

Influence of Knowledge of Smoking as Cancer-Causing on Behavior among Smokers

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Abstract

Background: Smoking-related behavior including passive smoking poses a major burden on the health status of populations and national economies. This is particularly true for countries that have a high prevalence of smoking, such as Jordan, which also has an increasing trend of waterpipe smoking: Knowledge of passive smoking and the association of knowledge of smoking as cancer-causing with quitting in addition to characteristics of smokers with denial or ignorance were assessed.

Methods: This study is part of a nationwide, cross-sectional survey conducted in Jordan. Respondents (3196) were asked about their knowledge of passive smoking in addition to the association of active, waterpipe, and passive smoking with cancer. Smokers were also asked about the possibility of them developing cancer. Knowledge and perception were correlated to past attempts and future intentions of quitting smoking. Smokers with a denial of developing cancer or lack of knowledge of the association of smoking with cancer were further characterized.

Results: Approximately half of the respondents, in general, knew of the term “passive smoking.” Knowledge of the association of smoking-related behavior with cancer was very high (~95%). However, almost 75% of smokers thought that they would develop cancer with a strong association between this perception with previous attempts or future intentions to quit smoking. Whereas smokers in their 20s and 50s, those with decreasing income, and female smokers were more likely to be in denial that they may develop cancer, male smokers and smokers in their 40s, or with intermediate education or increasing income appeared to be ignorant of the association of smoking with developing cancer.

Conclusions: These results may aid in the development of more effective and targeted anti-smoking campaigns.

Keywords: Jordan; Smoking; Passive smoking; Quitting; Behavior.

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INTRODUCTION

The overall prevalence of smoking in Jordan is considered among the highest in the world whereby approximately 33% of the population are considered smokers and almost 80% of them

consumed more than 10 cigarettes a day (1). In addition, more than 55% of smokers were males (1,2). The study of Jaghbir et al. also presented an increasing trend of smoking waterpipes, particularly among the younger age group (1). The latter study has also found that smoking is most common among those with intermediate education, rather than those with a low or higher level of education. It has long been well known that increasing knowledge among smokers is

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important to reduce smoking prevalence (3). This emphasizes the need of establishing strong awareness programs educating the public about the risk of smoking.

One of the smoking-related risk factors is exposure to passive smoking, which has negative health burdens including cancer (4). From an economic standpoint, the impact of passive smoking exposure is high where, for example, it was estimated in 2009 to be \$360 million in the state of California, United States of America, alone (5).

In continuation of previous work related to the prevalence of smoking and quitting strategies in Jordan (1,6), this study aimed to further explore the knowledge of the association of active and waterpipe smoking and second-hand smoking with cancer. In addition, this knowledge was correlated with previous and future attempts to quit smoking. Finally, the perception of getting cancer due to smoking was closely analyzed among smokers differentiating between smokers that lacked knowledge versus those that appeared to be in denial.

METHODOLOGY

Study design and data collection

The questions were part of the nationwide cross-sectional survey entitled "Knowledge, Attitudes, Practices (KAP) towards Cancer Prevention and Care in Jordan." Data collection spanned two months (January–March 2011). The questionnaire was in Arabic, with an available English translation, when needed. The questionnaire included standardized definitions for medical terms to be read by the interviewers. The survey consisted of 10 sections. In one section, knowledge and practice of active and passive smoking as well as quitting smoking were determined as previously described (1,6). At the end of the section, smokers were asked about the likeliness of them getting cancer being smokers. The following section investigated general beliefs about causes of cancer including smoking and exposure to passive smoking. Since the survey was conducted at the national level, the tool was reviewed and modified at the Department of Statistics for ethical and scientific considerations. Ethical approval was obtained from a special

committee at the Center of Consultation/the University of Jordan.

Participants

The final sample size in the survey was 3196 respondents (a response rate of 93%). Overall, the characteristics of survey participants correlated well with national estimates as published earlier (7,8).

Development of the instruments

The design of the survey was based on international references/tools that were used as a guide to the development of the questionnaire such as the Behavioral Risk Factor Surveillance System Questionnaire 2009 (BRFSS United States), 2. Health Information National Trends Survey 2005 (HINTS, NCI), and the Jordanian Ministry of Health's Jordan Behavior Risk Factor Survey, 2007. The survey was prepared by a panel of experts (a committee) from different Jordanian institutions including the Ministry of Health, the Department of Statistics, and the University of Jordan. The questionnaire was piloted and validated by the experts to assure the suitability of the content clarity, and that the items were understandable. The pilot study was first carried out in one area in the capital city, Amman, to test the survey tool, sampling technique, survey methods, and interviewers' performance. The pilot sample consisted of 56 randomly selected subjects. Following the pilot, a 2-day review session was conducted and resulted in the implementation of minor modifications. Based on the pilot study, the questions were read by interviewers who were trained on how to read and clarify the questions as well as how to respond to inquiries. In addition, issues related to data collection were addressed during pilot testing. The face-to-face interviews were conducted in the interviewee's household.

Measures

Demographic data. Participants were asked about their gender, age, education, and income (1 Jordanian Dinar = \$1.40).

Smoking-related lifestyle. Respondents were asked about their smoking habits and smokers were asked if they had ever attempted to quit smoking (1,6). All participants were asked if they ever heard of the term "passive smoking" given two options of "yes" or "no." The term was

defined to them afterward and they were then asked if and where they got exposed to passive smoking. Those who described themselves as active smokers were asked about the possibility of getting cancer being smokers. The latter was measured on a 4-point Likert scale with a score range from very likely to very unlikely.

General beliefs about cancer. The following section included a question about the knowledge of participants about possible causes of cancer. Forty four options were given including active cigarette smoking, active waterpipe smoking, and passive cigarette smoking. Three possible answers were given to respondents from which to choose: “yes”, “no”, and “do not know”.

Data analysis

Data were analyzed using SPSS, version 22.0. Univariate and bivariate analyses were run to describe all survey variables. Most of the variables in the study were measured on a nominal and/or ordinal level. Descriptive statistics were used to describe the basic features of the data. Responses were analyzed using the Chi-squared

and/or Pearson correlation coefficient when comparing sociodemographic groups or ranked data, respectively.

RESULTS

Knowledge of respondents toward passive smoking was first assessed. Slightly less than half (48.4%) of respondents indicated that they knew what the term meant (Table 1). Whereas age was not associated with knowledge, a significantly more males (52.4%) knew of the term than females (44%). In addition, both increasing education and income were also significantly associated with better knowledge. For example, whereas 71% of those with a diploma degree and higher knew what passive smoking meant, only 26% and 43% of the respondents with either low or intermediate levels of education, respectively, did. Similarly, almost two-third of the respondents with the highest income group knew of the term compared with 38% and 55% in the low and intermediate tiers of income, respectively.

Table 1. knowledge of the term “passive smoking” in association with demographics.

	Yes (%)	No (%)
	1547 (48.4)	1649 (51.6)
Gender		
Male (1648)	863 (52.4)	785 (47.6)
Female (1549)	684 (44.2)	864 (55.8)
	$\chi^2 = 21.4 (<0.001)$	
Age		
18-29 (964)	456 (47.3)	506 (52.7)
30-39 (916)	468 (51.1)	448 (48.9)
40-49 (627)	311 (49.6)	316 (50.4)
50-59 (270)	131 (48.3)	140 (51.7)
60 and above (419)	180 (43.1)	238 (56.9)
	$\chi^2 = 8.2 (<0.083)$	
Education		
Elementary or less (614)	162 (26.3)	453 (73.7)
Preparatory to high school (1638)	711 (43.4)	925 (56.6)
Diploma and above (944)	647 (71.4)	270 (28.6)
	$\chi^2 = 335.7 (<0.001)$	
Income^a		
Less than 300 (1495)	566 (37.9)	928 (62.1)
300-599 (1226)	671 (54.7)	556 (45.3)
600 and above (452)	297 (65.6)	156 (34.4)
	$\chi^2 = 139.0 (<0.001)$	

^aSince 22 respondents refused to declare their income, the total responses of the income category were 3174.

After defining the meaning of passive smoking, respondents were asked if they were exposed to passive smoking at work, at home, or on social occasions. The majority (83%) of respondents indicates that they got exposed to passive smoking at social events compared with 30% who reported being exposed to it at work and 44% of them mentioned that were exposed to passive smoking at home

Knowledge of smoking as a cause of cancer

We then investigated whether respondents knew if smoking was associated with cancer. The question raised was “which of the following factors is associated with cancer?” Among the listed factors were: active smoking, waterpipe smoking, and passive smoking.

Overall, there was considerable knowledge of the association of smoking-related behaviors with cancer where approximately only 5% of respondents indicated a lack of knowledge (Table 2). Interestingly, males and those in their forties and 60 and above of age significantly indicated less knowledge of the association of the three smoking behaviors with cancer than females and other age groups. It was also noted that increasing education was not associated with better knowledge of the link between active and passive smoking with cancer. On the other hand, those with higher educational status significantly had better knowledge that waterpipe smoking is associated with cancer than those with high school level education and lower. Income was not associated with better knowledge

Table 2. Knowledge of the relationship of cancer with active, passive, and waterpipe smoking.

	Active smoking		Waterpipe smoking		Passive smoking	
	Yes (%)	No (%)	Yes (%)	No (%)	Yes (%)	No (%)
	3078 (96.3)	128 (3.7)	3051 (95.5)	135 (3.5)	3032 (94.9)	164 (5.1)
Gender						
Male (1648)	1564 (95.0)	83 (5.0)	1549 (94.0)	98 (6.0)	1546 (93.9)	101 (6.1)
Female (1548)	1514 (97.7)	35 (2.3)	1502 (97.0)	47 (3.0)	1486 (95.9)	63 (4.1)
$\chi^2(p)$	$\chi^2= 17.4$ (P<0.001)		$\chi^2= 36.9$ (P<0.001)		$\chi^2= 7.0$ (P=0.005)	
Age						
18-29 (963)	946 (98.2)	17 (1.8)	938 (97.4)	25 (2.6)	935 (97.1)	28 (2.9)
30-39 (915)	890 (97.2)	26 (2.8)	883 (96.4)	33 (3.6)	872 (95.2)	44 (4.8)
40-49 (627)	589 (93.9)	38 (6.1)	578 (92.0)	50 (8.0)	580 (92.5)	47 (7.5)
50-59 (271)	266 (98.2)	5 (1.8)	266 (98.2)	5 (1.8)	264 (97.8)	6 (2.2)
60 and above (419)	387 (92.6)	31 (7.4)	386 (92.3)	32(7.7)	380 (90.7)	39 (9.3)
$\chi^2(p)$	$\chi^2= 41.0$ (P<0.001)		$\chi^2= 41.2$ (P<0.001)		$\chi^2= 36.9$ (P<0.001)	
Education						
Elementary or less (614)	583 (95.0)	31 (5.0)	581 (94.6)	33 (5.4)	572 (93.2)	42 (6.8)
Preparatory to high school (1638)	1577 (96.3)	61 (3.7)	1548 (94.5)	90 (5.5)	1557 (95.1)	81 (4.9)
Diploma and above (944)	917 (97.2)	26 (2.8)	921 (97.6)	23 (2.4)	903 (95.7)	41 (4.3)
$\chi^2 (p)$	$\chi^2= 5.5$ (P=0.064)		$\chi^2= 14.0$ (P=0.001)		$\chi^2= 5.0$ (P=0.082)	
Income^a						
Less than 300 JD (1495)	1438 (96.2)	57 (3.8)	1417 (94.8)	77 (5.2)	1412 (94.5)	82 (5.5)
300 to 599 (1227)	1188 (96.8)	39 (3.2)	1182 (96.3)	45 (3.7)	1163 (94.8)	64 (5.2)
600 and above (452)	431 (95.4)	21 (4.6)	430 (95.1)	22(4.9)	435 (96.2)	17 (3.8)
$\chi^2 (p)$	$\chi^2= 2.1$ (P=0.345)		$\chi^2= 3.6$ (P=0.168)		$\chi^2= 2.2$ (P=0.341)	

^aSince 22 respondents refused to declare their income, the total responses of the income category were 3174.

Probability of smokers to get cancer

Active smokers were asked of the probability that they would get cancer. As detailed in Table 3, almost three-quarters of

them indicated that it was either likely (55.9%) or very likely (20.8%) that they would. On the other hand, 18.7% and 4.6% of active smokers indicated that it was either unlikely or very

unlikely, respectively, that they would develop cancer. In order to better find associations between these responses with demographic characteristics of respondents, they were divided into two groups: one group included smokers who responded with positive likeliness to get cancer (76.7%) and another for those who thought it was unlikely or very unlikely to get cancer as smokers (23.3%). Neither gender nor level of education associated significantly with the positive response, although highly educated individuals tended to answer positively. On the other hand, age and income had a significant

association with the knowledge that smoking would cause smokers to get cancer. The younger age group of smokers, specifically those below the age of 40, more likely thought they would get cancer as smokers at a significant rate compared to older respondents. Interestingly, smokers in their forties and fifties were less likely to think they would get cancer than other groups. In addition, smokers with the lowest income category significantly perceived that it would be less likely that they would get cancer than those with higher income.

Table 3: knowledge of the likelihood that smokers would get cancer in relation to socioeconomic characteristics of the study group.

	As a smoker, likeliness to get cancer	
	Yes (%)	No (%)
	792 (76.8)	241 (23.2)
Gender		
Male (904)	693 (76.7)	211 (23.3)
Female (127)	99 (76.7)	30 (23.3)
	$\chi^2 = 0.0$ (P=0.542)	
Age		
18-29 (295)	238 (80.7)	57 (19.3)
30-39 (336)	269 (80.3)	66 (19.7)
40-49 (250)	174 (69.3)	77 (30.7)
50-59 (83)	58 (70.7)	24 (29.3)
60 and above (68)	52 (76.5)	16 (23.5)
	$\chi^2 = 14.3$ (P=0.006); r=0.08 (P=0.01)	
Education		
Elementary or less (167)	127 (76.5)	39 (23.5)
Preparatory to high school (604)	449 (74.5)	154 (25.5)
Diploma and above (262)	215 (82.1)	47 (17.9)
	$\chi^2 = 5.9$ (P=0.052); r=-0.52 (P=0.097)	
Income^a		
less than 300JD (501)	365 (72.7)	137 (27.3)
300 to 599JD (390)	314 (80.7)	75 (19.3)
600 and above (135)	108 (80.0)	27 (20.0)
	$\chi^2 = 8.8$ (P=0.012); r=-0.08 (P=0.01)	

^aSince 22 respondents refused to declare their income, the total responses of the income category were 3174.

Effect of perception on attempting and intending to quit smoking

In order to investigate further if the perception regarding the probability of getting cancer would affect the behavior of smokers towards quitting, an association was investigated between their

perception, on one hand, and attempting to quit smoking or intending to call a smoking cessation clinic, on the other hand. As shown in Table 4, knowing that smokers could get cancer themselves was significantly associated with attempting to quit smoking (P<0.001) where two-

third of them unsuccessfully tried to quit smoking, whereas only half of smokers who thought it would not be likely for them to get cancer did so. In addition, the perception of smokers that it would be likely for them to get cancer made them

significantly more likely that they would call a smoking cessation clinic ($P < 0.001$) where 57.5% expressed their willingness to take this action compared to only 38.0% of smokers who thought it would be unlikely for them to get cancer.

Table 4: Correlation between knowledge of smoking as cancer-causing with attempting to quit smoking and likeliness to utilize smoking cessation clinics.

		As a smoker, likeliness to get cancer		
		Yes (%)	No (%)	
		791 (76.7)	241 (23.3)	
Ever tried to quit smoking	No (%) 384 (37.2)	264 (33.4)	120 (49.8)	$\chi^2 = 21.3$ (< 0.001)
	Yes, but failed 648 (62.8)	527 (66.6)	121 (50.2)	
Likeliness to call smoking cessation clinics	Very likely 132 (12.8)	123 (15.5)	9 (3.7)	$\chi^2 = 37.9$ (< 0.001)
	Likely 414 (40.2)	332 (42.0)	82 (34.2)	
	Unlikely 248 (24.1)	172 (21.8)	76 (31.7)	
	Very unlikely 236 (22.9)	164 (20.7)	73 (30.4)	

Smoking habit and knowledge

It was interesting to note that whereas 96.3% of the general population, including smokers, had the knowledge that active smoking causes cancer, only 76% of smokers thought they would get cancer being smokers. This suggested a possible discrepancy between smokers and non-smokers in regards to knowledge of smoking as a cancer-causing factor. Indeed, whereas 99% ($n = 2124$) of non-smokers knew that active smoking causes cancer, 93% ($n = 924$) of smokers did, a statistically significant difference ($P < 0.001$).

Smokers with denial or ignorance

A group of smokers ($n = 240$) thought that it was unlikely that they would get cancer. This response suggested that these individuals may either lack knowledge that smoking causes cancer or that they might be in denial. The latter possibility was considered if smokers correctly knew that smoking causes cancer, but thought that they would not get cancer themselves. Therefore, it was interesting to look further into the demographic characteristics of the 240

individuals who did not think that they would get cancer in relation to their knowledge. Approximately 75% of smokers who did not think they would get cancer had the knowledge that active smoking causes cancer suggesting that the majority of them were in denial (Table 5). On the other hand, 25% of them lacked this knowledge. Further analyses of the two groups revealed that females (89.7%) were significantly more likely than males (72.7%) in being in denial ($P = 0.034$). Significantly as well, more males than females, on the other hand, lacked this knowledge. In addition, whereas more smokers in their forties (36.4%) lacked the knowledge that smoking causes cancer relative to other age groups, smokers who rejected the possibility of getting cancer, although being knowledgeable that cancer causes cancer, were mostly the younger ones (18-29) and those between 50-59 years of age. As for education, it was surprising that more smokers with an intermediate level of education lacked knowledge than those with lower and higher educational levels and a larger proportion of the latter group was in denial,

although the difference did not reach a statistically significant level. A clearer trend and a significant difference were noted in association with income where denial was

associated with decreasing income and, on the other hand, lack of knowledge was associated with increasing income ($P < 0.001$).

Table 5: Demographic characteristics of smokers who did think they would get cancer themselves in relation to their knowledge of the connection between smoking and cancer.

	Knowledge (%) Denial	No knowledge (%) Ignorance
	178 (74.8)	60 (25.2)
Gender		
Male (209)	152 (72.7)	57 (27.3)
Female (29)	26 (89.7)	3 (10.3)
	$\chi^2 = 3.870$ ($P = 0.034$)	
Age		
18-29	50 (87.7)	7 (12.3)
30-39	47 (72.3)	18 (27.7)
40-49	49 (63.6)	28 (36.4)
50-59	21 (87.5)	3 (12.5)
60 and above	11 (73.3)	4 (26.7)
	$\chi^2 = 12.420$ ($P = 0.014$)	
Education		
Elementary or less	31 (83.8)	6 (16.2)
Preparatory to high school	108 (70.1)	46 (29.9)
Diploma and above	39 (83.0)	8 (17.0)
	$\chi^2 = 5.033$ ($P = 0.081$); $r = 0.009$ ($P = 0.896$)	
Income^a		
<300	119 (88.1)	16 (11.9)
300-599	47 (62.7)	28 (37.3)
600 and above	12 (44.4)	15 (55.6)
	$\chi^2 = 32.065$ ($P < 0.001$); $r = -0.366$ ($P < 0.001$)	

^aSince 22 respondents refused to declare their income, the total responses of the income category were 3174.

DISCUSSION

Tobacco use has been established as a major cause of one-third of preventable cancers (9). Therefore, understanding knowledge of the risks of smoking and the behavior associated with it can aid in reducing smoking habits and, hence, health risks. Such action is critical for Jordan, which has one of the highest rates of smoking in the world (1). A large number of studies have indicated that quitting smoking would improve health status, reduce the risk of acquiring a chronic disease, and prolong lives (10–12). The advantage of quitting smoking is also reflected at the national level by reducing the economic burden linked to smoking (8). It

was estimated in 2016 that smoking-related expenditures in Jordan, including those related to healthcare, amounted to 1 billion dollars, which was approximately 5% of the gross domestic product (2). Although the exact burden of smoking on the economy in Jordan is lacking, the economic burden is expected in view of not only the high prevalence of smoking, but also the estimated higher health-related expenditures of smokers relative to non-smokers (13). This is alarming when considering the increasing trend of smoking waterpipe in Jordan, particularly among youngsters (1,12,13,14).

In this study, we have found that the

majority of respondents, smokers, and non-smokers, have good knowledge that smoking is a cause of cancer. Awareness that waterpipe and passive smoking are linked to cancer has also been found to be high. However, in cases of active and passive smoking, knowledge was not associated with higher educational level and socioeconomic status; rather it was associated with being female and younger in age (≤ 39). In addition, although there was a trend that increasing education is associated with having better knowledge that that habits of active, waterpipe, and passive smoking can lead to cancer, only knowledge of waterpipe smoking was significantly associated with higher educational level. Education has been found to be a significant factor in being knowledgeable of the risks of passive smoking in Turkey in which people with better education are more knowledgeable of the risks of smoking (17). Awareness of passive smoking has a number of factors associated with it. A Chinese study reported that the association of passive smoking to diseases was higher in urban areas (77.0 %) than rural ones (60.0%) (18). Respondents were also more knowledgeable of passive smoking-related lung diseases (88.5%) than other diseases such as cardiac diseases, which had the lowest level of awareness with 46.8% of respondents (18).

Interestingly, smokers are less likely to associate smoking with cancer at a significant rate when compared to non-smokers. Not only that, but it is also apparent that smokers had a dilemma affirming the likelihood of getting cancer as smokers. A similar finding was reported for Jordanian schoolchildren whereby those who smoked more heavily thought they had less chance of developing lung cancer than non-smokers, ex-smokers, and those who smoked less heavily (19). Another study among schoolchildren in Jordan reported that those who smoked both cigarettes and waterpipe would be in the safe zone as long as they quit within two years compared to non-smokers (20). This dilemma could be related to either ignorance or denial that smoking can cause them cancer despite their affirmation that it is associated with the disease. Ignorance was related to being a male, and being

within 30-49 years of age and those 60 and older. Surprisingly, there was also a trend of ignorance with increasing income. Interestingly, although it was not significant, those with intermediate education tended to be less informed than others with lower or higher education levels. An Australian study has found that a considerable proportion of socially disadvantaged smokers thought that medical evidence of the connection between smoking and cancer is exaggerated (21). The latter study and a Korean one also highlighted this misperception of smokers who state that other factors like air pollution has a higher risk of increasing the risk of cancer than smoking (22). Thus, having the knowledge that smoking is linked to cancer is not sufficient and, rather, it is also important to assess the perception of how strong this association is.

A proportion of smokers appeared to have a denial that smoking can be harmful to them. These individuals were more likely and significantly to be females, among the younger group of age and those in their fifties, and increasing income. Numerous studies have investigated the issue of denial or self-exemption. Based on a developed scale of self-exemption, Peretti-Watel et al. concluded that smokers' self-exempting beliefs were not associated with a psychological cause or lack of knowledge, rather they found that it was a result of acquired cognitive skills (23). This denial behavior was articulately attributed to five arguments: it is a personal choice and health management is undertaken, moderate use does not pose any harm, there is lack of actual evidence of harm based on observation of selves and others, leading an otherwise healthy lifestyle is sufficiently counteractive, and smoking is better than other harmful habits (24). The same arguments could be observed in other studies (25). Using rationalizations and risk denial is considered as defense mechanisms that smokers use to protect themselves from personalizing the health effects of smoking (25). It would be interesting to delve further into this topic and investigate the perception of this group among the Jordanian population.

Another interesting outcome is the influence and strong correlation of knowledge of smoking

hazards on self and its connection to cancer on intention to quit. Most of those who are not willing to visit smoking cessation clinics claimed that smoking is very unlikely to cause them cancer. The factor of self-exemption, primarily due to holding skeptical beliefs of the connection between smoking and cancer, has been reported to lower intention to quit (21). Unfortunately, smoking is socially acceptable and widespread among Jordanian males and it would be difficult to change such behavior when taking into consideration the study of Huang et al. (26). The latter study reported that believing that smoking is socially acceptable is the strongest predictor of not quitting. Tackling risk-minimizing belief has been suggested to be a more efficient means of inducing intention to quit with an emphasis on the emotional basis of linking smoking to health risks rather than rational association (27). The intention of quitting smoking has been reported to be related to the feeling of regret (28). Rationalization was also found to play a role in minimizing the intention to quit (29).

CONCLUSIONS

It can be concluded that knowledge of the association of smoking with cancer has an effect on the intention of quitting. Thus, more

organized efforts and smarter campaigns must be executed in order to reduce the prevalence of smoking in Jordan. It is also important to reach more people starting with young ones in schools taking into consideration the increasing trend of waterpipe smoking. In addition, smoking cessation clinics must be empowered and their usefulness should also be publicized.

Statements of ethical approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the Department of Statistics and a special committee at the Center of Consultation, the University of Jordan, and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

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تأثير معرفة التدخين كمسبب لمرض السرطان على السلوك لدى المدخنين

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الملخص

الخلفية: يشكل السلوك المرتبط بالتدخين بما في ذلك التدخين السلبي عبئاً كبيراً على الحالة الصحية للسكان والاقتصادات الوطنية، وهذا ينطبق بشكل خاص على البلدان التي ينتشر فيها التدخين بشكل كبير كالأردن ، والتي يتزايد فيها معدل تدخين الأرجيلة: في هذه الدراسة، تم تقييم معرفة التدخين السلبي في الأردن والربط بين معرفة التدخين كمسبب للسرطان والإقلاع عن التدخين بالإضافة إلى خصائص المدخنين وعلاقة ذلك مع الإنكار أو الجهل بارتباط التدخين بالسرطان.

الطرق: هذه الدراسة هي جزء من مسح مقطعي وطني تم إجراؤه في الأردن حيث تم سؤال 3196 مشارك عن معرفتهم بالتدخين السلبي بالإضافة إلى ارتباط الأرجيلة والتدخين بالسرطان. تم تحليل ارتباط المعرفة بارتباط التدخين كمسبب بالسرطان مع النية السابقة والمستقبلية للإقلاع عن التدخين، كما تم تحليل خصائص المدخنين المُنكرين لارتباط التدخين بالإصابة بالسرطان أو عدم معرفتهم بذلك.

النتائج: يعرف ما يقرب من نصف المشاركين - بشكل عام - مصطلح "التدخين السلبي" ، كما أن معرفة ارتباط التدخين بالإصابة بالسرطان كانت عالية جداً (~95%)،. وعلى الرغم من ذلك، إلا أن نسبة أقل من المدخنين (~75%) يعتقدون أنهم قد يصابون بالسرطان مع ارتباط قوي بين ذلك الاعتقاد والمحاولة للإقلاع عن التدخين أو النية في ذلك، وكان المدخنون في العشرينات والخمسينات من العمر وذوي الدخل المتدني والمدخنات الإناث أكثر إنكاراً باحتمالية إصابتهم بالسرطان ، في حين أن المدخنين الذكور والذين هم في الأربعينيات من العمر وذوي التعليم المتوسط وذوي الدخل المتزايد كانوا أكثر جهلاً بارتباط التدخين مع الإصابة بالسرطان.

الاستنتاجات: قد تساعد هذه النتائج في تطوير حملات أكثر فعالية واستهدافاً لمكافحة التدخين.

الكلمات الدالة: الأردن؛ التدخين؛ التدخين السلبي؛ الإقلاع عن التدخين ؛ سلوك.