

Smoking Related Knowledge, Attitude And Prevalence Among Medical Students In Princess Noura University

Bahattab S¹, Al-Abdulaziz M¹, Al-Shammari S¹, Al-Zahrani A¹, Al-Eeid B¹,
Al-Osaimi E¹ and Bakry H²

1 Bachelor Degree of Health Education

2 Assistant professor of Public health and community Medicine

Health Education Program, Health Sciences Department

College Of Rehabilitation And Health Sciences

Princess Nourah Bint Abdelrahman University

Corresponding Author: Bahattab S

Abstract: Smoking has been increasing in Saudi Arabia particularly among college and university students specially female students. Yet there is no enough information related to smoking leading factors and reasons behind adopting such habit in Saudi Arabia. Moreover, tobacco consumption can lead to harmful and serious health implications. Aim to assess the prevalence of smoking, knowledge and attitude towards smoking among medical students at Princess Nora University. Methods A cross-sectional study using a self-administered questionnaire assessing smoking-related knowledge, attitude and prevalence among medical students at Princess Nora University from March to May 2017. Results The result indicated that most participants had moderate knowledge about the hazards of smoking by 47%. In addition, the participant's attitude toward smoking was mostly a neutral attitude by 38% of the participants. While the prevalence of smoking was 1.7% and 100% of smokers agreed that smoking with friends was one of the major reasons behind smoking. Recommendations there is a great need for health education, to increase the awareness about smoking hazards in order to limit the complications of this behavior and prevent further increase in smoking prevalence among female medical students who are the future health care leaders and role models in Saudi Arabia

Date of Submission: 25-10-2018

Date of acceptance: 06-11-2018

I. Introduction

Smoking is one of the important causes of death in the world. According to the WHO, the global tobacco epidemic kills nearly 6 million people annually, which is expected to double by 2020.^[1] Smoking is physical habit addiction to tobacco products^[2]. Smoking compared to other risk factors is considered one of the most causing morbidity, mortality and economic problems which leads to various health problems such as cardiovascular disease and lung cancer, leading to rise health care costs and reduce productivity.^{[3][4]} Moreover, many health experts regard smoking as a psychological addiction^[2] which impacts their social life as well.

Many university students justify their smoking behavior of having a busy schedule in collage which rise their stress level in addition to life problems, curiosity and peer pressure.^[5] On the other hand, there are some factors acts as barriers to smoke, for instance: religion, stinky smell and bad taste, refusing by family members and perception of health hazards for themselves and others.^[5]

Smoking is linked to independence in women's perceptions while men smoke to calm down and relive stress.^[6]

All of these factors have a huge impact on the student's attitude towards smoking and rising trends of smoking among university students.^[7] Vaughan & Hogg (1995) defined attitude as, 'A general feeling or evaluation (positive/ negative) about some person, object or issue.'^[8] The public attitude toward smoking and impression of smokers could impact smoking rates.^[6]

In India a survey was conducted to present the prevalence of smoking among females as 12.3%.^[9] In the Arab countries, smoking reported among Lebanese university students (40%).^[10]

In Saudi Arabia smoking levels is in develop among the young population. it is more prevalent among males than among females. In 2000 the prevalence of smoking among females was (5.2%).^[11] A study conducted at Taif university, Saudi Arabia reported negative attitude toward smoking among medical students (48.0%).^[5] Despite the good knowledge on the hazards of tobacco consumption 9.1% female medical students in Jeddah continue to smoke.^[12]

Smoking has been known in Saudi Arabia for more than 50 years, influencing the health, quality of life of individuals, their families and communities and the huge costs of diagnosing and the treatment which in a

way affects economy. but late tobacco imports have increased lately, with an average annual expenditure of 600 million Saudi Riyals annually. ^[13,14] Smoking is increasing, particularly among the young in Saudi Arabia, partly due to aggressive marketing by tobacco companies. ^[15]

Smoking is increasing among college students in Saudi Arabia specially female students. However, Information on smoking and factors associated with initiating and maintaining such behavior in this group in KSA is very limited. ^[11] Providing data about university students attitude towards smoking is needed in developing more effective approaches to help to reduce tobacco consumption. Therefore, this study aims to measure the prevalence of smokers, knowledge and attitude towards smoking among medical students at princess Nora University in Riyadh.

II. Objectives

- 1- Determine the level of smoking related knowledge and attitude among medical students.
- 2-Measure the prevalence of smoking among medical students.
- 3- Identify the factors behind smoking.

III. Material And Methods

Study design and setting

A cross-sectional study was conducted among the medical students of PNU over a period of three months from March to May 2017.

Sample size & sampling procedure

The sample size for the research was calculated to be 240 based on total population 2063, confidence interval 95%, the design effect equals 2 and prevalence of the factor under study 9.1% ^[32].The sample was taken through multistage sample technique

Data collection tools

The questionnaire used in the study was an anonymous, self-administrated that was modified to suit the Saudi culture and delivered in Arabic language. The questionnaire was grouped into four categories:

- ✓ 1st questionnaire asks for socio-demographic data (age, marital status, the level of the study program and known smokers number and relation to participants).
- ✓ 2nd questionnaire concerned with smoking-related knowledge about health hazards. ^[5,16]
- ✓ 3rd questionnaire regarding attitude toward smoking. ^[5,16]
- ✓ 4th asking about the practice of smoking and reasons behind it. ^[5,16,17].Statistical analysis and management data management and analysis was conducted using the SPSS statistical program version 24.

Knowledge questionnaire

Smoking-related participant knowledge, presented in 16 questions about health hazards. All questions classified into correct and incorrect answer. Each correct answer takes 2 points and incorrect answer takes 1 point. The participates who had the total score less than 28 have a poor knowledge, in contrast, the students who had a total score 32 have a good knowledge, the participants who had the total score between 29-31 have neutral knowledge where cutoffs were taken at first quartile and third quartile.

Attitude questionnaire

questions about the attitude of students toward smoking, included 14 questions and answers were presented on 3-point Likert scale (disagree, neutral and agree). Question 4 and question 6 had reversed scoring. The participants who had a total score less than 16 points have a negative attitude towards smoking. on the other hand, who had a total score between 21- 42 points have a positive attitude towards smoking, while, participants who had a total score of 17 - 20 have a neutral attitude where cutoffs were taken at first quartile and third quartile.

Smoking reasons' questionnaire

This part is special for smokers participants to assess the reasons behind smoking. Scores assigned to each item are between 1 and 3 points as follow; (disagree, neutral and agree). Then data was presented in descriptive, figures and tables as number & percent.

Ethical consideration

Permission was obtained from the IRB of PNU. The participants' identity is kept anonymous each participant had to sign the informed consent before answering the questionnaire. The participants were assured about the confidentiality of the data and the data will be used for the purpose of research only.

IV. Result

Table 1 shows that the majority of participants was (90.8%) in the age group 19-22 . and the majority of them were single (94.2%) . About half of the students (48.3%) were at level 8, and both of level 9 and 11 have the same (1.3%). The number of smokers around the students less than 3 were (41.3%) in contrast the numbers from 4-15 smokers around students were (36.7%).

Table 1: Characteristics of the participants

Characteristics of the participants	No.	%
Age group		
19-22	218	90.8
23-25	22	9.2
Marital status		
Single	226	94.2
Married	13	5.4
Divorced	1	0.4
Level of education		
4	62	25.8
6	48	20.0
7	5	2.0
8	119	49.6
9	3	1.3
11	3	1.3
No. of smokers around		
0	53	22.1
1-3	99	41.3
4-15	88	36.7
Total	240	100

Table 2 shows that 99.6% of participants reported knowing smoking harm on own health and others', and the poorest knowledge were 29.6% about causing mouth and gum cancer.

Table 2: Smoking related knowledge among the participants.

Knowledge Questions	Correct		Incorrect	
	No.	%	No.	%
1. Harmful to your health.	239	99.6	1	0.4
2. Harmful for surrounding others.	239	99.6	1	0.4
3. Harmful for baby during pregnancy	236	98.3	4	1.7
4. Considered as addiction.	230	95.8	10	4.2
5. Cause low birth weight.	101	42.1	139	57.9
6. Cause lung cancer.	235	97.9	5	2.1
7. Cause heart disease.	225	93.8	15	6.3
8. Make diabetes worse.	132	55	108	45
9. Dangerous to children	225	93.8	15	6.2
10. Cause hair loss.	237	98.8	3	1.3
11. Cause bad taste.	121	50.4	119	49.6
12. Cause mouth cancer.	71	29.6	169	70.4
13. Cause stained teeth.	192	80	48	20
14. Cause bad smell for the mouth.	121	50.4	119	49.6
15. Cause tooth decay.				
16. Cause gum cancer.	71	29.6	169	70.4

Figure (1): The figure shows that almost half of the participants 47% had a moderate total knowledge toward the risks of smoking, while 39% showed poor knowledge. While only 14% of the participants had a good knowledge towards the risks of smoking.

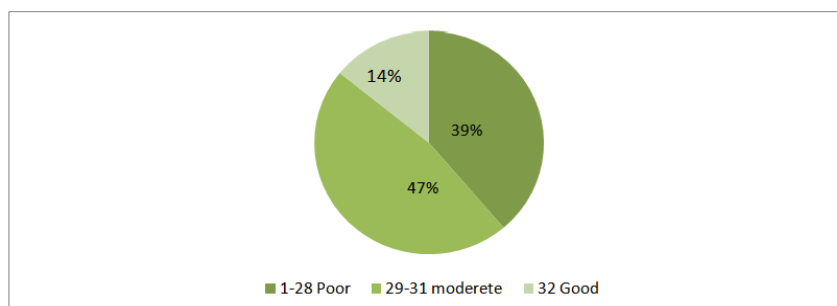


Table 3 shows that 96.7% of the participants has disagreed to allow their children to smoke. Also, 92.5% of them disagreed to allow smoking in university and almost half of them 47.5% disagreed that tobacco prices are high. On the other hand, only 33.3% disagreed that is tobacco better than drugs.

Table 3 Attitude of participants toward smoking

	Agree		Neutral		Disagree	
	No.	%	No.	%	No.	%
1. agree with smoking behavior	6	2.5	25	10.4	209	87.1
2. allow smoking in university	8	3.3	10	4.2	222	92.5
3. allow your children to smoke	1	0.4	7	2.9	232	96.7
4. agree to ban smoking in public areas	94	20.4	16	6.7	175	72.9
5. smoking makes you cool	9	3.8	13	5.4	218	90.8
6. I don't like being around smokers	37	15.4	33	13.8	170	70.8
7. smoking does not bother me	19	7.9	15	6.3	206	58.8
8. people should be able to smoke if they like	29	12.1	43	17.9	168	70
9. disapprove of non-smoking lows on university	48	20	14	5.8	178	74.2
10. tobacco companies can advertise freely	10	4.2	19	7.9	211	87.9
11. if offered a cigarette I might smoke it	19	7.9	15	6.3	206	85.8
12. ability to smoke in restaurants	4	1.7	17	7.1	219	91.3
13. tobacco price is high	52	21.7	74	30.8	114	47.5
14. tobacco better than drugs	92	38.3	68	28.3	80	33.3

Figure2: Participants attitude Toward Smoking

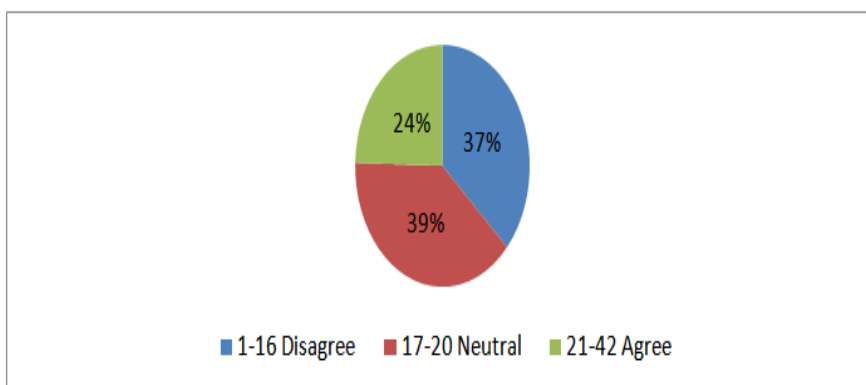
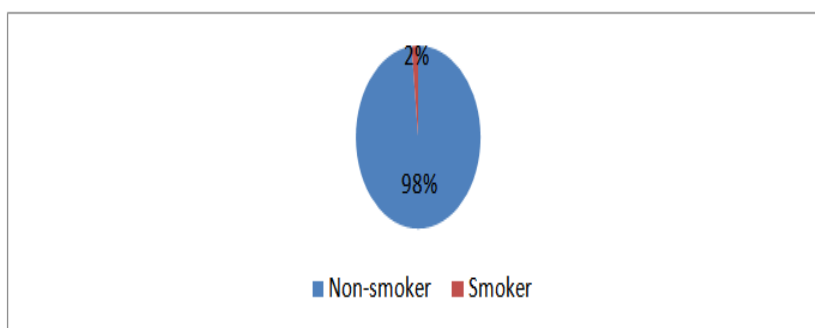


Figure 2)The figure shows that 38.8% of the participants showed a neutral attitude toward smoking, while 36.7% showed a negative attitude toward smoking. Meanwhile, only 24.6% showed a positive attitude toward smoking.

Figure 3: Percent of smoking among participants



The figure shows that the non-smokers participants got the highest percent which was 98.3%, where the smokers were only 1.7%.

Table(4): Shows that all of the participants who were smokers agreed that they liked to smoke with their friends. Also, 75% of them agreed that the cigarettes help them to relax and they smoke while they are bored. Meanwhile, 50% of the participants feel good and happy when the smoke.

Table 4: The reasons behind smoking among smokers' participants

	Agree		Neutral		Disagree	
	No.	%	No.	%	No.	%
1. Smoking make me thin	1	25	3	75	0	0
2. Smoking when nervous or stressed	1	25	2	50	1	25
3. Cigarettes helps to relax	3	75	1	25	0	0
4. Feel good when smoking	2	50	2	50	0	0
5. feel happy when smoking	2	50	2	50	0	0
6. Advertisement influence to smoke	0	0	2	50	2	50
7. Influenced by important people and movies stars to smoke	0	0	4	100	0	0
8. Like smoking with friends	4	100	0	0	0	0
9. Smoke when bored	3	75	0	0	1	25
10. Feel self-confidence when smoke	0	0	2	50	2	50

V. Discussion

Smoking-related knowledge

Almost half of the participants had a moderate Knowledge regarding the effect of smoking and most of them knew that smoking is harmful to their own health and others. According to a study conducted in Riyadh, 73% to 95% of university and high school students know that smoking is harmful, and 60% know that it is harmful to others.^[18]

Surprisingly in the current study, only 29.6% of students know that smoking causes mouth and gum cancer. Unlike, the results were found in other studies the participants agreed that smoking causes oral cancers were 83.0%.^[19] This may be attributed to the lack of health awareness campaigns focusing on the smoking effect on oral health while lung cancer and other types of cancer caused by tobacco smoking were the main focus in preventive programs.

Attitude toward smoking

While almost one-quarter demonstrated a positive attitude toward smoking. Which was unexpected result considering them as medical students. This may be interpreted as a lot of participants noted that at least one of their closest family members, relatives and friends were current smokers which may affect their perceptions about smoking. According to a study conducted in Saudi Arabia 63.5% reported influence by friends as the main reason for smoking, other responses include influenced by a family member, teachers.^[20]

The majority of our participants disagreed allowing smoking in public areas. According to a study conducted in Saudi Arabia indicates that 3 in 4 students think smoking should be banned in public places.^[18] This may be because of our participant consider the hazardous effect on other people and environment. Moreover, most of them disagreed to allow their children to smoke. This may be interpreted as they know very clearly how much it's harmful to their children's health.

Almost half of the participants agreed that the price of tobacco is not expensive. Together with previous studies, which indicated that financial reasons had a minimal importance for quitting smoking even for nonsmokers.^[21] This may be interpreted that Saudi Arabia is a rich country with a high per capita income and tobacco products prices are considered low⁽²²⁾ In the United Arab Emirates, 58.3% of the primary health center employees strongly emphasized that prices of tobacco products should be increased.^[21] As proven by the WHO that enforcing taxes on tobacco products succeed in minimizing smoking rates in other countries^[23] which indicates an urgent need to raise the prices. fortunately, a recent law will be implemented for raising the prices of tobacco products and forbid selling it inside neighborhoods.^[24]

However, only 33.3% of the participants disagreed that the smoking is less harmful than drugs. This may be interpreted the community a misconception that smoking is less harmful than drugs as it is permitted and people have easy access to it. According to a study interpreted some reasons which lead the community to this perspective, such as the tobacco's history of social acceptance and the drug concept. Therefore, efforts is needed to raise the knowledge that tobacco is not only harmful to health, but it is a drug itself as same as the cocaine, methamphetamine, and marijuana and affects the neurobiological functions of its users.^[25]

Reasons behind smoking

In the current research 98.3% of the participant are non-smokers and 1.7% are smokers. All the smoker participants who were smokers agreed that they liked to smoke with their friends. Also, most of them agreed that the cigarettes help them to relax and this could be explained by considering that smoking was a mean of relieving stress as they were as students continuously under pressure. Similarly, to study conducted in a Taif boredom was the more prevalent reason of smoking stated, followed by friends among students in medical sciences.^[5] and according to a study conducted in Jordan, a finding of this study suggested the pleasure was the main reason for smoking, followed by stress and curiosity.^[6]

VI. Conclusion

This study found the female medical students had a moderate knowledge about smoking hazardous effect on health with a neutral attitude towards smoking behavior. The estimated smoking prevalence was 1.7%, which necessitate the activation of the celebration with World No Tobacco Day on 31st May each year at schools, university, and malls, and give them ways helping to stop smoking, also using media and advertisements in publishing information to raise awareness about the harmful effects of smoking on health. Moreover, developing educational programs focusing on adolescence and young since that age group is at high risk of developing irresponsible behaviors, and activate the role of the medical related organization in spreading health awareness in the community.

References

- [1]. World Organization. WHO report on the global tobacco epidemic, 2011: warning about the dangers of tobacco.2013.Geneva, Switzerland. Retrieved from <http://www.who.int/iris/handle/10665/70680>
- [2]. Nordqvist, C. Why is smoking bad for you. 2015 Retrieved from <http://www.medicalnewstoday.com/articles/10566.php>
- [3]. Windham GC, Mitchell P, Anderson M, Lasley BL. Environ Health Perspect. 2005 Oct; 113(10):1285-90 <https://www.ncbi.nlm.nih.gov/pubmed/16203235/>
- [4]. Belchamber K, Hall DA, Hourani SM PLoS One. 2014 Jun 30; 9(6):e99711. <https://www.ncbi.nlm.nih.gov/pubmed/24978193/>
- [5]. Mansour, M. A., Youssef, H. A., Al-Mawajdeh, N. A., & Ayasreh, I. R. Awareness, attitude and practice of smoking among medical sciences & non-medical sciences students at Taif university: comparative study.2015. International Journal of Science and Research, 4, 255-64. <http://www.ijsr.net/archive/v4i1/02121401.pdf>
- [6]. Haddad LG , Malak M Z. Smoking habits and attitudes towards smoking among university students in Jordan.2002. International journal of nursing studies, 39(8), 793-802. <http://www.sciencedirect.com/science/article/pii/S0020748902000160>
- [7]. McLeod S. Attitudes and Behavior, Simply Psychology.2014. <http://www.simplypsychology.org/attitudes.html>
- [8]. Longman, W., Vaughan, G., & Hogg, M. (1995). Introduction to social psychology.
- [9]. Paul Y, Soni N, Vaid R, Basavaraj P, Khuller N. Ill effects of smoking on general and oral health: Awareness among college going students. J Indian Assoc Public Health Dent [serial online] 2014 [cited 2017 Jan 1];12:47-53. Available from: <http://www.jiaphd.org/text.asp?2014/12/1/47/138963>
- [10]. Hala Tamim et al. Tobacco use by university students in Lebanon. Addiction, 2003, 98:933-939.
- [11]. Koura M, Al-dossary A & Bahnassy A . Smoking pattern among female college students in Dammam, Saudi Arabia 2011. 18(2),63-68 Available from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3159230/>
- [12]. Wali, S. O. Smoking habits among medical students in Western Saudi Arabia. (2011) Saudi medical journal, 32(8), 843-848. Available at: <http://www.smj.org.sa/index.php/smj/article/download/7252/5026>
- [13]. Albar MA. Smoking and tobacco, the loss death trade. Jeddah: Saudi House for Publication and Distribution; 1994. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3159230/#ref11x>
- [14]. Central Department of Statistics. Foreign trade statistic in Saudi Arabia. Ministry of Finance and National Economy. 1985-1995 <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3159230/#ref11x>
- [15]. World Health Report. Geneva: WHO 1999. World Health Organization. Growing up Without tobacco. http://www.who.int/whr/1999/en/whr99_en.pdf
- [16]. Global Youth Tobacco Survey (GYTS). [Internet]. [cited 4 Mar 2017]. Available from: <https://www.biomedcentral.com/content/supplementary/1471-2458-6-169-S1.pdf>
- [17]. Saudi Health Interview Survey (SHIS) | Institute for Health Metrics and Evaluation [Internet]. Healthdata.org. 2017 [cited 19 March 2017]. Available from: <http://www.healthdata.org/ksa/projects/saudi-health-interview-survey>
- [18]. Medhat M and Bassiony. Smoking in Saudi Arabia. Saudi Med J [Internet]. 2009 [cited 10 May 2017]; 30(7):876-881. Available from: <http://www.ksu-symposium-2010.sa-tcp.com/pdf/smokinginsaudiarabiapaper.pdf>
- [19]. Innabi A, Ammari D, Tuqan W. Awareness and Knowledge of Smoking-Related Cancers Among University Students in Jordan. American Journal of Cancer Prevention [Internet]. 2014 [cited 8 May 2017];2(2):20-23. Available from: <http://pubs.sciepub.com/ajcp/2/2/1/>
- [20]. Al-Damegh S, Saleh M, Al-Alfi M, Al-Hoqaif I. Cigarette smoking behavior among male secondary school students in the Central region of Saudi Arabia. Saudi Med J [Internet]. Feb 2004 [cited 7 May 2017]; 25(2): 215-219. Available from: https://www.researchgate.net/profile/Saleh_Aldamegh/publication/8690977_Cigarette_smoking_behavior_among_male_secondary_school_students_in_the_Central_region_of_Saudi_Arabia/links/004635374f21e2845a000000.pdf
- [21]. Al-Hosani S, Al-Ali M, Al-Marashda K, Al-Shamsi N, Al-Ansari T, Al-Behandy A, et al. Smoking Prevalence, Attitudes and Behaviors of Primary Healthcare Providers and its Impact on Their Smoking Cessation Counseling Practices. IJMS J Med BS [Internet]. 30 April 2015 [cited 7 May 2017]; 7(2):47-55. Available from: <file:///C:/Users/test4/Downloads/528-4509-1-PB.pdf>
- [22]. Abdalla A, Hassan H, Mustafa A, Al-Kaabba A, Saeed A. Prevalence and associated factors of cigarette smoking among medical students at King Fahad Medical City in Riyadh of Saudi Arabia. Journal of Family and Community Medicine [Internet]. 2011 [cited 18 March 2017];18(1). Available from: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3114611/>
- [23]. Eriksen M, Mackay J M, Schluger N, Islami F and Drope J. The tobacco atlas. Atlanta: The American Cancer Society. 2015. [cited 2017 May 10] available from: http://3pk43x313ggr4cy0lh3tctjh.wpengine.netdna-cdn.com/wp-content/uploads/2015/03/TA5_2015_WEB.pdf
- [24]. Saudi Custom. Statement by Saudi Customs on what has been applied to tobacco products and its derivatives. Customs.gov.sa [Internet]. 14 March 2017 [cited 9 May 2017]. Available from: <https://www.customs.gov.sa/sites/sc/ar/Media/NewsArchive/Pages/-بيان-ايضاح-من-الجمارك-السعودية-حول-ماتم-تطبيقه-على-منتجات-التبغ-ومشتقاته.aspx>
- [25]. Cuervo M, Montana E, Smith B, Pitzenberger S. Tobacco Worse Than Cocaine? Neuroanthropology [Internet]. 2009 [cited 9 May 2017]. Available from: <https://neuroanthropology.net/2009/05/27/tobacco-worse-than-cocaine/>

Bahattab S. "Smoking Related Knowledge, Attitude And Prevalence Among Medical Students In Princess Noura University" IOSR Journal of Dental and Medical Sciences (IOSR-JDMS), vol. 17, no. 11, 2018, pp 51-56.