International Journal of Advanced Community Medicine

E-ISSN: 2616-3594
P-ISSN: 2616-3586
www.comedjournal.com
IJACM 2020; 3(3): 23-29
Received: 18-06-2020
Accepted: 15-07-2020

Jana S Aldwagiry
Graduates, Health Education Program, Department of Health Sciences, Faculty of Health & Rehabilitation Sciences, Princess Noura Bint Abdulrahman University, Riyadh, Saudi Arabia

Manar A Assiri
Graduates, Health Education Program, Department of Health Sciences, Faculty of Health & Rehabilitation Sciences, Princess Noura Bint Abdulrahman University, Riyadh, Saudi Arabia

Rahaf M Almutairi
Graduates, Health Education Program, Department of Health Sciences, Faculty of Health & Rehabilitation Sciences, Princess Noura Bint Abdulrahman University, Riyadh, Saudi Arabia

Sara M Aljitha
Graduates, Health Education Program, Department of Health Sciences, Faculty of Health & Rehabilitation Sciences, Princess Noura Bint Abdulrahman University, Riyadh, Saudi Arabia

Lamiaa Fiala
(1) Department of Health Sciences, Faculty of Health & Rehabilitation Sciences, Princess Noura Bint Abdulrahman University, Riyadh, Saudi Arabia
(2) Department of Public Health, Community, Environment and Occupational Medicine, Faculty of Medicine, Suez Canal University, Egypt

Corresponding Author:
Jana S Aldwagiry
Graduates, Health Education Program, Department of Health Sciences, Faculty of Health & Rehabilitation Sciences, Princess Noura Bint Abdulrahman University, Riyadh, Saudi Arabia

Assessment of second-hand smoking among princess Nourah Bint Abdulrahman University students, Riyadh, Saudi Arabia

Jana S Aldwagiry, Manar A Assiri, Rahaf M Almutairi, Sara M Aljitha and Lamiaa Fiala

DOI: https://doi.org/10.33545/comed.2020.v3.i3a.159

Abstract
Background: Smokers destroy their health and the health of people around them through spread the most prevalent indoor environmental exposures which is called secondhand smoking. The objective of this study is the assessment of knowledge, attitude and exposure among students of Princess Nourah Bint Abdulrahman University.
Methods: A cross-sectional study started in September 2019 to April 2020 among 553 female students. Multistage technique was used to recruit students from health and non-health colleges. Data designed to assess knowledge, attitude, and exposure among female students using the health belief model.
Results: The results showed that students were sometimes exposed to secondhand smoking in public places (66.5%), and the higher exposure in all places was among those who live with their parents (52.94%), as for the level of knowledge and attitude, less than half of the students showed a good level.
Conclusion: The study revealed that the prevalence of exposure among university students was slightly low. Moreover, the students' knowledge and attitude is consider to be in the acceptable level.

Keywords: Secondhand smoking, female students, prevalence of exposure, attitude, knowledge, princess Nourah Bint Abdulrahman University

Introduction
Tobacco smoking is one of the leading causes of death all over the world, not harmful to smokers only, but it also have a harmful impacts on those who never hold a cigarette [1]. That has led to another public health problem called secondhand smoking (SHS), which is considered to be one of the most prevalent indoor environmental exposures where the unwanted smoke is exhaled by the smoker and spread on the surrounding environment [2, 3, 4]. SHS is also known as passive smoking, involuntary smoking, environmental tobacco smoke, and all of these give the same meaning, which is breathing-in other people's tobacco smoke. According to World Health Organization (WHO), the tobacco epidemic is one of the largest public health dangers the world has ever faced, killing more than eight million people a year around the world, while around 1.2 million of those deaths were associated with being exposed to SHS. WHO have growing evidence suggesting the causal relationship between SHS exposure and preterm delivery, sudden/unexpected death in the first 12 months and low birth weight [4].
Around 1.1 billion smokers worldwide live in low- and middle-income countries, where the burden of tobacco-related diseases and deaths is considered to be the heaviest [5, 6, 7, 8]. According to the Saudi Health Interview Survey (SHIS, 2014), there are 17.2% of Saudis breathe passive smoking at home, with an average exposure of 5.1 days per week, while 14.8% of Saudis are exposed to SHS at work with an average of 2.2 days per week [9].
Smokers destroy their health and the health of people around them with each puff they give, as there are hundreds of toxic chemicals are contained in tobacco smoke which are the leading cause of illnesses and death [5, 10, 11].
Secondhand smoke exposure is globally widely spread among adults in 2016, one-third of females and one-fifth of males are exposed to SHS [12]. According to the WHO breathing SHS can cause serious health effects, and there is a sufficient evidence assured that SHS is linked with various diseases among adults [4].

Moreover, the Center for Disease Control and Prevention (CDC) has confirmed the relationship between exposure to SHS and cardiovascular disease including, coronary heart disease and stroke [11, 13].

Children are important vulnerable group to SHS, where it was found that 65000 children die each year from illnesses attributable to SHS [14]. Many of those who are exposed to SHS do not show symptoms immediately, but they will suffer problems over time [15]. Children whose parents smoke get ill more frequently with lung infections, ear infections, and they are more prone to cough and wheezing [16].

The primary sources of SHS are cigarette, cigar, and pipe smoking. It is more dangerous in closed places as in restaurants, homes/workplaces, and transportations [15, 16].

This study aimed to assess knowledge and attitude towards tobacco SHS among students of Princess Nourah Bint Abdulrahman University in Riyadh, Saudi Arabia.

Methods

Study Design: This is a descriptive cross-sectional study design to assess knowledge and attitude toward secondhand smoking and measure the prevalence rate of exposure to secondhand smoking. Settings: Princess Nourah Bint Abdulrahman –female- University, Riyadh, Saudi Arabia.

Study population and duration: It was conducted among students of Princess Nourah Bint Abdulrahman University, from September 2019 to April 2020. The total number of students in Princess Nourah Bint Abdulrahman University is 38986 [17].

Sample size: Sample size is calculated using the "n4studies application" software application [18]. Because the study design is a cross-sectional one, and the target population is more than ten thousand, the infinite population proportion is chosen using the following formula:

$$n = \frac{z^2_{1-\frac{\alpha}{2}} p(1-p)}{d^2}$$

Where,

p = proportion of the characteristic understudy = home exposure 17.2 % [9].

z = standard normal deviate usually set at 1.96 which corresponds to 95% confidence limit.

d = degree of accuracy = usually set at 0.05 level n = desired sample size

α = alpha sample = 0.05

Design effect = 2

This gives a sample size of 438 students. A 20% (88 students) dropout is added to the sample, giving a total number of 526 students.

Sampling techniques

Colleges of Princess Nourah Bint Abdulrahman University are classified into four major fields (humanities' colleges, science colleges, community colleges, and health colleges). Each major field has different colleges and every college has different academic programs.

Multistage technique has been used to recruit the students from the colleges to represent the different major fields.

First, colleges are stratified into health colleges and non-health colleges (humanities' colleges, science colleges, and community colleges). Then by simple random technique two colleges are selected: one college from the health colleges and another college from the non-health colleges.

Second, by simple random technique, two academic programs (clusters) are chosen from each selected college. All students (level 3+) in the four selected academic programs are recruited in the study. Students are approached by online survey to distribute the study questionnaire, after making announcement on social media (using Twitter and WhatsApp) and visiting the selected colleges to inform the students and encourage them to participate in the study.

The 526 sample students will be divided proportionally between the two colleges according to the size of their students, as follows: nh = (Nh / N) * n (where nh is the sample size for stratum h, Nh is the population size for stratum h, N is total population size, and n is total sample size).

Total number of target population = 38986 female students, Total sample size = 526 students,

Population size of health colleges = 3169 students, while population size of non-health colleges = 35817 students. So, the planned sample size is 43 students will be recruited from health colleges, while 483 students will be recruited from non-health colleges.

The actual data was collected from 44 students of health colleges (College of Medicine), and from 510 students of non-health colleges (College of Languages, French section), giving a total collected data from 553 students, with a response rate of 100%.

Being a smoker was the only exclusion criterion.

Data was collected using a pre-designed questionnaire including questions on socio-demographic data, and on knowledge, attitude and exposure to SHS.

Results

This study was conducted on 553 students of Princess Nourah Bint Abdulrahman University. The study population age ranged from 17 to 24 years old, with 20-22 years as the most frequent age group (60.8%). Most the students are living in Riyadh with their parents (93.3%) and the rest are living either in with a relative, in the campus, or independently. The majority of the students were from non-health college (92%). Most of the students were in their second and third academic years.

Table (1) demonstrates the frequency of exposure to SHS among the students in different places. The majority of the students were never exposed to SHS at home (70.2%), while 7.2% of them were exposed all the time "always". Regarding the exposure in public places, more than half of the students were exposed "sometimes" (66.5%) to SHS, and only 16.2% got exposed all the time "always". Most of the students never got exposed to SHS inside cars (67.1%), while only 6.1% got exposed all the time. The majority of the students were not exposed to SHS inside the university (82.4%), while only 9.6% got exposed.

Table 1: Frequency of exposure to second-hand smoking among the students in different places (N=553).

	Number	%
Exposure to secondhand smoking at home		
Always	40	7.2
Never	388	70.2
Sometime	125	22.6
Exposure to secondhand smoking in public places		
Always	89	16.1
Never	96	17.4
Sometime	367	66.5
Exposure to secondhand smoking inside cars		
Always	34	6.1
Never	372	67.3
Sometimes	147	26.6
Exposure to secondhand smoking inside the university		
Yes	53	9.6
No	456	82.5
Refused to answer	44	8.0

Figure (1) shows the existence of friends who are currently smokers. More than half of participants did not have friends who currently smoke (65%), while 14% have friends who currently smoke and they set with them while smoking.

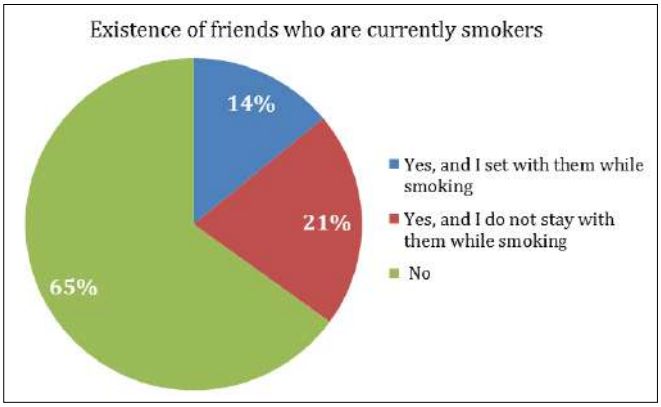

Fig 1: Existence of friends who are currently smokers

Figure (2) illustrates the number of family members who smoke inside the home. More than half of studied population did not have a family member who smoke inside the home (62%), and 23% of them have at least one family member who smokes inside home.

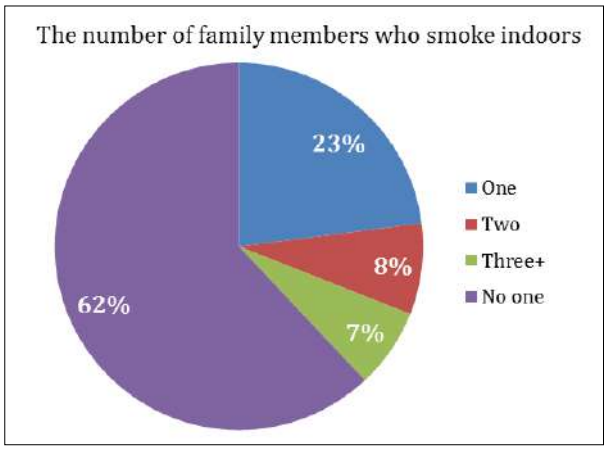

Fig 2: The number of family members who smoke indoors

Table (2) shows knowledge on SHS. Approximately half of the students stated that the smoke could stay in the air for several hours (52.80%), and agreed that they are concerned about the effect of SHS on their health (75.77%). Most of the students stated that SHS consists of chemicals substances that will harm humans' bodies (86.62%), and that SHS could cause real health complications (82.82%). Most of the studied sample agreed that SHS has some of the same risks as smoking (71.25%). More than half of students stated that avoiding exposure to SHS will reduce health care costs (67.09%), while the majority of them agreed that exposure to SHS bothers them (82.8%).

Table 2: Participants' Knowledge on secondhand smoking

Characteristics	Number	%
Tobacco secondhand smoke could stay in the air for several hours.		
Yes	292	52.8
No	48	8.7
I don't know	213	38.5
Concern about the effects of tobacco secondhand smoke on your health.		
Agree	419	75.8
Neutral	100	18.1
Disagree	34	6.1
Tobacco secondhand smoke consists of chemicals substance that will harm human's body.		
Yes	479	86.6
No	8	1.5
I don't know	66	11.9
Tobacco secondhand smoke can cause real health complications (chronic diseases - death).		
Yes	458	82.8
No	22	4.0

I don't know	73	13.2
Tobacco secondhand smoke has some of the same risks as smoking.		
Agree	394	71.2
Neutral	110	19.9
Disagree	49	8.9
Avoiding exposure to tobacco secondhand smoke will reduce health care cost.		
Yes	371	67.1
No	40	7.2
I don't know	142	25.7
Exposure to tobacco secondhand smoke bothers.		
Agree	458	82.8
Neutral	74	13.4
Disagree	21	3.8

Table (3) illustrates the health belief model constructs on SHS regarding perceived barriers. In the first question, more than half of the students stated that there is an effort in the community to educate people toward SHS (52.62%), while 11.94% did not have any idea. Following the previous question, the majority of the students found it socially acceptable to ask others not to smoke in closed or public places (76.13%), whereas 7.05% disagreed with that. Cues to action included three questions.

Table 3: Participants' attitude on secondhand smoking

Characteristics	N	%
Existence of efforts in the community to educate people regarding secondhand smoke.		
Yes	291	52.6
No	196	35.5
I don't know	66	11.9
Being socially acceptable to ask others not to smoke in closed or public places.		
Agree	421	76.1
Natural	93	16.8
Disagree	39	7.1
Banning smoking in public places will cause decline in which of the following diseases. (multiple response)		
Lung cancer rates	382	69.1
Pneumonia requiring hospital admission	346	62.6
Heart attacks	193	34.9
Colds and flu rate	39	7.1
I don't know	99	17.9
Good ventilation systems in indoor public places are effective methods to reduce exposure to secondhand smoke.		
Agree	334	60.4
Natural	157	28.4
Disagree	62	11.2
Adds (in TV and radio) is an effective method in motivating people to avoid tobacco second-hand smoke exposure.		
Agree	304	55.0
Natural	149	26.9
Disagree	100	18.1
It is easy to ask family members or friends to stop smoking while present.		
Agree	254	45.9
Natural	178	32.2
Disagree	121	21.9
Stop eating at desirable restaurant or coffee shop due to the existence of tobacco secondhand smoke.		
Agree	286	51.7
Natural	136	24.6
Disagree	131	23.7
It is easy to avoid meeting a friend who usually smokes while present.		
Agree	276	49.9
Neutral	157	28.4
Disagree	120	21.7

First and foremost, more than half of the students stated that it would be a decline in lung cancer rates after banning smoking in public places (69.08%), while 7.05% reported that it would cause decline in colds and flu rate. In the second question, more than half of the students agreed that ventilation systems could be an effective way to reduce exposure to SHS (60.39%), while 11.22% of participants disagree.

The third question included, more than half of the students agreed that adds are an effective way of motivating people to reduce exposure to SHS (54.97%), while more than a quarter of the students disagree with that (18.08%). Out of three questions distributed in self-efficacy, most of the students agreed that it is easy to ask family members or friends to stop smoking while present (45.93%), unlike 21.88% of the students disagreed. In the second question, approximately half of the students reported that they would stop eating at desirable restaurant or coffee shop due to the

existence of SHS (51.72%), and 23.69% refers to the presence of SHS will not affect their desire toward eating at restaurant or coffee shop. Along with the last question, it found that half of the students agreed that it is easy to avoid meeting a friend who is usually smoke while present (49.91%). In contrast, 21.7% disagreed with this point.

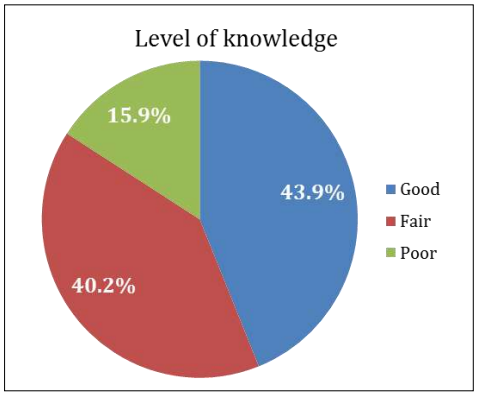

Fig 3: Level of knowledge about SHS among participants (N=553)

Fig. (3) Illustrates the total level of knowledge among students. Approximately around half of students had a good level of knowledge (43.9%), while about 16% of them had poor knowledge about SHS.

Table (4) demonstrates the association between total knowledge score and total attitude score toward SHS. Most of the students with positive attitude have good and fair knowledge (39.2% and 47.5%), while most of students with poor knowledge had negative attitude (52..6%). The association was statistically significant (X2= 10.474, p = 0.0332).

Table 4: The association between total knowledge score and total attitude score toward secondhand smoking

Variable		Total score of knowledge			Person Chi-Square test
		Good	Fair	Poor	
		N (%)	N (%)	N (%)	
Total score of attitude	Positive	147 (39.2)	178 (47.5)	50 (13.3)	X2 = 10.474 p = 0.0332*
	Neutral	54 (33.9)	71 (44.7)	34 (21.3)	
	Negative	10 (26.3)	4 (21.1)	5 (52.6)	

*Statistically significant (ps0.05)

Table (5) represents the association between total score of exposure to SHS and total score of attitude toward SHS. Most of students with positive attitude had low and average exposure to SHS (68.6% and 70.6%), while most of those with negative attitude were highly exposed to SHS (41.2%). The association was statistically significant (X2= 28.330, $p \leq 0.0001$).

Table 5: The association between total score of exposure to SHS and total score of attitude toward SHS

Variable		Total score of exposure			Likelihood Ratio test
		Highly exposed	Average exposed	Low exposed	
		N (%)	N (%)	N (%)	
Total score of attitude	Positive	6 (35.3)	48 (70.6)	321 (68.6)	X2 = 28.330 $p < 0.0001$*
	Neutral	4 (23.5)	18 (26.5)	137 (29.3)	
	Negative	7 (41.2)	2 (3.0)	10 (2.1)	

*Statistically significant ($p \leq 0.05$)

Discussion

Exposure to secondhand smoking is a preventable leading cause of death. The current study investigated the difference of knowledge, attitude and level of exposure toward secondhand smoking among female students in medical and non-medical colleges in princess Nourah Bint Abdulrahman University.

The current study has found that there is a high proportion of students never got exposed to SHS at home which is less than another study conducted among adolescents in South China showed that less than half of the study participants were exposed to SHS at home [19]. This might be explained by fact that the Saudi culture and morals make the young smokers avoid smoking inside homes as a respect to their parents during family gatherings. Also, old men are spending most of daytime outside doing their businesses. These two factors decreased the inside home smoking.

On the other hand, this study found that more than half of the students were exposed to SHS sometimes in public places which is consistent with a previous study conducted among adolescents in South China which found that almost half of participants were exposed to SHS in public places [19]. This finding might justified by the fact that smoking became more prevalent in some public places and females who tend to sit with their friends while they smoke during their free time.

The current study showed that 17.6% of the students who live in the university campus are highly exposed to SHS, which is less than another study conducted in Korea among college students to explore the prevalence of exposure to

SHS at two locations and showed that the majority of students were exposed to SHS on campus [20]. The lower level of exposure in the current study might be contributed to the presence of university anti-smoking policies and students' compliance to those policies. Also, all the target population are females with less prevalent smoking than males.

In this study, knowledge and attitude regarding SHS were described. The majority of the students stated that SHS can cause real health complications such as death, which is almost compatible with another study conducted among East West University students in Aftabnagar, where more than half of the students stated that SHS can cause real health complications, and less than one quarter thought that it can cause death [2]. This relatively good level of knowledge regarding the effect of SHS could be the result of efforts done by Ministry of Health in educating people about the effect of smoking and SHS. Also, students of health colleges are expected to have reasonable knowledge regarding smoking and SHS effects.

Also, the majority of students agreed that they are concerned about the effects of SHS on their health, similar to the results of Aftabnagar study [21]. This might be contributed to the students' level of knowledge, as was mentioned before, making them aware of the effects of SHS and shaping their concern.

The majority of the students agreed that SHS exposure bothers them, which is consistent with the Aftabnagar study results [21]. This finding is expected since the smell of the exhaled smoke by the smoker is unpleasant and it causes difficulty of breathing among the non-smokers.

Most of students found it is not easy to ask their family members and friends to stop smoking around them, which is supported by what was found in a study conducted among university students in Korea and reported that the majority of the students did not have the self-assertive behavior of asking others to stop smoking [22]. Despite the importance of the self-assertive behavior, this finding in the current study might be due to the fact that young people usually have a tendency of avoiding conflict with their loved ones.

Regarding the total knowledge of students, the results showed that around half of students had a good level of knowledge about SHS, of whom the majority were from Health Colleges and this is due to their medical background, while one quarter of all students had low level of knowledge. Furthermore, another study conducted among young adults to assess SHS exposure, knowledge, attitudes and was found that the majority of respondents had suitable knowledge about SHS and its health impacts [23]. The lower proportion of poor level of knowledge might be justified by the existence of frequent health education programs which aim at raising awareness among students and existence of health educational clubs in the university.

Conclusion

The level of exposure to SHS among Princess Nourah Bint Abdulrahman University students was slightly low. As for their level of knowledge, overall the students showed a good level of knowledge. Regarding the attitude, there was a positive attitude in connection to the students' average level of knowledge and exposure.

Recommendation

1. Health education of the students regarding self-assertive behavior of asking people around them to stop smoking in their presence and to motivate smokers to comply with the anti-smoking policies.
2. Enforced the laws to control SHS exposure in public places.
3. Strict supervision of the implementation of anti-smoking policy in the university campus.
4. There is a need for more studies to assess knowledge and attitude among female in Saudi Arabia.

Limitation

A number of students refused to answer the questions of exposure to secondhand smoking at university campus, which might have an effect on the results of this part.

Acknowledgement

The authors are thankful to princess Nourah Bint Abdularhman University administration in providing access to Saudi digital library and the IRB approval in a short time.

References

1. Studies report new risks to teens from secondhand smoke. Science News for students, 2018. October 5. Available from: https://www.sciencenewsforstudents.org/article/studies-report-new-risks-teens-secondhand-smoke
2. West R. Tobacco smoking: Health impact, prevalence, correlates and interventions. Psychology Health. 2017; 32(8):1018-1036.doi:10.1080/08870446.2017.1325890.
3. Secondhand Smoke. Centers for Disease Control and prevention (CDC). 2020 March 30. Available from: https://www.cdc.gov/tobacco/basic_information/secondhand_smoke/index.htm
4. Tobacco. World Health Organization (WHO), 2019, 26. Available from: https://www.who.int/news-room/fact-sheets/detail/tobacco
5. Ben-Joseph Ep, editor. Secondhand Smoke (for Teens) - Nemours Kids Health. Kids Health. The Nemours Foundation, 2019. September. Available from: https://kidshealth.org/en/teens/secondhand-smoke.html
6. Secondhand Smoke. The impact on children. 2014 Mar 7. Available from: https://ash.org.uk/wp-content/uploads/2018/12/ASH-Report-The-Impact-of-Secondhand-Smoke-and-Children.pdf
7. What is passive smoking. Cancer Research UK. 2018 December 28. Available from: https://www.cancerresearchuk.org/about-cancer/causes-of-cancer/smoking-and-cancer/what-is-passive-smoking
8. Oberg M, Jaakkola MS, pruss-Ustun A, Schweizer C, Woodward A. Second-hand smoke. Assessing the environmental burden of disease at national and local levels, 2010. Available from: https://www.who.int/quantifying_ehimpacts/publications/SHS.pdf
9. Smoking in the Kingdom of Saudi Arabia: Findings from the Saudi Health Interview Survey, 2013. Available from: www.healthdata.org/sites/default/files/files/projects/KSA/Smoking-KSA- Findings-from-the-Saudi-Health-Interview-Survey.pdf
10. Johnson TD. Secondhand smoke: Their cigarettes can make you sick. The Nation's Health. American public Health Association. 2011; 41(5):36. Available from: http://thenationshealth.aphapublications.org/content/41/

5/36
11. Secondhand Smoke (SHS) Facts. Centers for Disease Control and prevention (CDC), 2018 January 17. Available from: https://www.cdc.gov/tobacco/data_statistics/fact_sheets/secondhand_smoke/general_facts/index.htm
12. National Center for Chronic Disease prevention and Health promotion (US) Office on Smoking and Health. The Health Consequences of Smoking-50 Years of progress: A Report of the Surgeon General. Atlanta (GA): Centers for Disease Control and prevention (US), 2014. Available from: https://www.ncbi.nlm.nih.gov/books/NBK179276/
13. Health Risks of Secondhand Smoke. American Cancer Society, 2015. November 13. Available from: https://www.cancer.org/cancer/cancer-causes/tobacco-and-cancer/secondhand-smoke.html
14. Drope J, Schluger N, Cahn Z, Drope J, Hamill S, Islami F *et al*. Secondhand. Tobacco Atlas. Available from: https://tobaccoatlas.org/topic/secondhand
15. Secondhand smoking. Cedars-Sinai, 2012. Available from: https://www.cedars- sinai.org/health-library/diseases-and-conditions/s/secondhand-smoke.html
16. Princess Nourah Bint Abdul Rahman University. Riyadh, Saudi Arabia. Available from: https://pnu.edu.sa/en/pages/home.aspx
17. Ngamjarus C, Chongsuvivatwon V.n4Studies. The Royal Golden Jubilee Ph.D. Program - The Thailand Research Fund, prince of Songkla University, 2013. Available from: https://apps.apple.com/dk/app/n4studies/id680516901?l=da
18. Chen Z, Liu G, Chen J, Li S, Jiang T, Xu B *et al*. Frequency-risk relationships between second-hand smoke exposure and respiratory symptoms among adolescents: a cross-sectional study in South China. BMJ open, 2018, 8(4). doi:10.1136/bmjopen-2017-019875.
19. Kim EK, Choo J. Secondhand tobacco smoke exposure and associated factors among college students on campus and in the home: a preliminary study. Int J Environ Res public Health. 2012; 9(1):212-222. doi:10.3390/ijerph9010212.
20. Submitted D, Fulfillment P, Requirements T, Submitted P, Id ST. A Study on Knowledge and Attitude regarding passive Smoking among Students of East West University Declaration by the research candidate. 2017. Available from: http://dspace.ewubd.edu:8080/bitstream/handle/2525/3008/Saki_Tamanna.pdf?sequence=1&isAl lowed=y
21. Park SA, Lee DH, Lim HS. Factors Influencing Exposure to Secondhand Smoke: passive Inhalation in Student Nurses. Osong public Health Res perspect. 2019; 10(2):78-84. doi:10.24171/j.phrp.2019.10.2.06
22. Haddad L, Abu Baker N, El-Shahawy 0, Al-Ali N, Shudayfat T. Secondhand smoke exposure among young adults in a developing country - a Jordanian case. Subst Abuse Rehabil. 2013; 4:45-53. doi:10.2147/SAR.S43684