

# Original Research Article

## Assessment of tobacco dependence in Al-Bayda city, Libya

### ABSTRACT

Tobacco is the second leading cause of the death in adults' diseases in the world today. This is because of tobacco dependence. Therefore, aim of this study is to assess the level of nicotine dependence through a small random group of smokers in the city of Al-Bayda using the Fagerstrom test for nicotine dependence and to know the extent of desire to quit and take action. The study included 150 male smokers, with an age group ranging between 18-60 years, in the period between February and June 2020 through a questionnaire containing six questions from the Fagerstrom test and collected smoking risks and presence of smoking cessation medications. Data were collected and statistically evaluated using chi-square. Most of the participants had a family history, they were smoking imitating brother, father and friends. The average number of cigarettes consumed was more than 31 cigarettes per day, with a 5-minute time difference being the highest. The rate of desire to smoke was observed in the morning hours more than others. The proportion was also high for those who were unable to stop in public even while ill. Most of them are aware of the existence of drugs that help in smoking cessation. As for the attempts to quit, there were attempts during different periods of time, most of which failed due to physical and social reasons. Most of the results indicate a high rate of dependence among smokers, for reasons that may be social and economic. Therefore, we need more data and a wider study area through health centers and try to understand the reasons for returning to smoking and treating them. work to validate reliability.

*Keywords: [tobacco, dependence, Libya, Fagerstrom test]*

### 1. INTRODUCTION

Tobacco is the second leading cause of the death in adults' **diseases in the world today.** [1] About 5 million people they die from tobacco use every year. Tobacco is the second leading cause of death in adults and by the year 2020, the death rate will reach 10 million due to tobacco. [2] There are more than 50 diseases caused and exacerbated, by smoking. Globally there are 1.1 billion smokers, 70% of them in low-income countries. [3] Tobacco dependence is defined as compulsive use, including the inability to stop smoking or difficulty letting go [ 4] due to the nicotine in the cigarette, which is a psychoactive drug that cause severe dependence. The effects of nicotine on the body include reduced appetite, improved mood, increased heart rate, high blood pressure, nausea, diarrhea, while symptoms include nicotine withdrawal are cravings, anxiety, depression, headache, loss chances of getting back into habit [ 5]. Tobacco dependence is included in the International Classification of Diseases published by the World Health Organization as a resultant mental and behavioral disorders from the use of psychotropic substances [ 6].

**Fagerstrom Tolerance Questionnaire (FTQ) initially consists of eight questions, drawn up in 1978 to estimate nicotine dependence. Improved version from the scale, the Fagerstrom test for nicotine is called Accreditation (FTND) was developed by Heatherton et al., 1991.**

## After waking up, how long is it before you smoke your first cigarette?

	Number	%
Less than 5 minutes	109	72.7 %

*Consists of six questions (nicotine content and inhalation), and only two have been modified (The time before smoking and the first cigarette number of cigarettes per day) [7].*

We did not find previous studies on tobacco addiction in Libya except for a few. It emerged as the largest African importer of rolled tobacco, according to the World Bank from 2014 to 2016 [8].

Annual per capita consumption is expected to increase by more than 12% to more than 1,200 pieces by 2023. In a report of the World Health Organization 2009 in 15 years, it was found that the prevalence of smoking among males was 47.6%.

Since the high rate of consumption indicates the rate of dependence, and because there are very specific studies that indicate dependence on nicotine in Libya, the aim of this study is to assess this dependence through a small group of smokers in the city of Al-Bayda and find out the extent of desire to quit and the reasons back from which action can be taken. [9-11].

## 2. MATERIAL AND METHODS

One hundred fifty smokers from Al-Bayda city, aged between 18-60 years, A random sample (different categories) in the period between February and June 2020 participated in this study. They have been smoking for a while. Nicotine dependence was assessed with the Fagerstrom test questions for nicotine dependence, developed by Heatherton et al., 1991, questions were put into a questionnaire that the smoker filled out. Other data were collected such as desire or attempt to quit, family history of smoking, awareness of smoking risks and presence of smoking cessation medications. These data were collected in a questionnaire, the participants were informed of the purpose of the study and were given the freedom to participate or not. In case of approval, he signs the consent form and then answers the questions. The results were statistically evaluated using the Chi-square test.

## 3. RESULTS AND DISCUSSION

### Results

Table 1 displays the sample's Characteristics according to the FTQ, in this study sample, the responses to the Fagerstrom questionnaire indicate a high dependence on nicotine. The characteristics in terms of attempts to quit and beliefs related to the smoking habit are shown in Table 2.

**Table 1 Characteristics according to the FTQ**

Between 6 and 30 minutes	35	<b>23.3 %</b>
Between 31 to 60 minutes	6	<b>4 %</b>
After 60 minutes	-	-
Total	150	

#### **Difficulty to stop smoking in certain places**

	Number	%
Yes	121	<b>80.7 %</b>
No	29	<b>19.3 %</b>
Total	150	

#### **Which cigarettes could the smoker to give up**

	Number	%
The first of the day	135	<b>90 %</b>
Others	15	<b>10 %</b>
Total	150	

#### **How many cigarettes a day do you smoke**

	Number	%
10 or less	-	-
11 to 20	3	<b>2 %</b>
21 to 30	5	<b>3.3%</b>
31 or more	142	<b>94.7 %</b>

#### **Do you smoke more in the morning than the rest of the day**

	Number	%
Yes	137	<b>91.3 %</b>
No	13	<b>8.7 %</b>

Total	150	
<b>Do you smoke while you are sick</b>		
	Number	%
Yes	107	<b>71.3 %</b>
No	43	<b>28.7 %</b>
Total	150	

**Table2 Some characteristics related to the habit of smoking**  
**Have you already tried to stop**

	Number	%
Yes	43	<b>28.7 %</b>
If so, how long		
1 day	-	-
2 to 7 days	9	<b>6%</b>
8 to 30 days	27	<b>18%</b>
31 to 90 days	7	<b>4.6%</b>
More than 90 days	-	
No	107	<b>71.3 %</b>
<b>Do you know that smoking is harmful to health?</b>		
	Number	%
Yes	127	<b>84.7 %</b>
No	13	<b>8.7 %</b>
Total	150	
<b>Do you know that there are medicines that help you quit smoking?</b>		
	Number	%
Yes	52	<b>34.7 %</b>

No	98	<b>65.3 %</b>
Total	150	
<b>Influence of social factors</b>		
	Number	%
Father	31	<b>20.7 %</b>
Brother	79	<b>52.7 %</b>
Friends	40	<b>26.7 %</b>
Total	150	

In this study, we tried to assess the extent of dependence on nicotine using a Fagerstrom test, as there are not enough studies on this subject in Libya due to the regional conditions and the influence of many social and economic factors. Our findings are consistent with past research [12-17]. We noticed an increase in the smoking rate among smokers for physical rather than psychological reasons, previous studies mentioned the same reasons among smokers [18-20]. In the early morning hours, more than at any other time [21] for reasons mentioned by smokers such as mood, intense desire and a feeling of comfort, it is consistent with what was previously reported [22-24]. The results showed an increase in the number of cigarettes per day for smokers, which gives an indication of dependence as mentioned in previous studies [25&26]. While they were unable to stop during the period of illness, as well as in public places, [27] in accordance with what was mentioned. According to the results of this study, most of the smokers had started smoking at an early age, that is, the smoking period is long, this has been supported by others [28&29]. There were some questions about the impact of social factors most of them smoked in imitation of the brother, father and friends which is similar to the results of many other works [30-33]. Most of them have prior knowledge of the dangers of smoking on health, yet they continue to smoke because they are unable to stop which is in agreement with many studies [34-36].

Participants who attempted to quit at different time periods, most of them returned for the reasons mentioned by these: lack of rest and fatigue, headache, depression, insomnia, psychological symptoms. Most of them are body symptoms, as mentioned in [37]. Most of those who have tried to quit were not aware of the existence of medications that help them quit, due to the lack of awareness and the absence of organizations that help them and provide psychological support and medication.

Therefore, the attempts to quit were mostly unsuccessful and dependence level is close to high, many studies and reports supported the current findings [38-40].

This study is preliminary to determine the extent of the dependence. But it gives data for other authors, more comprehensive study through health centers is required to monitor the number of smokers, which would provide important data on the smoking situation in Libya.

#### **4. CONCLUSION**

The aim of this study is to assess the extent of dependence on nicotine in the city of Al-Bayda and found a high level of dependence for social and economic reasons. Because of the study relied on a self-questionnaire and the study area is limited, we recommend conducting a broader study through health centers and trying to understand and treat the reasons for returning to smoking.

#### **ETHICAL APPROVAL (WHERE EVER APPLICABLE)**

The local ethical committee granted approval for the research

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