Original Research Article

Smoking Trends: A Cross Sectional Study in Dengkil, Sepang, Selangor, Malaysia

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ABSTRACT

It is estimated that more than 27,200 of Malaysians' deaths annually are related to smoking. Majority of the smokers start smoking at the early age, smoke more than 15 years and spend less than RM 100 for cigarettes in a month. So, this study aims to determine the trend of smoking among smokers in a residential area in Dengkil, Sepang, Selangor.

A cross-sectional study was conducted among Malaysian, aged more than 18-year-old with a combination of stratified, systematic and simple random sampling. Respondents who fulfill the inclusion & exclusion criteria were interviewed using a validated questionnaire and data were analysed using SPSS.

The prevalence of current smoker was 23.5% with higher among male (50.7%), single (31.0%) and self-employed (44.1%). Peer pressure plays important role in either to start or to quit from smoking.

It is important to increase awareness program primarily in educational institutions such as schools and colleges.

Keywords: smoking, trend, prevalence, sub-urban, Selangor, Malaysian

INTRODUCTION

The World Health Organisation (WHO) in 2021[1] has reported that noncommunicable diseases (NCDs) mainly cardiovascular disease, cancers, respiratory diseases and diabetes are the biggest cause of death worldwide, in which it kills 41 million people annually (71% of global deaths). While tobacco accounts for over 7.2 million deaths every year (including from the effects of exposure to second-hand smoke), it is also projected to increase markedly over the coming years. In Malaysia, it is estimated that more than 27,200 of Malaysians deaths annually are related to smoking. [2]

The National Health and Morbidity Survey (NHMS) (2019) also showed a slight decrease in prevalence of smoking among Malaysian (21.3%) compared to NHMS 2015 (22.8%).[3] The prevalence of male smokers had reduced from 43.0% in 2015 to 40.5% while it peaked in the 30-34 years age group (27.1%) and among those who were self-employed (33.7%).

A cross-sectional study done in Terengganu, Malaysia showed that among current smokers, the duration of smoking was 21.6 years.[4] Another study conducted in a village area in Sepang, Selangor showed majority of the smokers smoke more than 15 years (75.8%), and spend less than RM 100 for cigarettes in a month (51.5%). [5]

The Indonesia Family Life Survey (IFLS) reported between 2007 and 2014, the number of smokers who smoke>30 cigarettes per day have been increased among productive age (from 67.7% to 80.4%). [6]

Thus, this study was designed to determine the trend of smoking among smokers in a residential area in Dengkil, Sepang, Selangor.

MATERIALS AND METHODS

A cross-sectional study was conducted in a residential area in Dengkil, Sepang, Selangor, which consists of 520 houses comprising of low cost to high-cost single and double storey units. The population is a multiracial community.

Stratified random sampling has been used to categorize the type of houses and systematic random sampling to choose the respondents' houses, followed by simple random sampling to select the respondent within the household. All Malaysian who was living in the area for at least three months, aged more than 18 years, not mentally retarded, deaf and mute, were selected as respondents. Respondents who refused to participate in the survey or were not there during the survey after three visits, will be considered as non-respondents.

Data was collected through face-to-face interview using a validated questionnaire from National Health Morbidity Survey 2015. [3] The data has been analysed using descriptive statistics to get the frequency and relative frequency (percentage) for smoking status, trends and sociodemographic variables.

RESULT

A total of 153 participants participated in this study, giving an overall response rate of 95.6%.

Table 1: Prevalence of smoking among respondents

Smoking status	N	%
Current smoker	36	23.5
Previous smoker	7	4.6
Non-smoker	110	71.9
Total	**153**	**100**

Majority (71.9%) of the respondents have never smoked (Table 1).

The higher prevalence of smoking is in the age group of 30-39 (41.7%), male (50.7 %), tertiary education (28.6%), self-employed (44.1%), single (31%) and monthly household income less than RM5000 (24.6%) (Table 2).

Table 2: Smoking status by socio-demographic (N=153)

Socio-demography	Smoking status		
	Yes n (%)	No n (%)	Total n (%)
Age (p=0.165)			
≤ 29	6 (20.0)	24 (80.0)	30 (100)
30 – 39	10 (41.7)	14 (58.3)	24 (100)
40 – 49	8 (22.9)	27 (77.1)	35 (100)
50 – 59	6 (14.6)	35 (85.4)	41 (100)
≥ 60	6 (26.1)	17 (73.9)	23 (100)
Gender (p=0.001)			
Male	34 (50.7)	33 (49.3)	67 (100)
Female	2 (2.3)	84 (97.7)	86 (100)
Education (p=0.758)			
No formal	1 (12.5)	7 (87.5)	8 (100)
Primary	4 (19.0)	17 (81.0)	21 (100)
Secondary	23 (24.0)	73 (76.0)	96 (100)
Tertiary	8 (28.6)	20 (71.4)	28 (100)
Occupation (p=0.001)			
Private	10 (28.6)	25 (71.4)	35 (100)
Government	2 (18.2)	9 (81.8)	11 (100)
Self employed	15 (44.1)	19 (55.9)	34 (100)
Retiree	5 (38.5)	8 (61.5)	13 (100)
Housewife	4 (6.7)	56 (93.3)	60 (100)
Marital status (p=0.522)			
Single	9 (31.0)	20 (69.0)	29 (100)
Married	26 (22.4)	90 (77.6)	116 (100)
Divorcee / widower	1 (14.3)	6 (85.7)	7 (100)
Monthly household income (p=0.566)			
< RM 5000	33 (24.6)	101 (75.4)	134 (100)
≥ RM 5000	3 (15.8)	16 (84.2)	19 (100)

Male smokers are significantly three times more likely to smoke compared to females [OR=3.79 (95% CI: 2.29, 5.25)]. Whereas, self-employed respondents are eleven times [OR=11.1 (95% CI:3.3, 37.4)] more likely to smoke.

Table 3: Smoking trend among current smokers (N=36)

Smoking trend	n	%	P value
Age start smoking			
< 25	16	76.2	0.009
≥ 25	5	23.8	
Duration of smoking (years)			
< 5	1	2.7	0.310
5-10	6	16.7	
11-15	6	16.7	
> 15	23	63.9	
No. of cigarette /day			
1-5	5	13.9	0.539
6-10	6	16.7	
11-15	2	5.6	
16-20	19	52.8	
> 20	4	11.0	
Money spent on tobacco (RM)			
< 100	4	11.1	0.001
≥ 100	32	88.9	
Attempt to quit smoking			
Yes	28	77.8	0.001
No	8	22.2	
Smoking inside the house			
Yes	11	30.6	0.310
No	25	69.4	

Majority of currents smokers significantly started smoking less than 25 years age (76.2%) and spent more than RM100 per month on tobacco products (88.9%) (p < 0.05). Majority of them (77.8%) attempted to quit smoking for the past 12 months.

Table 4: Reasons to smoke and barriers to quit smoking

Factors	n	%
Reasons to smoke (N=36)		
Peer pressure	19	52.8
Curiosity	9	25.0
Stress	8	22.2
Barriers to quit (N=28)		
Lack of self-control	15	53.6
Failed assisted smoking cessation	5	17.8
Peer pressure	4	14.3
High stress level	3	10.7
Nicotine Withdrawal	1	3.6

The most common reason for smokers to start smoking was due to peer pressure (52.8%). Whereas lack of self-control represents the highest prevalence of the barriers on attempt to quit smoking (53.6%) (Table 4)

DISCUSSION

The prevalence of current smokers in the National Health Morbidity Survey (NHMS 2015 and 2019) were 22.8% (2015) and 20.8% (2019), [2,3] which are slightly lower compared to our study. This might be due to much difference in sample size resulting in a difference in outcomes, [7] as the population studied differs from that of the Malaysian population as represented in the NHMS (2019).

Studies in Malaysia [8,9] reported that the prevalence of smoking was highest within the age group 20-30 years old, which was lower compared to our result with the highest prevalence within the age of 30-39 years old (41.7%). This could be explained as younger smokers were keener to accept the legislation for smoking as expected part of their life rather than older smokers. [10] Despite, peer related factors play a role mostly in emerging adults, where they would adopt norms and behaviours which they perceived to share as a social identity thus smoking among peers in that age group is closely related with the future and current

smoking behaviour. [11] However, our highest prevalence smoking age group that does not fall under the category of emerging adults (Arnett, 2015). [12] Nevertheless, our finding showed among the current smokers, almost 53% admitted that peer pressure as their top reason to start smoking.

Study has found that adolescents who were affiliated with deviant peers were associated with increased smoking [13] and smoking adolescents appear to see the peer group, not as encouraging them to smoke, but as not providing any discouragement for smoking. [14] The consistent visual cues of smoking by social members may make it harder for a smoker to quit and easier for a former smoker to relapse smoking. [15] This was consistent with our finding as 14.3% of the smokers failed to quit smoking because of peer pressure compared to other barriers.

The prevalent culture which is more accepting of male smokers compared female smokers [16] might explained to the higher prevalence of smoking among male, as shown as in our result (50.7%) and other studies. [17,18] The higher prevalence also might be due to their role as the breadwinner of the family, [19] that men contributed 71% of the total couple income and were economically dependent in approximately 15% of couples.

Studies done in Sarikei, Sarawak [20] and whole Malaysia in 2019 [2] reported that the higher prevalence of smoking was found among self-employed (30.4% and 33.7%, respectively), which were consistent with ours (44.1%). As a breadwinner and self-employed their mental health is affected which can be seen in a study done in Spain. The study stated that among men who was considered as the breadwinner, there was a relationship between poor mental health and main breadwinner role observed (aOR = 1.20; 95%CI: 1.03-1.39). [21]

Stress is also related with those having a low monthly income as incomes close to the minimum wage level make many people's life situations difficult, where the increasing in stress levels contributes to mental problems which may

lead to depressive symptoms and anxiety disorders. [22] Studies done in Malaysia in 2013 [8] and 2019 [2] showed that the higher prevalence of smoking was reported among those who have monthly income less than RM2999 (47.7%) and RM1999 (28.0%) respectively. This explained the higher prevalence of smoking among those who are from the lower income group with monthly income less than RM4850 (24.6%).

Majority of our smokers, smoke for more than 15 years (63.9%) with 16-20 cigarettes per day (52.8%). The high number of cigarette smoke per day might be due to nicotine addiction and nicotine from cigarettes generate strong urges to smoke that undermine and overwhelm concerns about the negative consequences of smoking. [23] This explained why our smokers willing to spend on tobacco product more than RM100 monthly (88.9%). A recent study in Malaysia [24] reported that the monthly household tobacco expenditure for tobacco-smoking households in Malaysia had increased from USD 24 in 1993 to USD 34 in 2014.

The age range between 14 to 25 years old is also the crucial window during which individuals develop nicotine addiction.[25] During the transition from adolescent to adulthood, they encounter more opportunities to engage in or accelerate previously discouraged or prohibited behaviours. [26] This was consistent with our finding in which among the current smokers, 76.2% started smoking before the age of 25 years old.

Majority of our single respondents were smokers (31%) and the prevalence was consistent with the results from other studies in Malaysia (23.9% and 22.9%, respectively). [17,2] This is probably due to the loneliness that they experienced without a partner, where single persons experience loneliness in specific domains (i.e., in the domain of romantic partners and family), but not in other domains (i.e., in the domain of social relationships). [27] Loneliness is one of the causes of smoking based on a systemic review done in 2015, [28] where out of the 25 studies assessed, 52% reported associations between loneliness and smoking behaviour.

Whereas, marriage often comes with responsibilities and married participants are more likely to be restricted in their ability to purchase cigarettes (Owolabi, et al., 2017). [29] Hock et al., (2019) [30] reported that 42.8% of married people practised total restriction of smoking in their homes compared to single people (38.3%) and widow/widower/divorcee (37.3%), due to requests from spouses that exert a positive social influence (Ayuningtyas et al., 2020). [31]

Nationwide population-based study reported that the prevalence of smokers who smoke inside their homes was 46.2% (95% CI: 43.4, 49.00), [30] whereas, 30.6% of our current smokers smoked inside the house. This factor might contribute to the presence of passive smokers in our study (42.4%).

A study done in Beijing [32] among smokers showed that the main factor for failure of cessation smoking was lack of addiction control and self-willpower which further support lack of self-control as the main barrier to quit smoking. Similarly, we found lack of self-control (53.6%) was voted as the most salient challenge to quit smoking compared to other barriers such as failed assisted smoking (17.8%), peer pressure (14.3%), and stress (10.7%).

CONCLUSION

This study highlighted the higher prevalence of smoking among male, age group 30-39, single, self-employed and those who earns less income. The results also revealed the impact of peer pressure as the reason to smoke and barrier to quit smoking.

Based on a community level approach, a smoke-free support environment and family members or close members could monitor the smoking cessation activity thus giving a confidence boost for the smokers to quit smoking.

ACKNOWLEDGEMENT

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