Smoking Habit Profile and Health Related Quality of Life among Smokers Students in Suez Canal University

Eman Abd Elmonem Saleh Abd elKawi[1]Asst.Prof. Heba Al-Kotb Mohamed [2], Asst.Prof. Hanaa Kassem Farg [3],

(1)Specialized nurse at Alkaren Specialized Hospital
(2)Assistant Professor of Family and Community Health Nursing, Faculty of Nursing, Suez Canal University
(3)Assistant Professor of Family and Community Health Nursing, Faculty of Nursing, Suez Canal University

Abstract

Background: Smoking persists as a global health problem being one of the major risk factors to non-communicable diseases and early death particularly among youth. **Aim**: The study aimed to assess University student's smoking habit profile and health related quality of life. **Design:** Descriptive study was used at this study. **Setting:** The study was conducted at all faculties in Suez Canal University in Ismailia city. **Sample:** Convenient sample of 190 students at first grade from all faculties at Suez Canal university **Tools:** Two tools were used for data collection through self-administrated questionnaire: First tool: was compromise of three parts; Part 1- Socio demographic data, Part II: Smoker's profile questionnaire: Part III: Nicotine dependence questionnaire. The second tool: Modified Heath Related Quality of Life Short Form-36. **Results:** the mean age of the studied students was 19.07 years old with a range of 17-22 years. The majority studied students were males. Also, it was found that more than half of them smoked both cigarettes and shisha. Nearly half 44.4%, 44.3% of the students were moderate and heavy smokers respectively .The general health perception got the highest mean score followed by role physical limitation, physical functioning, mental health and role emotional limitation. There was statistically significant difference between heavy nicotine dependence & light nicotine dependence in all dimensions of quality of life. **Conclusion**: The findings of the present study revealed that there was a highly statistical significant relation between smoking methods& nicotine dependence and health related quality of life among the studied students. **Recommendations:** Developing educational programs to raise awareness of males and families about smoking problem in universities.

Key words: *Health related Quality of life, Smoking ,University students.*

1.Introduction

Smoking is an important health and economic problem. Every year, tobacco related diseases claim the lives of nearly six million people globally and the costs to society of smoking are enormous ***(Reitsma et al., 2017).*** Evidence suggests that nearly 9 out of 10 current smokers-initiated smoking before adulthood, and 98% of smokers first experience tobacco smoking until 26 years of age ***(Milic et al.,2020).***

Despite significant progress, smoking among university students remains a serious public health problem leading single greatest cause of preventable morbidity and mortality. An important aspect of smoking is its association with health-related quality of life (HRQoL). Smoking not only kills, it affects

individuals 'quality of life too***(Wang et al., 2019***).

University education stage can be a stressful and vulnerable period of development, marked by a tendency to experience poor mental health, which may increase the propensity to adopt risky behaviors such as increasing tobacco use ***(Kabbash & Saied, 2020).***

Community health nursing have main roles towards main public health issues especially smoking during youth stage through counseling and health education sessions ***(Backhaus et al., 2020)***.

1.2.Significance of the study:

More than 100 million persons in youth stage around the world smoke daily ***(WHO, 2018).*** Nearly 3.5% of the Egyptian population is Shisha smokers. In 2020, a study among adolescent students in Kafer El Sheikh reported 10.4% daily water pipe use ***(Kabbash & Saied, 2020)***.

University life is a critical transition stage through which young adults set out to discover tobacco use. In addition, university students are at risk population regarding smoking habits and its effects on health-related quality of life ***(Fouad et al., 2020).***

The aim of the study: The current study aims to determine smoking habit profile and health related quality of life among students in Suez Canal University.

Research Objectives:

1. Assess smoking habit profile among smoker's students in Suez Canal University.

2. Assess health related quality of life among smoker's students in Suez Canal University.

Research Questions

1. What is the smoking habit profile among smoker's students in Suez Canal University؟
2. What is the health-related quality of life among smoker's students in Suez Canal University؟
3. Is there association between smoking habit among smoker's students and their health-related quality of life?

Subjects and Method

2.1. Study design: Descriptive cross-sectional design was used in this study.

2.2. The sample of the study: A total sample composed of 190 students at first year was recruited as sample size determined by using the following equation:

Sample size calculated according to the following formula

$$n = \left[\frac{Z_{\alpha/2}}{E}\right]^2 * P(1-P)$$

(Dawson and Trapp, 2004)

2.3. Study setting: The study was conducted at all faculties in Suez Canal university in Ismailia city. It have sixteen faculties divided into practical faculties (Physical Education, Agriculture, Faculty of Computing and Information, Engineering ,and Science) Medical faculties (Medicine, Nursing, technical institute for nursing, dentistry, Veterinary Medicine, and Pharmacy) and theoretical faculties (Commerce, Alsun, Education, College of Tourism and Hotels, and Arts). The Total number of students rolled in university was 9436 in academic year 2017/2018 (Center for Student Affairs at Suez Canal University).

2.4. Tool of data collection:

2.4.1.Tool (1): First tool: self-administrated questionnaire:

It was developed by the researcher in Arabic language after reviewing the literature and experts' opinion; it comprised three parts;

Part 1: **Socio demographic data**:

Smoker's students' socio-demographic characteristics composed of 11 questions . It including age, gender, marital status, residence, parents educational level and family income.

Part II: Smoker's profile questionnaire:

It was adopted from **(Fagerström, 2011, Ali, 2015)** composed of 11 questions to assess smoking history, reasons for smoking, type of smoking, daily number of smoking and previous quitting trials and health conditions related to smoking.

Part III: Nicotine dependence questionnaire based on "Heaviness of Smoking Index" **(Heatherton et al., 1989)** to assess smokers' students nicotine dependence degree.

2.4.2. Scoring system:

The smoker was given: a score of 0 if he smoked more than 60 minutes after waking up, a score of 1 if within 31-60 minutes, a score of 2 if within 6-30 minutes and a score of 3 if within 5 minutes. The second

question was about the "average number of cigarettes smoked per day"; the smoker was given: a score of 0 if he smoked less than 10 cigarettes per day, a score of 1 if 10-20 cigarettes per day, a score of 2 if 21-30 cigarettes per day and a score of 3 if more than 30 cigarettes per day.

2.4.3. Tool (2): Modified Heath Related Quality of Life Short Form-36 (HRQOL SF-36):

It was adopted from SF-36 Physical and Mental Health Summary Scales: A Manual for Users of Version 1, Second Edition. Lincoln, RI: Quality Metric Incorporated **(Ware et al., 1994).** It was composed of 8 domains.

2.4.4.Reliability of the Tool:

The reliability of tools was assessed through measuring their internal consistency by Cronbach Alpha coefficient test.

Tools	Number of items	Cronbach Alpha
Smoking profile	**10**	.887
Nicotine dependence	**2**	**.876**
HRQOL	**8**	**.920**

2.5. Field work:

Data were collected within a six-month period started in May 2018 and ended in October 2018.The researcher was attaining to each faculty of Suez Canal University for three days per week to collect data and selected the subject according to the previous criteria. The researcher met the students between lectures in the stadium from 9 AM to 3 PM. The researcher interviewed group of students for about 15 to 20 min and utilized interviewing questionnaire schedule starting by introducing herself to each student and then explaining the aim of the study to obtain student consent to participate in the study. Distributed self-administered questionnaire for smokers' students to fill it and the researcher was available to clarify any question. The researcher asked the smokers students after filled questionnaire to participate in the study. Then, communicated with them through mobile (WhatsApp media) for any question .

2.6. Administrative design:

An official permission was obtained using proper channels of communication before embarking on the study, and after the purpose of the study was explained to the responsible authorities to gain their cooperation.

2.7. Ethical considerations:

Ethical considerations:

The researcher approval was obtained from Scientific Research Ethical Committee, Faculty of Nursing, and Suez Canal University before starting the study. The aim of the study was explained to each student before applying the tools to gain confidence and trust. An oral consent was obtained from each student prior to participate in the study. Data was confidential and coding system was used for it. Each student has right to withdraw from the study at any phase. There was no harm to the students. Total of data collection did not touch students' dignity or traditional and culture issues.

2.10. Statistical design

The collected data were tabulated and analyzed using spss version 16 software. Categorical data were presented as number and percentages while quantitative data were expressed as mean and standard deviation. Chi square test (x2), fisher's exact test and analysis of variance (f) test were used as tests of significance, significant ANOVA. The accepted level of significance in this work was stated at 0.05 ($p < 0.05$ was considered significant.

1. Results

Table (1): shows that the mean age of the studied students was 19.07±.81 years old with a range of 17-22 years , 96.3% were males and 72% of them studied in theoretical faculties. Furthermore, more than half of those students (52.7%) stay away from their family during the study period and 96.3% of students were single. As regard to their family income more than one third of them (41.7%) had adequate income.

Table (2) shows that the majority of the students (89.5%) were smokers after the age of twelve years. Also, it was found 55.4% of them smoked both cigarettes and shisha and also 33.8% of the students smoked more than 30 cigarette per day. Regarding the time of the 1st cigarette after walking up this table shows that 74.4% of them take more than one hour to smoke. Furthermore, 53.7% of them smoked in all places (home, faculty and general places) and 88.9% of studied students got a pocket money from their family.

Table (3) Reveals distribution of the studied students according to their motives leading to increase smoking practice which it illustrates that the motives of enjoy and relax got the highest percentage (62.6%) followed by pressure deal and dealing with friends

59.5% and 49.5% respectively were a motives for increasing smoking practice.

Table (4) shows that the minority of the studied sample (89.4%) didn't try to quit smoking compared to only 10.6 % of them tried to quit smoking. Also, the main reasons for didn't quit smoking were being interested in smoking, like smoking with friends and pressure with percentage 71.8%, 63.5%and 52.9% respectively.

Table (5) The mean scores of SF-36 questionnaire in table 6 indicates that the studied students have higher HRQoL values in general health perception, role physical limitation and physical functioning. Table also described that the studied students have low value in social functioning, energy and bodily pain

2. Discussion

University students are at high risk of smoking as there are more availability of cigarettes, and intimate association with smoking peers. Also, they face social, emotional and educational challenges when they enter the university **Amin et al., (2016)**.

Regarding the personnel characteristics of the studied students, the present study results showed that, the age of the students was in a range from seventeen to twenty two years old. This finding was inconsistent with the finding of the study conducted at Kafr El-Sheikh University by **Amin et al., (2016)** to estimate the prevalence of smoking among university students, showed that the age of students was in a range from eighteen to twenty one years old. This variation may be attributed to the difference of the study sample criteria from the point view of the researcher .

The present study findings revealed that the majority of the studied students were male. This was supported by the study done by **Eid et al., (2015)** to estimate the prevalence of smoking among university students, reported that the frequency of smoking habits was higher among male than female students, with a statistically significant difference. Additionally, the study conducted at Helwan University by **Eid et al., (2015)** to assess smoking problem among Helwan University students: practical versus theoretical faculty which found that the prevalence of current smokers among male students was significantly higher than that among female students. This may be attributed to the fact that the social acceptability of smoking habits among men in the society. This could be due to cultural factors in many societies,

such that smoking may be viewed as an acceptable male social behavior, while being considered a cultural taboo for females .

The current study revealed that the majority of the students got a pocket money from their family for smoking this finding agreed with **Bobo et al (2018)** who conduct a study in western Ethiopia to determine the prevalence of susceptibility to cigarette smoking and associated factors among high school students and found that having pocket money lead to a higher risk of susceptibility to smoking .

Regarding to parents education of studied students the current findings showed that nearly three quarter of fathers and nearly one half of mothers had secondary school education. This finding was agreed with the finding of ***Mohd Radzi et al., (2021)*** who compared Nicotine Dependence among Adolescents Single and Dual Cigarette Users in Malaysia who stated that nearly two thirds of fathers and nearly three quarter of mothers had secondary school education.

Meanwhile, ***Sabra et al ., (2018)*** who studied Smoking Habits Among Assiut University Students: prevalence and Associated Risk Factors found that one half of student fathers had university or higher education and nearly one third of their mothers had university or higher education.

This study revealed that significantly higher percent of smoking among theoretical faculties' students than practical faculties' students this finding is consistent with **Amin et al., (2016)**. From the point view of the researcher, Theoretical faculties Students may be less aware of smoking dangers or risks, have more time which expose them more to peers' pressure and may be dissatisfied with their study, these factors might be led them.

The present study showed that the percentage of smoking was significantly higher among students living away from their families compared to those living with their families. This result agreed with **Ali (2015)** study that was conducted at Benha University to determine the prevalence of tobacco smoking among Benha University students, found In the current smoker, smoking was significantly associated with the place of living. Students living away from their families were smokers at higher percent.

This may be attributed to low levels of parental supervision and strictness;

inadequate parental monitoring; and lack of parental affection, concern, and involvement.

In contrast, the results of the present study were disagreed with the results obtained by **Ulus et al., (2012)** who conducted a study of students in İstanbul University School of Physical Education and Sports. They declared that the prevalence of smoking was significantly associated with the place of residence with smokers were more likely to be living with family.

Regarding the smoking status of the studied students, the present study demonstrated that more than half of the studied students smoked both cigarettes and shisha, and more than one third of them smoked shisha only. This finding agreed with **Muzammil et al (2019**) who conducted his study in Ar Rass, Qassim university, Kingdom of Saudi Arabia to assess the prevalence and perception of shisha smoking among university students and found that more than one third of university students were Shisha smokers, less than one third were cigarette smokers, and smoked both shisha and cigarettes. The increased prevalence in this current study may be due to the social acceptance of shisha smoking among the Egyptian Population. The false perception that shisha Smoking is less lethal and toxic than cigarette smoking may be one of the factors that influence users to think it a safe alternative to cigarette smoking from the point view of the researcher.

The present study found that the majority of the students started smoking after the age of twelve years old. This finding was in contrast with the results of **Sabra et al., (2018)** who conducted her study in Assuit University to study the prevalence and socio–demographic associated factors of smoking among Assiut university students and found that More than half of smokers started smoking before the age of fifteen years .

The present study found that the motive items of enjoy and relax got the highest percentage for both followed by pressure deal and dealing with friends with percentage were motives for starting smoking. These finding in consistent with the findings of study conducted by **Barreto Niño et al., (2018*)*** to identify factors associated at the beginning of tobacco consumption at Universidad Javeriana, Bogota – Colombia. Which showed that the main cause for them to start smoking was social pressure, followed by curiosity. Most of the participants said that the first time they smoked was in the company of a friend, and

the minority was in the presence of a family member, being mainly in a happy mood or excited.

The explanation of these findings is may be that worse mental condition due to stress of the students making them vulnerable to more tobacco consumption and having greater difficulties to quitting smoking.

The present study revealed that nearly half of the students were moderate smokers and eleven percent of were light smokers. This finding was supported by ***Abbas &Naeem (2010)*** who conducted his study to assess the prevalence and determinants of smoking among university students in Basrah and found that most of the smokers were moderate smokers, thirty five percent of the smokers were heavy smokers, and twenty of students were light smokers.

The present study showed that being very interested in smoking was the most important challenging factor for quitting, followed by like smoking with friends and under pressure. Not have a will and think being nicotine addict was reported to be the least important challenging factors for smokers to quit smoking.

These results were in agreement with ***Wah & Bissoon (2012)*** who conducted the study to analyze the factors influencing the intention to quit smoking among university students in Mauritius, and showed that the main barrier to cessation was that the respondents enjoy smoking too much to give it up, followed by family and friends don't think it is important to quit smoking ,and there are too many difficult things going on in their life right now.

The present study showed that nearly half of studied students reported that they had tried to quit smoking previously, only sixteen succeeded. Whereas, more than half had not attempted to quit smoking. These results were in consistent with ***Ali, (2015)*** who stated that concerning the quitting trials and intention to quit; nearly half of ever smokers tried to quit but only twenty percent succeeded. The longest abstinence period of one to less than three months was reported by more than one third of relapsed smokers.

The present study showed that the most highly important endorsed **Challenges for quitting smoking** were being interested in smoking, like smoking with friends and pressure. This result went in the same line with ***Buczkowski et al., (2014)*** who conduct a study investigate former and current

smokers' motivations for smoking cessation, reasons for relapse, and modes of quitting, revealed that the most frequently reported relapse reasons was stress and the need to lessen it by smoking a cigarette, the wish to experience the pleasure connected with smoking, and the smoking environment both at home and at work.

Concerning the quitting trials and intention to quit; in the current study, ten percent of smokers tried to quit with the longest abstinence period of one week to less than one month was reported by one third of relapsed smokers this finding supported by the results of ***Elshair and Shafik (2012) and Ali et al. (2015)*.** They revealed that 40.3% tried to quit **last** year but only low number succeeded and about last quit trial duration, more than half ever smokers tried < seven days. Also this results supported by the findings of ***WHO (2014)*** in a study "Shisha and Smokeless Tobacco Use Among University Students in Egypt: Prevalence, Determinants and Economic Aspect " which revealed that Among the more than half of current smokers who reported making quit attempts in the past twelve months, only the minority succeeded to quit. This low quit rate may result from social and peer pressure, which drive the smoker to start and continue the smoking behavior, or from persistent stress. Students reported that stress relief was the major emotion associated with smoking and an important motivating factor for initiating smoking.

Regarding QOL scores, the present study found that general health perception got the highest mean score followed by role physical limitation, physical functioning, mental health and role emotional limitation.

This is similar to ***Becoña et al. (2013)*** study in which the studied smokers QOL was evaluated with SF-36 and found that they had low mean score of physical functioning and mental health. Furthermore, ***Milic et al., (2020)*** observed a strong association between smoking and poorer physical and mental health components of the health-related quality of life and this finding was in agreement with the study by ***Nur et al., (2017)*** who revealed that non-smokers had a higher HRQOL compared to smokers.

3. Conclusion:

In the light of the current study findings, it can be concluded that, there was a highly statistical significant relation between smoking methods& nicotine dependence and

health related quality of life among the studied students.

6. Recommendations:

Based on the results of the present study, the following recommendations were suggested: Conducting health education services to increase awareness on the hazards of tobacco smoking and the harmful effects.

Table (1): Distribution of the studied fishermen according to Socio demographic data (n = 352)

Socio demographic data	N	%
Age (Years)		
Mean ±Std.	19.07±.81	
Range	17-22	
Gender		
Male Female	183 7	96.3 3.7
Locality:		
Urban	80	42.2
Rural	110	57.8
Area of study		
Medical faculties (medicine/pharmacy/densriy/ventory/ nursing/tecnical institute of nursing)	21	11.1
Practical faculties (Engineering/Science/Agriculture/ computing/physical education)	31	16.9
Theroritical faculities (Arts/ Education/ Alsun/Commerce/Torism)	138	72
Stay during study		
With family	90	47.3
Away from family	100	52.7
Marital status :		
Single	183	96.3
Engaged	6	3.7
Family income		
Not Adequate for daily needs	17	8.9
adequate for daily needs	79	41.7
adequate for daily needs and emergency	68	35.7
Adequate for investment	26	13.7

Table (2): Distribution of the studied students according to their smoking profile (n=190)

Items		
	N	**%**
Age of start smoking		
<12y	20	10.5
≥12y	170	89.5
Smoking methods practice		
Cigarettes	15	7.8
Shisha	70	36.8
Cigarettes and Shisha	105	55.4
Number of Cigarette per day (120)		
<10	25	20.6
10:<20	31	26.3
20:<30	23	19.4
≥30	41	33.8
Time of 1st cigarette after walking up (120)		
Within 5 min	11	6.9
After 6-30 min	9	5.6
31-60 min	21	13.1
>1 hour	119	74.4
Place of smoking		
Home	8	4.2
Faculty	38	20
General places	42	22.1
All	102	53.7
Source of money for smoking:		
Pocket money from family	169	88.9
Part time work	21	11.1

Table (3): Distribution of the studied students according to their motives leading to increase smoking practice (n=190)

Motives for smoking	Total sample (190)	
	N	%
Relax	119	62.6
Time spending	57	30
Reduce boredom	71	37.3
Pressure deal	113	59.5
Enjoy	119	62.6
Something done with friends and siblings	94	49.5

Table (4): Distribution of the studied students according to their Challenges for quitting smoking (n=190)

Items	Total sample (190)	
	N	%
Try to quit smoking		
No	170	89.4
Yes	20	10.6
Reasons for not quitting smoking (n=170)		
Being very interested in smoking	121	71.8
Not have a will	53	31.2
Under pressure	90	52.9
Think being nicotine addict	47	27.6
Like smoking with friends	108	63.5
Quitting may be very bored	59	34.7

Table (5): Distribution of studied students according to their mean scores of Health Related Quality of Life (SF36) (n=190).

Health Quality Of Life items (S36)	Total sample (190)
	Mean ±SD
General health perception	72.29± 24.29
Physical functioning	58.66±39.24
Role physical limitation	62.30±24.68
Role emotional limitation	50.53±18.93
Energy/ Vitality	41.68±19.62
Mental health	57.05±24.72
Social functioning	38.18±41.52
Bodily pain	42.19±18.03

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