

## Assessment of Health Related Quality of Life among Patients Smoking attitudes attending Primary Health Care Centers in Makkah, Saudi Arabia (2019)

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### **Abstract**

#### **Background**

*Smoking is now well established as a recognized cause of cancer, lung disease, coronary heart disease, and stroke; it is considered the single most important avoidable cause of premature morbidity and mortality in the world. Additionally, epidemiological studies have reported positive associations between smoking and psychiatric disorders. Several studies have found high rates of smoking among selected populations of persons with mental illness, whereas general population surveys have demonstrated a significant association between current smoking and psychiatric symptoms.*

*The World Health Organization has reported that more than 4 million annual deaths are attributed to tobacco consumption; this is projected to be 10 million annually in 2030. Conversely, smoking cessation reduces health risks and improves quality of life. In particular, the cumulative risk of dying of cancer, cardiovascular and lung diseases can be drastically reduced if smokers quit, even at an advanced age. Objective: To assess the health-related quality of life (HRQL) among Patients Smoking attitudes attending smoking clinics Primary Health Care Centers in Makkah. Aim of the study: The study aimed at assessing the health related quality of life among Patients smoking attitudes attending smoking clinics Primary Health Care Centers in Makkah. Method: A cross-sectional descriptive study conducted from January, 2019 to December, 2019 in four Primary Healthcare Centers (PHC) in*

*Makkah, the Sample size of Patients Smoking Attitudes attending PHC. Our total participants were (80). Results: the specific medical diseases significantly associated with smoking were Musculoskeletal disorders and Central nervous system diseases were ( $P < 0.001$  and  $=0.033$ ) and  $X^2$  25.481 and 3.554 with the Negative in age (25-35) of the patients was (66.67% and 11.11%) while in Positive age patients was (33.33% and 83.33%) while all another medical diseases no significantly associated with smoking. Conclusion. the health related quality of life among Patients smoking attitudes attending Primary Health Care Centers in Makkah smokers with smoking history show significant impairment in the physical and mental domains of HRQL in comparison to never-smokers. Postgraduate studies, workshops and training are indeed necessary to help PHCPs' to understand the significance of the role they play in implementing SCC for patients, individuals, family and the community effectively.*

**Keywords:** *Assessment, Health Related Quality of Life, Patients, Smoking, PHC, Makkah*

### **1.Introduction:**

Smoking is a major preventable cause of morbidity and mortality. It is associated with a wide range of diseases: pulmonary, gastrointestinal and cardiovascular diseases and different kinds of cancers [1–2]. This creates a considerable economic burden for any nation .

Some studies have shown that smoking may lead to impairment of health-related quality of life (HRQL). Significant differences in mean scores, as measured by the 36-item short form (SF-36), have been observed between never-smokers, smokers, and ex-smokers in population surveys. [1–3]

Similar results were obtained employing the St. Georges Respiratory Questionnaire in a group of subjects older than 55 years. The results of general population surveys and studies including old people can be potentially influenced by unrecognized smoking-related disorders and other comorbidities. So far, no investigation has been done specifically aimed at investigating HRQL in young subjects with a short smoking history.[4]

The World Health Organization has reported that more than 4 million annual deaths are attributed to tobacco consumption; this is projected to be 10 million annually in 2030, most of the victims being from developing countries. While the prevalence of smoking in developed countries has been declining by 1% annually, the trend in developing countries is rising by 2% [5,6].

There is no doubt that medical advice helps smokers quit [7], yet often this opportunity is missed [8–9]. The frequent observation of general practitioners (GPs) not adhering to guidelines for brief counseling might at least partially be due to inadequate training in undergraduate education. Indeed, substantial deficiencies in medical education on smoking-related issues have been described [10–11]. This is not surprising since little attention is being paid to nicotine dependence in medical school curricula; a worldwide survey recently revealed that only one in four medical schools taught a specific module on nicotine dependence [12]

In Saudi Arabia, the prevalence of smoking in the population was found to be 12.1%, with obvious gender discrepancy between males (23.7%) and females (1.5%).[13] Overall, the prevalence of smoking has significantly increased in the past decade making the country one of the highest ten importers of cigarettes in the world.[14] Initiation of smoking occurs mainly during adolescence, and is significantly associated with male gender, stress and family members or friends who smoke.[15]

According to the Ministry of Health, Saudi smokers spend 690 million Saudi Riyals (SR) each year on cigarettes, with an average consumption of 15 billion cigarettes annually[10] In addition, the health and economic burden as a result of smoking costs the kingdom up to 5 billion SR annually.[16]

Knowledge of the impact of smoking cessation on health-related quality of life (HRQoL) can be important in encouraging smokers to quit. A successful smoking-cessation attempt involves addressing the physical, psychological and emotional addiction to nicotine. Several studies have examined HRQoL among current smokers, former smokers and nonsmokers,[ 17] showing that HRQoL is better among nonsmokers and former smokers than among current smokers. However, most such studies have defined smoking abstinence based on patient self-reports. To date, there is scarce information regarding potential changes in HRQoL that can be provided to smokers who are trying to quit. [18]

### **Literature Review**

Despite the fact that Saudi Arabia does not grow tobacco or manufacture cigarettes, it is amongst the top ten countries that consume cigarettes and shisha the most, a feature that increases the economic and health burdens on the country.[19]

According to the Osservatorio Fumo, Alcol e Droga, about 11 million adults in Italy are still current smokers, 20.7% of the entire adult population [20]. Smoking is the largest avoidable health risk in Europe, causing more problems than alcohol, drugs, high blood pressure, excess weight, or high cholesterol every year, 695,000 Europeans die prematurely of tobacco-related diseases and it is estimated that, within the EU, smoking causes annual costs of at least €100 billion. Conversely, smoking cessation reduces health risks and improves quality of life. In particular, the cumulative risk of dying of cancer, cardiovascular and lung diseases can be drastically reduced if smokers quit, even at an advanced age [21,22].

In Saudi Arabia, the prevalence of smoking in the population was found to be 12.1%, with obvious gender discrepancy between males (23.7%) and females (1.5%).[23] Overall, the prevalence of smoking has significantly increased in the past decade making the country one of the highest ten importers of cigarettes in the world.[24] Initiation of smoking occurs mainly during adolescence, and is significantly associated with male gender, stress and family members or friends who smoke.[25]

Smoking as entertainment was reported in some studies where youths combined smoking with other entertainment [21]

A study published by the United States Public Health Service showed that physician advice to stop smoking increases abstinence.(19) The nicotine patch-bupropion combination has been approved by the U.S. Food and Drug Administration for smoking cessation.(20)

Bader et al reported the it is assumed that a better educated mother and/or father could deal, in most cases, more effectively and rationally with the behavior of their children.[18]

The undergraduate medical curriculum did not have enough educational content on tobacco. Therefore, the Internet and books were most common source of information on counseling for smoking cessation.[26]

Another study found it is expected that peer pressure will play an important role on the smoking behavior'. Coupled with the effect of a family member at home who smoked would produce a negative combination that might increase the tendency to smoke.[24]

PHCPs are said to be in the first line of eradicating the habit of smoking.[26,27]However, it has been reported in studies in Germany and Saudi Arabia that about 24.0% to 31.7% of the representative population of physicians of both genders were smokers.[26]

## **2 Rationale:**

Smoking is considered a significant health problem among youth and people around the world, particularly in developing countries. The World Health Organization (WHO) has described tobacco smoking as an epidemic. The global smoking epidemic is expected to remain as one of the greatest causes of premature death, disease, and suffering for decades to come. The WHO has estimated that the number of deaths each year from smoking-attributable disease will increase to 10 million within the next 30 years or so, of which 70% will occur in developing countries.

### **2.1 Aim of the study:**

Aim of the study: The study aimed at assessing the health related quality of life among Patients smoking attitudes attending smoking clinics Primary Health Care Centers in Makkah. 2019

### **2.2 Objectives:**

To assessment the health-related quality of life (HRQL) among Patients Smoking attitudes attending smoking clinics Primary Health Care Centers in Makkah

## **3. Methodology:**

### **3.1 Study design:**

This study is descriptive type of cross-sectional study was conducted among 80 Patients Smoking applying a convenience sampling technique .

### **3.2. Study Area**

The study has been carried out in the city of Makkah Al-Mokarramah Makkah is the holiest spot on Earth. It is the birthplace of the Prophet Mohammad and the principal place of the pilgrims to perform Umrah and Hajj. It is located in the western area in Kingdom of Saudi Arabia and called the Holy Capital. Contains a population around 1.578 million. This study has been conducted in Makkah on governmental primary health-care centers (PHCCs) in from Januarye , 2019 to December , 2019 in four Primary Healthcare Centers (PHC) the Sample size of Patients Smoking Attitudes attending PHC, and it reflects a diversified demographic profile with a considerable portion of the population comes from rural descent, while others come from an urban one. This difference translates into biological, socioeconomic and lifestyle differences in the Makkah population. Our total participants were (80)

### **3.3 Study Population**

The study has been conducted among Patients Smoking Attitudes attending PHC at Makkah Mokarramah. Januarye , 2019 to December , 2019 in four Primary Healthcare Centers (PHC)

#### **3.4.1 Selection criteria:**

##### **3.4.1 Inclusion criteria**

1. patients 25 years of age or older
2. taking the written consent from the physician to participate.
3. All nationalities
4. male and female

##### **3.4.2 Exclusion criteria:**

Patients who were not available on the duration of the study .

##### **3.5 Sample size**

Patients Smoking and attending in the PHC, The sample size has been calculated by applying Raosoft sample size calculator based on (The margin of error: 5%, Confidence level: 95%, and the response distribution was considered to be 20%) accordingly the Sample size is (80) Smoking patients (male and female) after official communication PHC .in the Makkah and adding 10 more to decrease margin of error. After adding 5% oversampling, the minimum calculated sample has been 80. Computer generated simple random sampling technique was used to select the study participants.

### **3.6 Sampling technique:**

Systematic random sampling technique is adopted. After that, by using random number generator, then simple random sampling technique has been applied to select the PHC. Also, convenience sampling technique has been utilized to select the participants in the study. By using systematic sampling random the required sample size; (80 ).

### **3.7 Data collection tool**

The self-administered questionnaire is designed based on previous studies and frameworks to assess assessment of Health Related Quality of Life among Patients Smoking attending Primary Health Care Centers in Makkah . The questionnaire has been developed in English. The questions were first pre-tested and were revised and finalized after it has been pilot tested. Before completing the survey, participants were required to indicate their consent using a forced response question followed by the survey questionnaires. The survey is estimated to take 10 min to complete .

To collect the information, a set of questions were constructed and developed. All questions were closed-ended, with tick boxes provided for responses; participants answered the questionnaires from January , 2019 to December , 2019.

The questionnaire consisted of questions that

First part General and Socio demographic information. These variables included contact data (email or mobile phone number), (age, gender, marital status ). Other variables were education level, economic level.

A questionnaire has been developed that had Socio demographic data and questions related to reasons why smokers frequency smoking clinics cessation therapy respectively. The two senior faculty members checked the questionnaire's validity and comprehension, and it was revised according to their suggestions. A pilot study has been conducted on 20 patients smoking to check the questionnaire's understanding and responses further, and its Cronbach's alpha was 0.75. The results of the pilot study were not included in the final analysis.

The reasons of smokers frequency smoking clinics cessation therapy has been categorized into "Yes" and "No" as per each topic/question, and also as per each response/answer. Data entry and analysis were carried out using the Statistical Package for the Social Sciences. Pearson's Chi-square tests were performed to explore if there is any significant association between the reasons why smokers frequency smoking clinics cessation therapy and their (i) age.

### **3.8 Study Variables**

Variables of the study

#### **Dependent variable.**

- Reasons why smokers frequency smoking clinics cessation therapy.

Independent variables.

- Age, gender, other variables were education level.

### 3.9 Data entry and analysis:

The Statistical Package for Social Sciences (SPSS) software version 24.0 has been used for data entry and analysis. Descriptive statistics (e.g., number, percentage) and analytic statistics using Chi-Square tests ( $\chi^2$ ) to test for the association and the difference between two categorical variables were applied. A p-value  $\leq 0.05$  will be considered statistically significant.

### 4. Pilot study

A pilot study has been conducted in patients smoking in the same sector due to the similarity to the target group using the same questionnaire to test the methodology of the study. As a feedback, the questionnaire has been clear and no defect has been detected in the methodology

### 5. Ethical considerations

Permission from the Makkah joint program has been obtained. Permission from the Directorate of health, verbal consents from all participants in the questionnaire were obtained. All information was kept confidential, and results will be submitted to the department as feedback.

### 6. Budget: Self-funded

## Results

**Table 1:** Distribution of demographic characteristics of the participants data (age, gender, marital status, Occupation, Level of education) in our study (n=80)

	N	%
<b>Age (in years)</b>		
25–35	18	22.5
36–45	36	45.0
46–55	26	32.5
<b>Gender</b>		

Male	57	71.3
Female	23	28.8
<b>Marital status</b>		
Single	12	15.0
Married	47	58.8
Divorced	21	26.3
<b>Occupation</b>		
Employed	22	27.5
Unemployed	58	72.5
<b>Education</b>		
Illiterate	18	22.5
Literate	62	77.5

Table 1 shows that most of the participants (45.0%) were in the age group 36-45 years follow by the (32.5%) were in the age 46-55 years , more than three-quarters were males (71.3%) while female(28.8%) . Regarding the marital status the majority of participant married were(58.8%). While occupation most of participants unemployed (72.5), also regarding level of education the majority of participant are Literate level were(77.5%)

Figure (1) Distribution of demographic characteristics of the participants data(age, gender,marital status, Occupation, Level of education) in our study

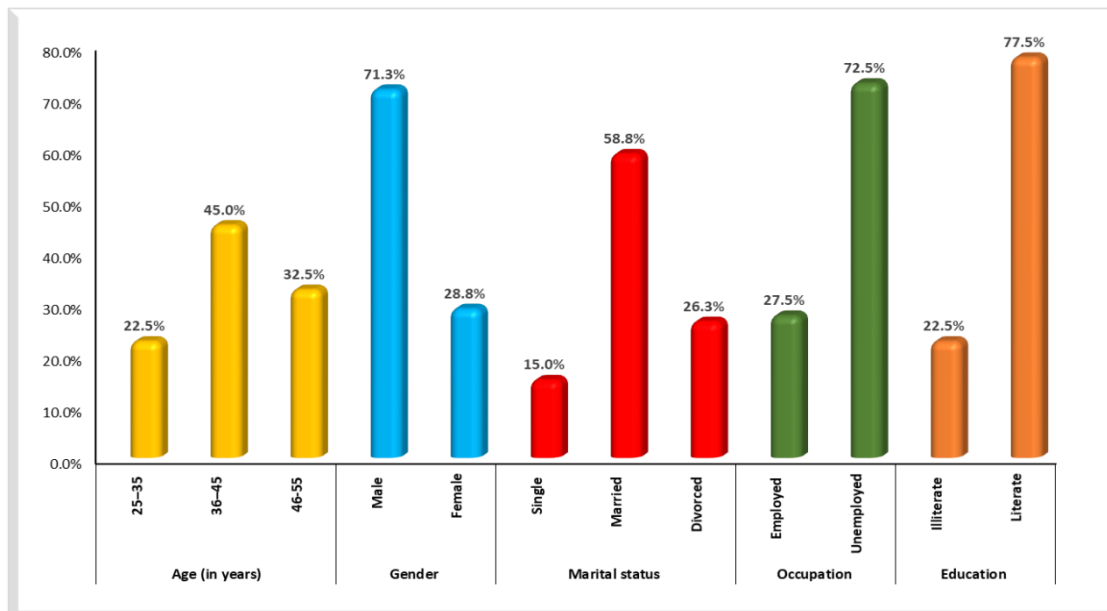


Table 2: Distribution of the Reasons why smokers frequency smoking clinics cessation therapy

	Yes		No		Chi-square	
	N	%	N	%	X <sup>2</sup>	P-value
Did you have very bad Physical functioning	36	45.0	44	55	0.800	0.371

Smoking is harmful to health	70	88.0	10	12.5	45.000	0.000
Did you have bodily pain	60	75.0	20	25	20.000	0.000
Did you have bad general health(Hypertensive, DM)	73	91.0	7	8.75	54.450	0.000
Patient's chances of quitting smoking are increased if physicians advise him or her to quit	44	55.0	36	45	0.800	0.371
Did you have difficulty concentrating	59	74.0	21	26.25	18.050	0.000
Did have difficulty thinking and solving problems?	30	38.0	50	62.5	5.000	0.025
Did you feel restless, unsettled, or jittery?	35	44.0	45	56.25	1.250	0.264
How much of a problem was each of the following during smokers in						
a. Lack of interest in sex.	15	19.0	65	81.25	31.250	0.000
b. Lack of sexual energy.	23	29.0	57	71.25	14.450	0.000
c. Unable to relax and enjoy sex.	14	18.0	66	82.5	33.800	0.000
Did you have loss the vitality	62	77.0	18	22.5	24.200	0.000
Did you have bad mental health	46	58.0	34	42.5	1.800	0.180

Table (2) show that is a significant relation between the reasons why smokers to the smoking clinics cessation therapy were increase (Yes) in Smoking is harmful to health, Did you have bodily pain, Did you have bad general health(Hypertensive, DM) , Did you have difficulty concentrating and Did you have loss the vitality) where respectively (88.0%,750%,91.0% ,74.0% and 77.0% ) and  $X^2$  (45.00%, 20,00,54.450, 18.050 and 24.200 )and P-value= $<0.000$ .

Regarding show that is a significant relation between the reasons why smokers frequency smoking clinics cessation therapy and how much of a problem was each of the following during smokers were increase (No) Lack of interest in sex, . Lack of sexual energy and Unable to relax and enjoy sex where respectively (81.25%,72.25% and 82.2% ) and  $X^2$  (31.250%, 14,450,33.800)and P-value= $<0.000$

**Table 3**DistributionThe relationship between smoking and health-related quality of life (HRQOL) before visit the smoking clinics cessation and after visitthe smoking clinics cessation

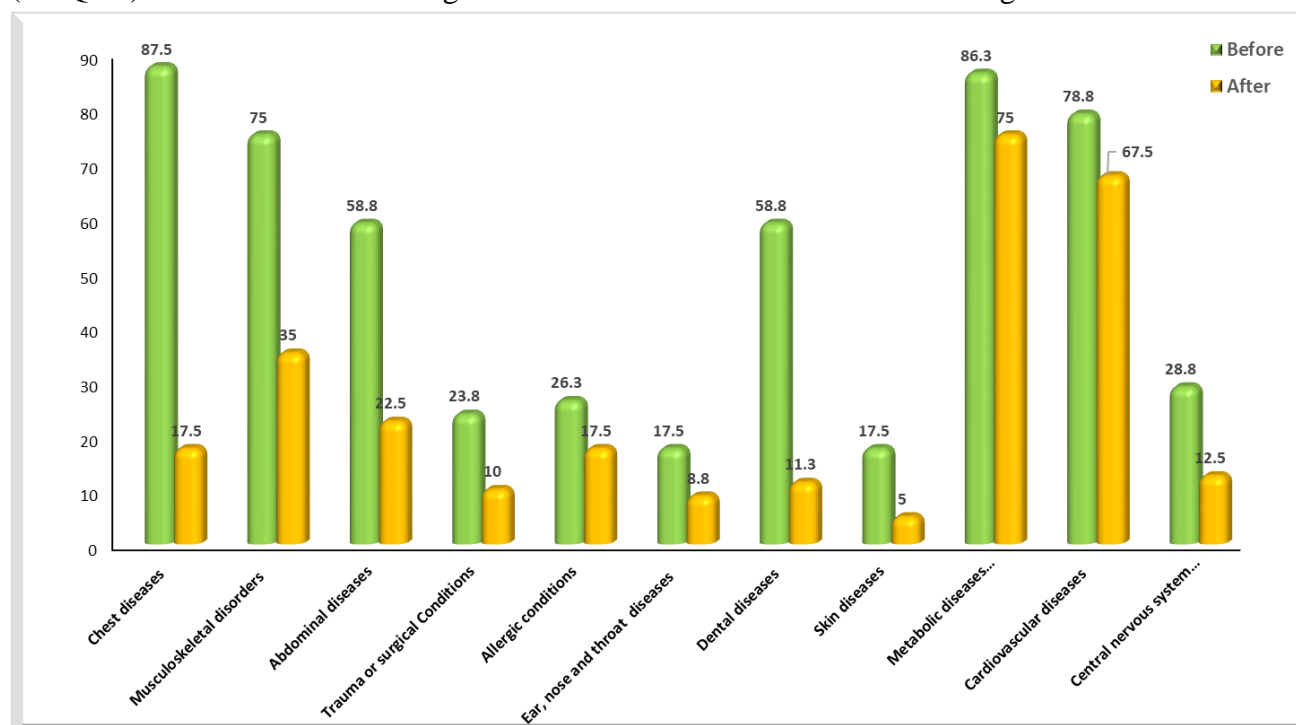
	Before		After		Chi-square	
	N	%	N	%	$X^2$	P-value
Chest diseases	70	87.5	14	17.5	78.596	0.000
Musculoskeletal disorders	60	75.0	28	35.0	25.859	0.000



Abdominal diseases	47	58.8	18	22.5	21.791	0.000
Trauma or surgical Conditions	19	23.8	8	10.0	5.391	0.020
Allergic conditions	21	26.3	14	17.5	1.792	0.181
Ear, nose and throat diseases	14	17.5	7	8.8	2.686	0.101
Dental diseases	47	58.8	9	11.3	39.670	0.000
Skin diseases	14	17.5	4	5.0	6.260	0.012
Metabolic diseases	69	86.3	60	75.0	3.241	0.072
Cardiovascular diseases	63	78.8	54	67.5	2.576	0.108
Central nervous system diseases	23	28.8	10	12.5	6.452	0.011

Table 3 shows the relationship between smoking and health-related quality of life (HRQOL) before visit the smoking clinics cessation and after visit that the specific medical diseases significantly associated with before smoking were chest diseases, Abdominal diseases, Skin diseases and Central nervous system diseases where respectively (87.5%, 75.0%, 58.8.0%, 17.5% and 28.8%) and  $X^2$  (78.596%, 25,859, 21.791, 6.260 and 6.452) and P value = <0.000, 0.012, 0.101

**Figure (2)** Distribution The relationship between smoking and health-related quality of life (HRQOL) before visit the smoking clinics cessation and after visit the smoking clinics cessation



**Table 4** Distribution of medical diseases by smoking status the relationship between smoking and health-related quality of life (HRQOL)

		25–35		36–45		46–55		Chi-square	
		N	%	N	%	N	%	X <sup>2</sup>	P-value
Chest diseases	Positive	15	83.33	30	83.33	25	96.15	2.637	0.267
	Negative	3	16.67	6	16.67	1	3.85		
Musculoskeletal disorders	Positive	6	33.33	28	77.78	26	100.00	25.481	<0.001*
	Negative	12	66.67	8	22.22	0	0.00		
Abdominal diseases	Positive	13	72.22	20	55.56	14	53.85	1.758	0.415
	Negative	5	27.78	16	44.44	12	46.15		
Trauma or surgical Conditions	Positive	5	27.78	7	19.44	7	26.92	0.674	0.714
	Negative	13	72.22	29	80.56	19	73.08		
Allergic conditions	Positive	6	33.33	10	27.78	5	19.23	1.172	0.557
	Negative	12	66.67	26	72.22	21	80.77		
Ear, nose and throat diseases	Positive	3	16.67	5	13.89	6	23.08	0.894	0.640
	Negative	15	83.33	31	86.11	20	76.92		
Dental diseases	Positive	11	61.11	22	61.11	14	53.85	0.382	0.826
	Negative	7	38.89	14	38.89	12	46.15		
Skin diseases	Positive	4	22.22	8	22.22	2	7.69	2.566	0.277
	Negative	14	77.78	28	77.78	24	92.31		
Metabolic diseases Cardiovascular diseases	Positive	13	72.22	32	88.89	24	92.31	4.003	0.135
	Negative	5	27.78	4	11.11	2	7.69		
Cardiovascular diseases	Positive	15	83.33	25	69.44	23	88.46	3.554	0.169
	Negative	3	16.67	11	30.56	3	11.54		
Central nervous system diseases	Positive	2	11.11	9	25.00	12	46.15	6.826	0.033*
	Negative	16	88.89	27	75.00	14	53.85		

Table 4 shows that the specific medical diseases significantly associated with smoking were Musculoskeletal disorders and Central nervous system diseases were ( $P < 0.001$  and  $=0.033$ ) and  $X^2$  25.481 and 3.554 with the Negative in age (25-35) of the patients was (66.67% and 11.11%) while in Positive age patients was (33.33% and 83.33%) while all other medical diseases no significantly associated with smoking.

### Discussion

The major finding of this study is that this particular type of smoking cessation program improves the HRQoL of the enrollees. This is consistent with the findings of other authors [28] who found that smokers report poorer health status in general than never and former smokers. In one study,[9] it was demonstrated that cigarette smokers who receive a clinical smoking cessation intervention and who are continuously abstinent from smoking for the subsequent year self-report more improvement in the SF-36 mental component summary at the end of that year than do those who continue to smoke. Similar results have been reported for COPD patients who stop smoking.[29] One limitation shared by many of the studies cited is that the definition of smoking abstinence relied on self-reports, and only patients who responded to the follow-up survey were included.[30,31] Similarly our the results of the study (see table 1)

Abdalla et al.(15) reported the prevalence of smoking in of teenagers in secondary schools in Jeddah was higher (37.1%) than the rate found in some previous Saudi studies.[32]

Similarly for Al Ghobain et al.,[33] the prevalence was 31.2% in male students in Riyadh aged 16-18 years, and the significant factors related to smoking were friends and parents who smoked. One possible reason for this difference is that our study included all those who answered “yes” to the question (are you a smoker?) even on an irregular basis, as long as the person did not answer that he had quit. In our opinion, a considerable number of young people at that age experimented with smoking on an irregular basis. Nevertheless, this has to be noted for preventive purposes, for it is known that children who start smoking at that age continue to smoke, and a proportion form a habit which they have difficulty breaking later in life.[34]

In our study show that is a significant relation between the reasons why smokers to the smoking clinics cessation therapy were increase (Yes) in Smoking is harmful to health, Did you have bodily pain, Did you have bad general health(Hypertensive, DM) , Did you have difficulty concentrating and Did you have loss the vitality) where respectively (88.0%,750%,91.0% ,74.0% and 77.0% ) and X<sup>2</sup> (45.00%, 20,00,54.450, 18.050 and 24.200 )and P-value=<0.000.

Regarding show that is a significant relation between the reasons why smokers frequency smoking clinics cessation therapy and how much of a problem was each of the following during smokers were increase (No) Lack of interest in sex, . Lack of sexual energy and Unable to relax and enjoy sex where respectively (81.25%,72.25% and 82.2% ) and X<sup>2</sup> (31.250%, 14,450,33.800)and P-value=<0.000(see tabel 2,3(

Shuter et al (2019) supports our study many smokers may lack motivation to stop smoking because they may think they are not at risk of diseases related to tobacco after surviving smoking for many years, while others may believe that any damage that may have accumulated is irreversible.[35] This study indicated that only 23% of ever smokers had undertaken serious trials to quit smoking. In addition, the reasons for returning to smoking among current smokers were mainly having smoking friends, living or working with smokers, stress, depression, and anxiety. also similar results were obtained in a study conducted in Ecuador about the prevalence of and attitudes toward smoking among patients smoking .[36]

This research provides substantial evidence that quitting smoking benefits subjective well-being relative to continuing smoking. As other researchers have reported (e.g., [14]), our stud shows that the specific medical diseases significantly associated with smoking were Musculoskeletal disorders and Central nervous system diseases were (P < 0.001 and=0.033 ) and X<sup>2</sup> 25.481and 3.554 with the Negative in age (25-35) of the patients was (66.67% and 11.11% ) while in Positive age patients was (33.33% and 83.33%) while all anther medical diseases no significantly associated with smoking .(see table 4) similar another study reported because of the many physically harmful effects of smoking it makes sense that quitting would enhance HR-QOL. The present study shows that cessation also benefits global or total QOL in addition to HR-QOL. While global QOL decreased significantly over the follow-up for both quitters and continuing smokers, consistent with previous research that quitting mitigates this effect.[14]

### **Conclusion :**

For the suppression of the use of tobacco in Saudi Arabia differential intervention strategies and policies in males and females are needed, such as reducing access to cigarettes – in addition to intensive school and community ant tobacco programs, despite some limitations of our study, we concluded that cigarette smoking is a common problem among PHC clients. Clients were characterized by certain sociodemographics, co-morbid diseases and patterns of smoking that were somewhat similar to national and international research, and nurses should offer condensed

training courses on smoking prevention and treatment. Finally, in addition to identifying the underlying risk factors in communitybased studies, future intervention research should explore the role of psychosocial and drug therapies in the management of tobacco addiction.

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