The Prevalence of Smoking and the Use of Different Types of Tobacco Products Among Adult Syrians

Louay Labban (✉ drlouay@gmail.com)

Professor of Nutrition and Dietetics. Damascus, Syria <https://orcid.org/0000-0001-6007-4018>

Research Article

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Abstract

Background:

In recent years, smoking has been identified as a major cause of sickness and the most pressing public health issue. There is no confirmed number of smoking-related deaths around the world, and there is no safe level of tobacco smoking for both regular and occasional smokers or users of tobacco products. Smoking tobacco raises the risk of lung cancer, mouth cancer, heart disease, and blood clots. Tobacco usage also raises the likelihood of a woman having an abortion. A single study in Syria found the prevalence of smoking to be 56.9% among men and 17.0% among women. The study's goal was to determine the prevalence of cigarette smoking and tobacco product usage among Syrians following the conflict, as well as the association between smoking and age, gender, social status, education, and economic status.

Methods:

2847 individuals (aged between 18 - 80 years) have responded to the questionnaires which were distributed through many groups on Whatsapp. The response rate was 91%, 51 participants (1.3 %) individuals were excluded from the study because they were under 18 years of age which is the legal age to buy cigarettes in Syria. Therefore, 2796 participants enrolled in this study (61.7 % Males and 38.3 % Females). Questionnaire was distributed through Whatsapp groups. Regular smoker was defined as the person who smokes at least one cigarette per day or who uses any type of tobacco products once a day. Whereas occasional smoker can be defined as the person who smoked one cigarette at least once during the past week or used any other types of tobacco such as hookah, cigar, vape or pipe.

Results:

The overall prevalence of smoking among Syrians was 58.3 % and they were mostly regular smokers. More smoked ready imported cigarettes. The prevalence of smoking among men was higher compared with females (61.7 % males vs 38.3 % females). The prevalence of smoking among pregnant women was 33.4% which is still low comparing with other countries. Syrians smokes primarily at homes (41%) followed by public places such as restaurants and cafeterias. The highest %age of smokers was in the age groups 18-30 and 51-60 years old (26.4 %) (22.9 %) respectively whereas the lowest smoking %age was in the age groups over 70 years and 41-50 (5.5%). More smokers were in country-sides comparing with city residents (58.2 % vs 41.8). The prevalence of smoking in under-graduate students and individuals with no education was almost similar 24.1 % and 23.9 % respectively. More smokers were singles 39.1% followed by widowed 22.9 % and lowest were divorced 18.7%. With reference to profession, the highest prevalence was among governmental workers 35.9 % followed by health workers 27.1 %, self – employed and engineers 22.5 % and 12.1% respectively. More smokers made less than 20,000 SP/month (31.2%) whereas only 4% of the smokers made over 200,000 SP /month. The majority of smokers smoked less than 5 years (44.2) whereas 8.9% and 9.1% smoked for 20-25 and more than 25 years. The majority of Syrian smokers started smoking at early age about 15-20 years old (66.3%)

followed by age 20-30 years old (2,4%) and only 0.7 % started smoking after 60 years old. Unfortunately, only 3.1 % of the smokers were healthy. The rest have had respiratory diseases (32.5%), diabetes (24.1%), kidney diseases (10.8%) and liver diseases (9.3%). With regards to expenditure on smoking 28.8% spent more than 5000 SP daily on smoking, 23.7 % spent 3000-4000 SP/day and only 5.1% spent less than 1000 SP/day.

Conclusion:

The prevalence of smoking among Syrians males and females is on the rise maybe due to the current conflict. Smoking start at early ages and other tobacco products such as water-pipe smoking is becoming the popular trend among young generation. Syrians smoke more imported cigarettes than locally produced ones despite their cheaper prices. Several diseases have been recorded among Syrian smokers which will be an economic burden on them and on their families. Education has limited effect on smoking practices as the highest prevalence was seen among under – graduate students.

Background:

According to the WHO, there are around 1.1 billion current cigarette smokers worldwide (1). Cigarette smoking has been more common in recent years all across the world, and it is now considered a major public health issue (2). One of the most preventable causes of death from non- communicable diseases is smoking (3). It's widely regarded as one of the leading causes of illness and the most pressing public health concern of recent years. There is no confirmed safe level of tobacco smoking and both regular and occasional of smokers and users of its products, are at risk of various health problems which increases the likelihood of developing cancers such as lung and cervical cancer, heart disease, Cervical cancer, and blood clots are also risks. Smoking causes tooth decay and skin aging, as well as increasing the risk of heart attack and stroke. (4). Women who smoke are more likely to develop osteoporosis, cardiovascular disease, atherosclerosis, and type 2 diabetes, as well as have early menopause, premature birth, irregular fetal growth, low birth weight, miscarriage, and fetal death. Preterm birth, irregular fetal growth, low birth weight, miscarriage, and fetal mortality are all increased risks for women who smoke before and during pregnancy (5, 6). Smoking cigarettes has a harmful influence on countries, affecting their health and economic standing. Tobacco smoking is classified as an epidemic by the WHO, with an estimated 10 million deaths per year worldwide, and this number is predicted to climb if present smoking trends continue. Seventy % of these deaths will take place in underdeveloped nations. (7). There have been numerous studies on the prevalence of smoking all around the world. In the United States, the prevalence of cigarette smoking among adults was 20.9 % in 2004. (8) In 2010, an estimated 28.1 % of persons in China (52.9 % of males and 2.4 % of women) were current smokers, according to the World Health Organization (9). Each year, 480,000 people in the United States die as a result of cigarette smoking (10). Generally speaking, Smoking rates have fallen all around the world as a result of increasing tobacco education and anti-tobacco initiatives. The smoking rate in the United Kingdom was 38 % in 2000, but it has now declined to 19.15 %. Following the previously noted trend, three of the top countries are in the Pacific Islands and two are in Europe's Balkan region.

Several factors influence the prevalence of tobacco use. Smoking is more prevalent in wealthy countries. Furthermore, smoking is part of the social culture in numerous societies around the world, and it is nearly expected of males. On the continents of Oceania, Asia, Europe, America, and Africa, the prevalence of ever smoking was 36 %, 14 %, 38 %, 31 %, and 32 %, respectively.

In many South and Southeast Asian countries, men's smoking rates are relatively high while women's rates are very low. The male smoking rate in Indonesia, for example, is 76.20 %, whereas the female smoking rate is 3.60 %. (11). Southeast Asia and the Balkan region of Europe have the highest smoking rates. Smoking rates are lower in Western European countries and the Americas. Greece (42.65 %), Serbia (41.65 %), Russia (40.90 %), Jordan (40.45 %), Indonesia (39.90 %), Bosnia and Herzegovina (38.60 %), Lebanon (38.20 %), and Chile are the countries with the highest smoking rates (38 %).

Men with the highest levels of education (63.2%) had the highest prevalence, while those with the lowest levels of education (college graduates or postgraduates) had the lowest (44 %). Male machine operators had the greatest smoking prevalence (67 %) of all the vocations studied (9).

Many studies have been conducted in Arab countries, particularly Saudi Arabia, to determine the prevalence of smoking. A prevalence rate of 21.1 % was observed in a 1999 study of male secondary school pupils in three regions. (7) Another study from 1995 indicated that 17 % of high school pupils in Riyadh had the disease (12). Only a few researches on this vital topic have been identified in other Gulf nations, and even those were not conducted on adolescents. In Kuwait, smoking was prevalent in 34.4 % of men and 1.9 % of women (13). The prevalence of smoking shisha among young male students in the Kingdom of Bahrain is (13 %). (12, 13).

Despite the fact that Syria is a tobacco producer and produces a variety of cigarette brands, only a few studies have been undertaken to determine the prevalence of smoking among Syrians, particularly adolescents. Syrians spend millions of dollars each year on cigarettes imported legally or illegally through smuggling routes, particularly through Lebanon. Syria is now ranked eighth in the world in terms of tobacco consumption, importing 20,000 million cigarettes per year for a total cost of 351.8 million dollars. (14). Syria lacked consistent and trustworthy data on the smoking epidemic's prevalence and characteristics. Smoking, on the other hand, is regarded as a separate issue.

The sole study on the prevalence of smoking in Syria was published in 2006, and indicated that cigarette smoking was prevalent in 56.9% of men and 17.0% of women, while water-pipe (Hookah) smoking was prevalent in 20.2 % of males and 4.8 % of women (15).

The goal of this study was to determine the prevalence of cigarette smoking and the use of various tobacco products in a sample of Syrians (aged 18 years - 80 years). Tobacco items such as manufactured or hand-rolled cigarettes, vapes (electronic cigarettes), cigars, pipes, and hookah are also investigated (water-pipe). This research will also look into the prevalence of smoking among people of all ages and genders, as well as the link between smoking and education, socioeconomic level, and

occupation. The study's ultimate goal is to raise awareness among Syrian health officials about the seriousness of the situation. This study used a questionnaire to collect data.

Methods:

A total of 2847 people (aged 18 to 80) responded to questionnaires provided through various Whatsapp groups. The questionnaire was created specifically for this study, and the response rate was 91%. However, 51 participants (1.3%) were excluded from the study because they were under the age of 18, which is the legal age in Syria to purchase cigarettes. All participants signed a written consent form along with the questionnaire, indicating that they consented to participate in the study and that the results will be published. As a result, the survey included 2796 adults (61.7 % males and 38.3 % females). The term "regular smoker" was used in this investigation as someone who smoked at least one cigarette in the previous week or used any other tobacco product such as a hookah, cigar, vape, or pipe... The participants were questioned if they smoked cigarettes and if they used tobacco products or other forms of tobacco on a daily or occasional basis.

This was a descriptive cross-sectional research. The socio-demographic parameters of the selected household member were also gathered such as participants' socioeconomic position based on information about their income, education, employment, and place of residence.

Participants were also asked about their preferred smoking location, where they consume the most of their daily cigarettes. Homes, restaurants, university cafeterias, parks, and other recreational facilities are among these locations. SPSS version 18 was used for statistical analysis. All questions in the survey form, including %ages, were subjected to descriptive analysis, with confidence intervals set at 95%.

Results:

2847 people responded to our questionnaires, which were distributed through various Whatsapp groups whose members live in various parts of Syria. Only 51 participants (1.8 %) were excluded from the study because they were under the age of 18, which is the legal age in Syria to buy cigarettes or use tobacco products. As a result, a total of 2796 adults (aged 18 to 80 years) participated in the study, which lasted 30 days (01/06/2021-30/06/2021), with 1726 males (61.7 %) and 1070 females (38.3 %) as shown in (Figure 1).

When participants were asked where they smoked the majority of their cigarettes or where they smoked the most frequently, 41.1 % smoked primarily in their homes, followed by restaurants and coffee shops (20.2 % and 21.1 %, respectively). Parks received 11.4 % of the respondents, while university cafeterias received 6.2 %. The explanation for the high %age of smokers who smoked in their homes could be due to local municipality laws prohibiting smoking in public places, as well as the long hours they spent in their homes. The information is displayed in (figure 2).

The total number of smokers (cigarettes and other tobacco products) was 1630 individuals (males and females) in this study, and the overall prevalence of smoking among Syrians was 58.3 % (CIs 57.1- 59.3). As shown in the table, the number of nonsmokers was 1166, accounting for 41.7 % (CIs 39.7-43.8) of the total (Table 1).

Table 1
The overall prevalence of smoking and the use of tobacco products among Syrians

Group	n	% (95% confidence intervals)
Smokers	1630	58.3 (57.1- 59.3)
Non-Smokers	1166	41.7 (39.7- 43,8)
Total	2796	100

Figure 3 showed that males had a higher prevalence of smoking than females. There were 1182 males (68.5 %) and 448 females (41.9 %) smokers in the male and female groups, respectively.

The findings of this study were very comparable to those of a Chinese study, which found that the prevalence of smoking among women was 5.34 % (16). In another study conducted in Iran, the prevalence of smoking among girls aged 12 to 17 years old was found to be 6%. (17). A study conducted in Central and Eastern Europe found that the prevalence of smoking among women was 64.7 %, which was fortunately very high when compared to the findings of this study (18). One of the reasons for female smoking has been the large number of tobacco companies that have promoted female smoking in both high and low-income countries over the last century.

According to the WHO report from 2018, the prevalence of cigarette smoking among women in Africa, America, the Eastern Mediterranean, Europe, Southeast Asia, and the Western Pacific was 1.4 %, 10.2 %, 1.5 %, 17.5 %, 0.9 %, and 2.5 %, respectively. The West Pacific and the African continent have the lowest prevalence, while Europe has the highest (19). According to the WHO report, the cigarette smoking rate among women in European countries is higher than in the rest of the world, which is consistent with the findings of this study. According to a World Bank report, the prevalence of smoking among women in high-income, upper-middle-income, lower-middle-income, and low-income countries was equal to 16.1 %, 4.4 %, 1.3 %, and 2%, indicating a high prevalence of consumption in high-income countries (20). The increased prevalence of smoking in adult women increases the risk of stroke, cardiovascular disease, asthma, decreased lung function, breast cancer, cervical cancer, and cervical cancer (21). Other factors that contribute to women starting to smoke include reduced stress, lower education levels, and lower cigarette prices (22).

The study looked at the percentage of pregnant women who smoke or use tobacco products of any kind. The findings of this study revealed a rising trend in smoking among women in general, and pregnant women in particular. Unfortunately, this included 150 female pregnant smokers (33.4 % CIs (30.2-36.9) of

total female smokers. There were 298 non-pregnant smoker women, accounting for 66.6 % of the total (CIs 62.9-70,3). Pregnant women have a higher smoking prevalence than other groups, owing to the negative effects of smoking on the health of pregnant women and their fetus, such as reduced fetal size, stillbirth, increased perinatal mortality, infant death, miscarriage, placental abruption, premature birth, premature lung aging, and chronic obstructive pulmonary disease (23). The effects of a mother's smoking on her fetus can be devastating, endangering future generations in any society. One reason for pregnant women's proclivity to smoke is a lack of knowledge about the effects of smoking on congenital anomalies (24). Other reasons include physiological changes during pregnancy. The Lange study published in 2018 found that the global prevalence of smoking during pregnancy is 1.7 %, which is lower than the prevalence found in this study (25). According to a study conducted by Kondracki in the United States, 9.5 % of pregnant women smoked, with 7 % smoking during pregnancy (26).

Table 2
The prevalence of smoking among pregnant women

Females	n	% (95% confidence intervals)
Pregnant	150	33.4 (30.2-36.9)
Non-Pregnant	298	66.6 (62.9-70,3)
Total	448	100

When smoking prevalence was compared to age groups, smokers were most prevalent in the age groups 18-30 and 51-60 years old (431 or 26.4 %) (374 or 22.9 %), respectively, followed by the age groups 31-40 years old (311 or 19.1 %) and 61-70 (206 or 12.6 %). Table 5 shows that the lowest smoking %ages were in the age groups over 70 years and 41-50 (90 smokers or 5.5 %) and (218 smokers or 13.4 %), respectively as shown in Table 3. The data obtained reveals an alarming trend in the youngest age group, which has the highest prevalence of smoking. The findings of this study are very similar to those of a 2011 study published in China, which found that among men, the prevalence was highest among those 45 to 64 years old (63.0 %) and lowest among those 15 to 24 years old (33.6 %) (9). Another study discovered that the majority of smokers began smoking during their adolescence (27).

Table 3
Comparison of the prevalence of smoking among age groups

Age (years)	n	% (95% confidence intervals)
18-30	431	26.4 (20.9- 32.4)
31-40	311	19,1 (18.2-20.1)
41-50	218	13.4 (11.6- 15,7)
51-60	374	22.9 (19.6- 25.4)
61-70	206	12.6 (11.1- 14.2)
>70	90	5.5 (4.8- 6.1)
Total	1630	100

According to the findings which are shown in Table 4, the prevalence of smoking in the countryside was higher than in the city (949 or 58.2 %) compared to (681 or 41.8 %) respectively.

Table 4
The %age of smokers residing in cities and country-sides

Residence	n	% (95% confidence intervals)
Cities (urban)	681	41.8 (37.5- 46.1)
Country-sides (Rural)	944	58.2 (52.7- 65,2
Total	1630	100

The prevalence of smoking in the Syrian countryside is higher than it was in China. According to a 2011 study published in the New England Journal of Medicine, the prevalence of smoking among men was significantly higher in rural residents (56.1 %) than in urban residents (49.2 %) (9).

Surprisingly, (Table 5) shows that university students, particularly undergraduate students, had the highest prevalence of smokers. The group with the lowest level of education (392 or 24.1 %) was followed by the group with the highest level of education (392 or 24.1 %) (389 or 23.9 %). There were 17.4 % of smokers, or 284 smokers, among those who attended some college but did not complete college. Individuals who attended high schools, primary and preparatory schools had a smoking prevalence of (216 or 13.2 %), and (228 or 14.0 %) respectively.

Table 5
The relationship between smoking and educational level

Educational status	n	% (95% confidence interval)
No school	389	23.9 (21.3-25.4)
Primary and preparatory school	228	14.0 (12.6-16.2)
Secondary (High) school	216	13.2 (12.3-14.5)
Some collage	284	17.4 (15.2-19.5)
Under-graduate	392	24.1 (21.8-27.5)
Post-graduate	121	7.4 (5.5-9.5)
Total	1630	100

The study also looked at the prevalence of smoking and marital status. The difference between singles and married people was significant. The single group had the highest prevalence (637 or 39.1 %), followed by the widowed group (373 or 22.9 %). While the prevalence among married people was (315 or 19.3 %). As shown in, the divorced group had the lowest prevalence of smokers (305 or 18.7 %) as presented in Table 6.

Table 6
The prevalence of smoking according to the marital status

Social status	n	% (95% confidence interval)
Single	637	39.1 (31.9-46.6)
Married	315	19.3 (17.7- 21.4)
Divorced	305	18.7(16.6-21.5)
Widowed	373	22.9 (20.9-24.7)
Total	1630	100

The prevalence of smoking among professions is shown in Table 7. The highest prevalence was found among government employees (542 or 35.9 %). The findings revealed a shocking fact: the prevalence of smoking among health care workers was (410 or 27.1 %), which should be concerning to policymakers in Syria's government. The self-employed had the highest smoking prevalence (340 or 22.5 %), followed by engineers and other professional groups (183 or 12.1 % and 36 or 2.4 % respectively).

Table 7
The prevalence of smoking among professional groups

Professional status	n	% (95% confidence intervals)
Self-employee	367	22.5 (20.1-24.8)
Government workers	585	35.9 (31.7- 39.9)
Health workers	442	27.1 (24.1- 30,7)
Engineers	197	12.1 (9.7-15.1)
Other professions	39	2.4 (1,9-3,2)
Total	1630	100

There was an inverse relationship between monthly earnings and smoking when it came to social status and smoking. The highest prevalence of smoking was found among those with a monthly income of less than 20,000 Syrian pounds (471 or 31.2 %). This group could include both adolescents and those who did not receive an education. This was followed by the group earning 20,000-50,000 SP per month (337 or 22.3 %), the group earning 50,000-100,000 SP per month (201 or 13.2 %), and the group earning 100,000-150,000 SP per month (201 or 13.2 %) (261 or 17.3 %). The lowest prevalence was observed in both the 150,000-200,000 SP and the over 200,000 SP groups (181 or 12 % and 60 or 4 % respectively). These findings are illustrated in (Table 8).

Table 8
Smoking prevalence according to the monthly income

Monthly income (SP)	n	% (95% confidence intervals)
< 20,000	509	31.2 (30.6-32,4)
20,000-50,000	363	22.3 (20.5-24.9)
50,000- 100,000	215	13.2 (12.7-14.6)
100,000-150,000	282	17.3 (13.7-21.2)
150,000-200,000	196	12.0 (11.4-13.8)
> 200,000	65	4.0 (3,2-4,7)
Total	1630	100

According to the data in (Table 9), the highest prevalence of smoking was found among regular smokers who smoked at least one cigarette or one hookah (water - pipe) per day. In this group, the prevalence was 1491 or 91.5 % (CIs 87.4 - 95.6), while the prevalence among occasional smokers was 138 or 8.5 % (CIs 6.3-10.5). These findings are extremely concerning, given that the vast majority of those polled were

regular smokers presented in (Table 9), showed that the highest prevalence of smoking was among the regular smokers who smoke at least one cigarette or one hookah (water - pipe) per day. The prevalence in this group was 1491 or 91.5% (CIs 87.4 - 95.6) whereas the prevalence among occasional smokers was 138 or 8.5% (CIs 6.3-10.5). These results are very nerve-racking as the majority of individuals were regular smokers.

Table 9
Classification of smokers according to frequency of smoking

Type of smoker	n	% (95% confidence intervals)
Occasional	139	8.5 (6.3-10.5)
Regular	1491	91.5 (87.4 - 95.6)
Total	1630	100

Table 10 depicts the various types of smoking and tobacco products used by Syrians. Cigarette smoking has the highest %age (56.2 % or 916 (CIs 51.7-61.4) smokers, followed by hookah smoking (670 (41.1 %) (CIs 40.1- 42.5), which is on the rise among Syrians, particularly adolescents. Cigar and pipe smoking were very low among Syrians, accounting for 21 (1,3%) and 18 (1,1%), respectively. The reason for these low rates could be the high cost of cigars and pipe tobacco, as well as the time-consuming process of preparing the pipe for smoking. Vape or electronic cigarettes are becoming more popular among young people and the wealthy, but the prevalence of vape smoking remains low (28). The prevalence of vape smoking was 0.2 % in this study due to its high cost and scarcity. Sniffing tobacco is not as common in Syria as it once was. The prevalence of sniffing tobacco was 2 (0.1 %), which is extremely low. The outcomes are shown in (Table 10).

Table 10
The prevalence of Smoking and the use of other tobacco products
among Syrians

Types of smokes	n	% (95% confidence intervals)
Cigarettes	916	56.2 (51.7-61.4)
Hookah (water pipe)	670	41.1 (40.1-42.5)
Cigar	21	1.3 (1.1-1.4)
Pipe	18	1.1 (1.0-1.1)
Vape or electronic cigarettes	3	0.2
Chewing Tabaco	0	0
Sniff	2	0.1
Total	1630	100

According to the findings of this study, Syrians smoked two types of cigarettes. 16.1%, or 147 participants, smoked hand-rolled or traditional cigarettes, while 769, or 83.9 %, smoked brand-name manufactured cigarettes (local and imported). Because of the higher prices of manufactured cigarettes, smokers prefer to smoke traditional or hand-rolled cigarettes, as seen in (Table 11).

Table 11
The different types of cigarettes smoked by Syrians

Types of cigarettes	n	% (95% confidence intervals)
Brand name manufactured	769	83.9 (80.7-86.4)
Hand rolled (Traditional)	144	16.1 (14.3- 18.8)
Total		100

According to the data in (Table 12), Syrians smoked more imported cigarettes. Syrians smoked more imported cigarette brands. 73.4 % of participants, or 672 people, smoked imported cigarettes, while 244 individuals, or 26.6 %, smoked locally produced cigarettes.

Table 12
The %age of imported and locally produced cigarettes
smoked by Syrians

Cigarettes	n	% (95% confidence intervals)
Imported	672	73.4 (69.4 - 77.5)
Locally produced	244	26.6 (21.2 – 31. 8)
Total	916	100

According to the findings of this study, 720 participants, or 44.2 % (CIs 40-1-48.2), have been smoking or using tobacco products for less than 5 years, while 269 participants, or 16.5 % (CIs 12.3 – 20.2), have been smoking or using tobacco products for 5-10 years. 328 participants, or 20.1 % (CIs 18.1- 21.4), have smoked or used tobacco products for 10-15 years, while 145 participants or 8.9 % (CIs 8.1-8.8), have smoked or used tobacco products for 15-20 years. The number and %age of smokers were 148 or 9.1 % (CIs 7.4 – 11.3) and 20 or 1.2 % (CIs 0.1- 1.4) for a period of 20-25 years and more than 25 years of smoking, respectively.

Table 13
The duration of smoking practice among Syrians (years)

No. years of smoking	n	% (95% confidence intervals)
< 5 years	720	44.2 (40-1- 48.2)
5-10 years	269	16.5 (12.3 – 20.2)
10-15	328	20.1 (18.1- 21.4)
15-20	145	8.9 (8.1-8.8)
20-25	148	9.1 (7.4 – 11.3)
> 25	20	1.2 (0.1- 1.4)
Total	1630	100

This study also looked at the age of the first cigarette or use of tobacco products. The majority of smokers, 66.3 % (CIs 61.4 – 71.1), or 1081 participants, began using tobacco products when they were between the ages of 15 and 20. This result is consistent with the international trend. Increasing age has a negative correlation with using tobacco products or smoking cigarettes. 349 participants, or 21.4 % (CIs 19.9 – 23.2), used tobacco products for the first time when they were 20-30 years old, while 156 participants, or 9.6 % (CIs 5.3 – 13.9), used tobacco products for the first time when they were 30-40 years old. As shown in the table, only 37 participants (2.3 %) (CIs 1.6 -3.4) and 7 participants (0.4 %) used tobacco products or smoked their first cigarettes between the ages of 50 and 60, respectively (Table 14).

Table 14
Age of first cigarette smoking or the first use of tobacco products among Syrians

Age (years)	N	% (95% confidence interval)
15-20	1081	66.3 (61.4 – 71.1)
20-30	349	21.4 (19.9 – 23.2)
30-40	156	9.6 (5.3 – 13.9)
50-60	37	2.3
>60	7	0.4
Total	1630	100

According to the results of this study, 47 participants (5.1 %) (CIs 3.9-7.5) smoked fewer than 5 cigarettes per day. The highest %age of smokers was 277 participants (30.2 %) (CIs 28.7 – 32.5) who smoked 5-10 cigarettes per day. Only 176 smokers or 19.2 % (CIs 16,6 – 21.5) smoked more than 20 cigarettes (one pack) per day, while 193 smokers (21.1 %) (CIs 20.4 – 22.9) and 223 smokers (24.4 %) (CIs 21.4 - 27.6) smoked 10-15 and 15-20 cigarettes per day, respectively. The outcomes are shown in (Table 15).

Table 15
The %age of smokers and the number of cigarettes smoked daily

Number of cigarettes/day	n	% (95% confidence interval)
<5	47	5.1 (3.9-7.5)
5-10	277	30.2 (28.7 – 32.5)
10-15	193	21.1 (20.4 – 22.9)
15-20	223	24.4 (21.4 - 27.6)
>20	176	19.2 (16,6 – 21.5)
Total	916	100

The link between smoking and non-communicable diseases (NCD) is well explained and demonstrated in the literature. Only 50 people (3.1 %) were healthy and had no diseases or health problems to report. 530 people (32.5 %) (CIs 26.6 – 38.8) had respiratory diseases (i.e. emphysema, chronic bronchitis, and lung diseases). CVD was also common among the study's participants. 393 people, or 24.1% (CIs 21.6% – 26.4%), had some form of heart disease (CHD, Stroke, Aortic aneurysm and PAD). 329 participants, or 20.2 % (CIs 16.8 – 23.9), had diabetes, the majority of which was type 2 diabetes. The %ages of kidney

and liver disease were nearly identical. As shown in the table, n= 176 (10.8 %) (CIs 16.8 – 23.9) had kidney diseases, while n= 152 (9.3 %) (CIs 7.3 – 11.2) had liver diseases (Table 16).

Table 16
the %ages of Non-communicable diseases (NCD) and health related issues among smokers.

Chronic diseases	n	% (95% confidence intervals)
CVD	393	24.1 (21..6 – 26.4)
Diabetes	329	20.2 (16.8 – 23.9)
Kidney diseases	176	10.8 (16.8 – 23.9)
Respiratory disease	530	32.5 (26.6 – 38.8)
Liver diseases	152	9.3 (7.3 – 11.2)
Healthy	50	3.1 (2.6- 4.7)
Total	1630	100

Smoking is not only a health issue, but it is also an economic one because smokers spend a portion of their income on cigarettes or other tobacco products, which can be financially burdensome for them and their families. 470 participants (28.8 %) (CIs 23.5 – 33.8) spent more than 5000 Syrian Pounds on smoking and other related products, with 23.7 % (CIs 20.8 – 26.5) or 386 participants spending between 3000 and 4000 SP daily. 295 participants, or 18.1 % (CIs 14.5 – 22.7), spent \$4000-5000 SP, while 202 participants, or 12.4 % (CIs 10.7 – 14.6), spent 2000-3000 SP whereas 194 participants, or 11.9 % (CIs 10.1- 13.2) spent 1000-2000 SP on cigarettes and other tobacco products on a daily basis. Only 83 people (5.1 %) (CIs 4.6–6.5) spent less than 5000 SP per day.

Table 17
The amount of money spent on cigarettes and other tobacco products (SP/Day)

Money spent on smoking (SP/day)	n	% (95% confidence intervals)
< 1000	83	5.1 (4.6 – 6.5)
1000-2000	194	11.9 (10.1- 13.2)
2000-3000	202	12.4 (10.7 – 14.6)
3000-4000	386	23.7 (20.8 – 26.5)
4000-5000	295	18.1 (14.5 – 22.7)
>5000	470	28.8 (23.5 – 33.8)
Total	1630	100

Conclusion:

Cigarette smoking and tobacco product use are declining in many parts of the world as a result of public awareness of the harmful effects of cigarettes on health. According to the findings of a study, the prevalence of smoking among Syrians is steadily increasing, most likely as a result of the current situation. Unfortunately, this is also true in neighboring countries. Smoking cigarettes in general, as well as smoking water pipes (hookah), is a growing trend, particularly among teenagers, adolescents, and adults (males and females). Smoking is a major risk factor for future health for adolescents, as is their proclivity to use cigarettes, alcohol, and drugs. According to the findings of various studies, smoking parents, low parental education, low-income family, low self-esteem, peer pressure, alcohol consumption, positive attitude toward smoking, having a smoking friend, actors smoking, parental divorce, or living with a parent were all associated with adolescent smoking. The study's findings revealed that the prevalence of smoking was higher in males than in females. Cigarette smoking was the most common, followed by hookah or water pipe smoking, and other tobacco products such as cigars, pipes, and vapes were in the minority.

Surprisingly, the prevalence of smoking among health workers was high, and smoking was positively associated with daily income but negatively associated with educational status. Syrians smoked more imported cigarettes than locally produced cigarettes, and the majority of Syrian smokers smoked 5-10 cigarettes per day. Only 50 of the 1630 smokers who took part in this study were healthy and did not have any health problems, indicating that smoking has a negative impact on health. Unfortunately, Syrians begin smoking at a young age, and various studies have found a high prevalence of smoking among adolescents.

Recommendations:

According to the findings, the following recommendations should be implemented:

- 1- The authorities should enact political and social policies to limit access to tobacco products and smoking.
- 2- Raise the purchasing age for tobacco products to 21.
- 3- Reactivate the previous law that prohibits smoking in public places.
- 4- Increase taxes on cigarettes and tobacco products.
- 5- Include health education programs about the dangers of smoking in schools and universities.
- 6- Collaborate with international, regional, and local organizations to raise awareness about smoking.
- 7- Any smoking-related disease should be charged for at a public hospital.
- 8- Organizing preventive programs in schools and educating parents on the subject.

Declarations:

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Ethics approval and consent to participate: The participants had provided the author with consent to participate together with the questionnaire. The study was performed according to research ethics of Ministry of higher education ethics committee.

Consent for publication: The author obtained consent for publication of the study outcomes.

Availability of data and materials: The data and materials of this study will be made available.

Competing interests: The author declares that there was no conflict of interest

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Authors' contributions: The author did the entire study from proposal to conducting this study

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Figures

Percentage of Males and Females

Figure 1

Gender distribution among participants

Figure 2

The most common places for smoking or using tobacco products among Syrians

Figure 3

The prevalence of smoking and the use of tobacco products in males and females