.1)	09 (23.7)	01 (2.6)	12 (31.6)	38 (100.0)	χ=24.463, df=9, p-value=0.004
per day (hours)	6-8	02 (28.6)	03 (42.5)	01 (14.3)	01 (14.3)	07 (100.0)	
	≥8	03 (33.3)	04 (44.4)	00 (0.0)	02 (22.3)	09 (100.0)	
	Mobile phone	45 (36.9)	25 (20.4)	02 (1.6)	50 (40.9)	122 (100.0)	χ=14.86, df=9, p-value=0.09
Most common	Laptop	04 (25.0)	03 (18.7)	00 (0.0)	09 (56.3)	16 (100.0)	
gadgets used	Desktop	00 (0.0)	01(10.0)	00 (0.0)	09 (90.0)	10 (100.0)	
	Tablet	05 (71.4)	01 (14.3)	00 (0.0)	01 (14.3)	07 (100.0)	
	Residence	31 (33.7)	19 (20.6)	00 (0.0)	42 (45.6)	92 (100.0)	χ=6.182, df=9, p-value=0.722
Most common	Classroom	00 (0.0)	01 (50.0)	00 (0.0)	01 (50.0)	02 (100.0)	
internet access	Hostel	22 (37.9)	09 (15.5)	02 (3.4)	25 (43.1)	58 (100.0)	
	Cybercafé	01 (33.3)	01 (33.4)	00 (0.0)	01 (33.3)	03 (100.0)	
	Log in and off occasionally during the day	42 (34.4)	20 (16.4)	01 (0.8)	59 (48.4)	122 (100.0)	χ=13.650,
	Permanently online	12 (36.4)	10 (30.3)	01 (3.1)	10 (30.3)	33 (100.0)	dt=9, p-value=0.135
	Morning	01 (14.3)	02 (28.6)	00 (0.0)	04 (57.1)	07 (100.0)	
Usual time of the day for internet use	Afternoon	07 (53.8)	02 (15.4)	00 (0.0)	04 (30.8)	13 (100.0)	χ=8.845, df=9, p-value=0.452
	Evening	25 (42.4)	07 (11.8)	01 (1.7)	26 (44.1)	59 (100.0)	
	Night	21 (27.6)	19 (25.0)	01 (1.3)	35 (46.1)	76 (100.0)	
Amount of money spent for internet use	≤100	04 (13.8)	03 (10.3)	01 (3.4)	21 (72.4)	29 (100.0)	χ=21.266, df=9, p-value=0.012
	101-300	35 (43.7)	15 (18.7)	00 (0.0)	30 (37.6)	80 (100.0)	
	301-500	07 (35.0)	03 (15.0)	01 (5.0)	09 (45.0)	20 (100.0)	
	≥501	08 (30.8)	09 (34.6)	00 (0.0)	09 (34.6)	26 (100.0)	
[Table/Fig-4]: Di	stribution of students according to the	different socioder	nographic variables a	nd level of interne	et addiction (n=1	55).	1

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internet use per day by the study subjects and amount of money spent by them for internet use [Table/Fig-4].

DISCUSSION

This study was conducted on 155 undergraduate medical students by using IAT. Several studies have been conducted on this topic in different parts of India and abroad [10, 12-19]. Medical sciences are based upon recent developments and it is very much necessary for medical fraternities to update themselves with those developments for the proper application of patient caring and other activities in health sector. To remain updated, regular internet use has become a part of life of medicos. Side by side, there are other attractions in internet which easily generate much interest of surfing internet among the teenagers and college students. Similarly, medical students are not an exception to them.

In the present study, it was found that, online chatting and social networking involved the maximum proportion of internet use of the undergraduate medical students of CMSDH. Mail checking and news/information updates also hold a significant proportion of internet use by these students. Chathoth VM et al., also found that social networking was an important purpose for internet use in their studies [10]. While Nawaf A et al., experienced that the most frequently accessed websites by medical students belonged to social media (90.7%), scientific website (50.4%) and the news websites (31.3%) [12].

In the present study, we found that 54 (34.8%) of the total respondents were having mild degree of internet addiction and almost 20% of the students were suffering from moderate to severe degree of addiction to internet. Similar type of study carried out in Mangalore, Karnataka, India, estimates the prevalence of internet addiction (representing moderate and severe addiction) at 18.9% which is comparable to the present study i.e., 32 (20.7%) [10]. Goel D et al., in Mumbai reported the prevalence of internet addiction at 0.7% among 987 students of various faculties across the city of Mumbai [13]. Differences in geographical and cultural settings may be responsible for such differences in prevalence. A study on medical students in China reported a prevalence of 16.2% [14]. Haque M et al., found 49% and 32% of the medical students in Malaysia was mildly and moderately addicted to internet respectively [15].

In the present study, the possible factors which are significantly associated with the internet addiction among medical students were found as gender of the students, average duration of internet use per day by the study subjects and amount of money spent by them for internet use. Goel D et al., also reported that males in comparison to females were significantly more likely to be addicted to internet (χ^2 =10.2, p=0.006) [13].

On the contrary, Shetty SK et al., found no significant difference in IAT score across both genders [16]. Srijampana VV et al., also found that the rate of internet surfing for males was higher than that for females [17]. On the other hand, the years of medical curriculum influences significantly to the level of internet addiction in the study conducted by Haque M et al., [15]. Salehi M et al., also conducted a research on this issue in Iran with a number of factors which might have an association of internet addiction among medical students [18]. The factors in their studies which were found significantly associated with internet addiction were: male sex, stage of education, daily time spent on using internet, most frequent time of internet use, monthly cost of use, and tea consumption. Few studies done among the undergraduate medical students in West Bengal also. Paul B et al., found browsing of the internet was the predominant activity of their mobile phone handling among the 1st semester MBBS students [19]. Whereas, Chakraborty A et al., concluded that medical students acknowledge the role of the internet in surviving the enormous stress level brought on by various life events [20]. At the same time, stressful life events could predict internet addiction.

LIMITATION

Cross-sectional design was one of the limitations of the present study and therefore more studies of longitudinal design are required to establish associations with possible factors and to have a more comprehensive understanding of the problem. Lack of participation of students of other semesters could be included among other limitations, too.

CONCLUSION

Internet use is a necessary part for medical education. However, it is the responsibility of the authority of medical colleges and also, the guardians of the students to ensure that use of internet should not be in an improper way. For this, a regular vigilance by the guardians and also by the college authorities regarding this issue is very much helpful. Medical students must be encouraged to use internet for research and creative purposes. Not only that, but also awareness among the generation about the demerits of prolonged internet use both from health and social point of view among these students should also be a part of the vital responsibilities of the institutional committee to prevent the generation of addiction to internet via workshops, debates and seminars. Guardians should be counseled regarding the availability of a rational amount of pocket money to their children. Male students are very much prone to be affected by unhealthy use of internet by their easy and wider approach to the outer world than the female students. Vigilance to the overall activity of male students should be tighter. After all, we all have to be very much aware of the fact that the benefits of internet must not be lagging behind the unhealthy use of internet and its addiction.

REFERENCES

- [1] Holden C. 'Behavioral' addictions: do they exist?. Science. 2001;294(5544):980-82.
- [2] Krishnamurthy S, Chetlapalli SK. Internet addiction: prevalence and risk factors: a cross-sectional study among college students in Bengaluru, the Silicon Valley of India. Indian J Public Health. 2015;59(2):115-21.
- Young KS. Internet addiction: the emergence of a new clinical disorder. Cyberpsychology & Behavior. 2009;1(3):237-44.
- [4] Young KS, Rogers RC. The relationship between depression and internet addiction. cyberpsychology & Behavior. 2009;1(1):25-28.
- [5] Weinstein A, Lejoyeux M. Internet addiction or excessive internet use. Am J Drug Alcohol Abuse. 2010;36(5):277-83.
- [6] Kuss DJ, Griffiths MD. Online social networking and addiction-a review of the psychological literature. Int J Environ Res Public Health. 2011;8(9):3528-52.
- [7] Durkee T, Kaess M, Carli V, Parzer P Wasserman C, Floderus B, et al. Prevalence of pathological internet use among adolescents in Europe: demographic and social factors. Addiction. 2012;107(12):2210-22.
- [8] Tsitsika A, Janikian M, Schoenmaker TM, Tzavela EC, Olafsson K, Wojcik S, et al. Internet addictive behavior in adolescence: a cross-sectional study in seven European countries. Cyberpsychol Behav Soc Netw. 2014;17(8):528-35.
- [9] Kim GT, Jang YJ, Ryu EJ, Koo KD, Lee CS, Youn H, et al. Cephalosporins with the (E)-thiovinyl linker with pyrimidine at C-3 position exhibiting potent activities against gram-positive strains. J Antibiotics. 2004;57(7):473-76.
- [10] Chathoth VM, Kodavanji B, Arunkumar N, Pai SR. Internet behaviour pattern in undergraduate medical students in Mangalore. Int J Innovat Res Sci Eng Technol. 2013;2(6):2133.
- [11] Available at: http://www.globaladdiction.org/dldocs/GLOBALADDICTION-Scales-InternetAddictionTest.pdf, [accessed on 15.01.2018].
- [12] Alqahtani NA, Alqahtani AM, Alqahtani KA, Abdullfattah HS, Alessa EA, Khalid S, et al. Screening for internet addiction among medical students in a Saudi community. Int J Med Health Sci. 2016;10(3).
- [13] Goel D, Subramanyam A, Kamath R. A study on the prevalence of internet addiction and its association with psychopathology in Indian adolescents. Indian J Psychiatry. 2013;55(2):140-43.
- [14] Liu X, Bao Z, Wang Z. Internet use and internet addiction disorder among medical students: a case from China. Asian Social Science. 2010;6(1):28-34.
- [15] Haque M, Rahman NA, Majumder MA, Haque SZ, Kamal ZM, Islam Z, et al. Internet use and addiction among medical students of university sultan zainal abidin, Malaysia. Psychol Res Behav Manag. 2016;9:297-307.
- [16] Setty SK, Rani KS, Usha LV. A cross sectional study of internet addiction in undergraduate medical students. J Dent Med Sci. 2015;14(12):108-11.

- [17] Srijampana VV, Endreddy A, Prabhath K, Rajana B, Raju. Prevalence and patterns of internet addiction among medical students. Medical Journal of Dr. D.Y. Patil University. 2014;7(6):709-13.
- [18] Salehi M, Khalili MN, Hojjat SK, Salehi M, Danesh A. Prevalence of internet addiction and associated factors among medical students from Mashhad, Iran in 2013. Iran Red Crescent Med J. 2014;16(5):e17256.
- [19] Paul B, Roy S, Saha I, Misra R, Chattopadhyay S, Masu M. Mobile phone usage pattern among undergraduate medical students at a medical college of Kolkata, West Bengal, India. Turkish Journal of Public Health. 2014;12(3):178-87.
- [20] Chakraborti A, Ray P, Islam MU, Mallick AK. Medical undergraduates and pathological internet use: Interplay of stressful life events and resilience. Journal of Health Specialties. 2016;4(1):56-63.

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FINANCIAL OR OTHER COMPETING INTERESTS: None.

Date of Submission: Jul 07, 2017 Date of Peer Review: Sep 22, 2017 Date of Acceptance: Jan 22, 2018 Date of Publishing: Apr 01, 2018