

## Perception of youth on smoking among first year medical students in Myanmar

Kye Mon Min Swe <sup>1\*</sup>, Amit Bhardwaj <sup>2</sup>

<sup>1</sup> Associate Professor, Department of Community Medicine, Melaka Manipal Medical College, Malaysia

<sup>2</sup> Assistant Professor, Department of Orthopaedics, Melaka Manipal Medical College, Malaysia

\* **Corresponding Author:** Kye Mon Min Swe

Department of Community Medicine, Melaka Manipal Medical College, Malaysia

Email: khmoneminswe@gmail.com

---

### Abstract

**Introduction:** Tobacco use is considered to be a chief preventable premature cause of death all over the world. Tobacco use kill million of people worldwide, causes immense suffering and also has economic and social cause, those effects that have been linked to global epidemic. Tobacco control experts and Global Health Professional Survey on youth reports have emphasized the importance of training medical students about tobacco smoking. This study examined cigarette smoking among a sample of newly intake medical students of famous medical university in Myanmar. The perception of students on smoking and preventive measure was discussed.

**Objective:** To study the perception of youth on smoking among first year medical students.

**Method:** A questionnaire-based, cross-sectional survey was done among first year medical students of the University of Medicine-1, Yangon, during August 2007. Data were collected using a pretested structured self-administered questionnaire. Questionnaire included sections about socio-demographic information, knowledge, practice and their perception on smoking.

**Result:** The prevalence of current smoking among them was 5.8%. There was also statistical significant association between perception and gender, perception and knowledge level and perception and smoking habit. Majority of the students did not smoke since they were aware of the health risk of smoking. Regarding perception of smoking and environmental peers like present of smokers in environment, the students with no smokers in their environment have positive perception than there was a smoker in their environment but it is not statistically significant. Regarding correlation between knowledge score on smoking and perception on smoking, significant correlation between was found between knowledge score and attitude towards susceptibility, seriousness, threat, benefit, barrier and control.

Regarding relation between perception on smoking and smoking habit, significant association was found and the nonsmokers and smokers had positive attitude than current smokers.

**Conclusion:** In this study, their perceptions on tobacco smoking were related with practice of smoking. Their perception would be change by health education methods using individual

---

interview, group discussion and form anti-smoking campaign at University. The student's perception upon legislative measure of smoking was still weak.

---

**Keywords:** Medical students, smoking, perception, control

## **Introduction**

Young adulthood represents a critical time in the transition from adolescence to adulthood, when changes in risk-taking behaviors such as experimenting with smoking become apparent.<sup>1,2</sup> According to the National Health Interview Survey (NHIS), 38% of current smokers aged 18 to 25 report they initiated regular smoking after age 18, a 27% increase from the 2007 NHIS estimate of 30%.<sup>3,4</sup> In the National Survey on Drug Use and Health (NSDUH), 1 million people reported that they initiated smoking as young adults, an increase from about 600,000 in 2002; during the same period, the increase in the number of initiates aged 18 or younger was considerably less, from 1.3 million to 1.4 million.<sup>5</sup>

The surveillance of tobacco use among youth in several countries has revealed that the problem is of equal concern in developed and developing countries.<sup>6</sup> The prevalence of smoking in medical students was still certain amount present and Health professionals serve as role models for their patients, have a role in giving advice about smoking cessation to patients, health professionals should get specific training on cessation techniques.

Tobacco use is considered to be a chief preventable premature cause of death all over the world.<sup>7</sup> Cigarette smoking and other tobacco use impose a huge and growing public health burden.<sup>8,9,10</sup> According to WHO statistical data, there is about 44.7% male smoking 7.8% female smoking in Myanmar.<sup>4</sup> Smoking prevalence among students (13-15 years) in Myanmar was 22.5% male and 8.2% female.<sup>5</sup> According to GHPSS Myanmar 2007 report, the prevalence of smoking among medical students was 31.3% ever smoked cigarettes (Males = 49.3%, Females = 9.3%) and peer pressure is significantly related.<sup>11,12</sup>

Nowadays, smoking control measures are targeted among youth with comprehensive measures. With the interest upon youth and future doctors, the medical students, the study was done to find out the perception of youth on smoking. According to health belief model, perception is the major basic factor for behavioral change.<sup>13</sup> By finding out the student's perception, it will be easier for their future control measure of smoking among youth and behavior related to tobacco use and its health impact, to guide programming and advocacy work addressing youth tobacco use.

## **Material and Method**

A questionnaire-based, cross-sectional survey was done among first year medical students of the University of Medicine-1, Yangon, during August 2007. Data were collected by using a pretested structured self-administered questionnaire. There were total 27 perception questions based on the

health belief model. To validate and evaluate the questionnaires, a pilot study was done to twenty 3rd year MB; BS students of University of Medicine I, Yangon. The reliability of the question was calculated by using Chronbach alpha. Sample size was determined based on the smoking prevalence in Myanmar in the year of 2006 that is 32.9%<sup>14</sup> and the required sample size was 340.

Data were collected by using simple random sampling. Regarding data collection, questionnaires were distributed and collected during practical session. To get the required sample size data were collected at two main different practical sessions out of four sessions for all students. Total data collected from two sessions was 416. All present students from each three section were taken. Students absent on the day of data collection were not taken. Total 416 questionnaires were distributed and total 16 questionnaires had to be discarded because of incompleteness.

Before data collection, the researcher explained about the nature of the research and informed consent was obtained. All students who were attending the class at the data collection days were included. Absentees on the day of study were excluded.

Regarding data management, all the collected data were screened for accuracy. Incompleteness and inconsistency were corrected by examining answers to all questions at the same time. Most of the answers were pre-coded. Answers to opened questions were compiled, sorted out and post-coded. Question file was constructed in Epi Data soft ware. Data entry was done in EpiData version 3. Check file for prevention of entry errors was constructed. The entry data were transferred to "SPSS" format by stat transfer and analyzed by Statistical Package for Social Science (SPSS) software. First, descriptive analysis and frequency tables were run and missing data, outliers and inconsistencies were checked. Errors and data entry were checked by reviewing the questionnaires forms. Chi square value was calculated for the significant difference between groups.

### ***Scoring system for level of Perception of students on tobacco smoking***

Twenty seven statements were constructed to detected perception of the students on tobacco smoking in following areas; perceived susceptibility, perceived seriousness, perceived threat on tobacco smoking, perceived benefit and perceived barrier on quitting tobacco products, perception on control activities. Each statement was score as following.

Agreement scale	Score for Positive statements	Score for negative statements
Strongly agree	5	
Agree	4	
Uncertain	3	
Disagree	2	
Strongly disagree	1	

Individual groups of score were sum. Percent based on possible maximum total score were then calculated for each groups of individual perception. Then, the scores were divided into low and high perception score according to individual median value.

## **Results**

Among total 737 first year medical students in the year of 2007, 400 students were participated in this study response rate of 96%, male 213 and female 187 students between the ages of 16-18 yrs old.

### ***Perceived Susceptibility of smoking***

Regarding susceptibility of smoking, most of the students had positive attitude upon harm effect of smoking but statements; 'Smoking of health conscious person should not get adverse effect of smoking', uncertain response was 42.8% i.e. nearly 50%. Besides, 94.3% strongly agree and agree to the statement; smoking is a bad habit. 80.1% strongly disagreed and disagree to the statement; smoking is not harmful to health. 92.4% strongly agreed and agree to the statement; smoking could give harm effect even in healthy person. 87.6% strongly agreed to the statement; Smokers can get more harmful effect to health than non-smoker.

### ***Perceived Seriousness of smoking***

Regarding seriousness of smoking, 94.4% strongly agreed and agreed to the statement; buying a cigarette is just wasting the money. 90.3% strongly agreed and agree to the statement; Young girls should not be smoke because they will become a mother one day. 83% strongly agreed and agree to the statement; Passive smoker should not get adverse effect of smoking. 85% strongly agreed and agree to the statement; smoking is just destroying their own life. 45.1% uncertain to the statement; smoking will died of lung cancer one day.

### ***Perceived threat of smoking***

Regarding threat of smoking, most of the students had positive attitude upon harm effect of smoking. Among the students, 85.3% strongly agree and agree to the statement; smoking can shorten life expectancy. 93.8% strongly agreed to the statement; getting a disease due to smoking might lead to social problem. 76.9% strongly agreed to the statement; People will look down on one who smokes at public place.

### ***Perceived benefit of tobacco quit smoking***

There was over three-fourth of the students (strongly agree and agree response) had perceived benefit on quitting of tobacco smoking. Among the students, 90.3% strongly agreed and agree to the statement; quitting of smoking can save the money. 92.2% strongly agreed and agree to the statement; quitting of smoking lead to better health. Among the students, 60.3% strongly agreed and agree to the statement; quitting of smoking is difficult due to its addictive effect. But only 55.8% strongly agreed and agree to the statement; Quitting of smoking is difficult due to environmental peers.

### ***Perceived on Control measure of smoking***

Regarding perceived control of tobacco smoking, disagree and uncertain percent were found increase than the statements in other areas. Regarding perception on control of smoking the statement, 93.6% strongly agreed and agreed to the statement, 'Health professionals should not be smoke'. 92.3% strongly agreed to and agreed to the statement; 'Smoking of medical students should be prohibited'. 89.8% strongly agreed and agreed to the statement, 'The health education talk and audio-visual show about hazard of smoking'. 61.3% strongly agreed and agree to the statement; 'Health professionals have influence on one's stop smoking'. 89.5% strongly agreed and agree to the statement; Students who smoke in the campus should be punished. 70.3% strongly agreed and agree to the statement; 'University of sport programs can reduce the number of smoker'. 55% strongly agreed and agree to the statement; prohibition of tobacco advertising reduce the number of smokers. 91.6% strongly agreed and agree to the statement; prohibition of smoking in public places is good for both smokers and non-smoker. 28.8% strongly agreed and agree to the statement; Cigarette should be sold by package not in minor. 85.5% agreed and agree to the statement; tobacco products should be sold with the health warning.

In the following statements, the response of uncertain percent was more increase than other statements, such as this statement 'Health professionals have influence on one's stop smoking'. The response of uncertain percent for it was 33.3%. For the other statements, the percentages were as it follows: 'University of sport programs can reduce the number of smoker' (25.8%), 'Prohibition of tobacco advertising reduce the number of smokers (34.2%) and 'Cigarette should be sold by package not in minor' (47.7%). These uncertain responses showed weakness of the control activities in these areas.

### ***Relation between perception of smoking and gender***

Association of gender and attitude towards smoking were analyzed by crosstab and tested by chi-square method. It was found that there were significant association between gender and perception on susceptibility of smoking. Female students had good attitude toward smoking than male student.

## **Discussion**

Among total 737 first year medical students in the year of 2007, 400 students were participated in this study response rate of 96%, male 213 and female 187 students between the ages of 16-18 yrs old.

To explore the perception of students, specific perception questions were asked. Regarding perception of smoking, most of the students had good perception upon most of the statements except perception towards barrier of quit smoking and some statements upon perception towards control activities of smoking. Among these statements, disagree and uncertain percent were found increase than other statements.

Regarding perceived susceptibility and seriousness on harm effects of tobacco smoking, three positive questions and two negative questions were administered under susceptibility on harm effects of tobacco smoking.

Regarding perceived threat on harm effects of tobacco smoking, most of the students had positive attitude upon harm effect of smoking. Although students had perceived threat on cost for treatment and social problem by smoking, 1 in 7 of the students had not have perceived threat on harm effect by just puffing of smoked tobacco products.

Regarding perceived benefit on quitting of smoked tobacco products, there was over three-fourth of the students (strongly agree and agree response) had perceived benefit on quitting of tobacco smoking. Regarding perceived barrier on quitting of smoked tobacco products, among the students, 60.3% strongly agreed and agree to the statement; quitting of smoking is difficult due to its addictive effect. But only (55.8 %) strongly agreed and agree to the statement; Quitting of smoking is difficult due to environmental peers.

In a study by Pessy et al.<sup>21</sup>, on the perceived barriers and motivators to smoking cessation regarding pregnant women smoking, there was 77% who agree to the statement that 'Pregnancy is a time when most women are more motivated to quit than usual', 26% did not agree to the statement "It's harder to quit during pregnancy than other times", and 12% did not agree to the statement 'There is no point in stopping smoking late in pregnancy' 76% agree to the statements "Women will try to quit for their children even if they won't try for themselves".

Regarding perceived control of tobacco smoking, disagree and uncertain percent were found increase than the statements in other areas. Regarding perception on control of smoking the statement, 93.6% strongly agreed and agreed to the statement, 'Health professionals should not be smoke'. 92.3% strongly agreed to and agreed to the statement; 'Smoking of medical students should be prohibited'.

In a study by Sreeramareddy et al., nearly 80% of the students agreed about the following items: medical professionals should be role models by being non-smokers to advice/counsel their patients, smoking among medical professionals is an obstacle for effective implementation of tobacco education and all medical schools should have facilities for smoking cessation. The perceptions of medical students about medical professionals' role in tobacco cessation were statistically significant according to smoking status and gender. Never smokers and female students were likely to respond as 'agree' or 'strongly agree'.<sup>18</sup>

For questions about tobacco education in their medical school curricula, only a third felt that they are being taught adequately about health effects of smoking, and tobacco cessation methods. Nearly half of the students felt that they should be trained about tobacco cessation methods including counselling; current training about tobacco smoking is not systematic and integrated with other disciplines. About half of the students agreed that medical school curricula should include a separate module about tobacco education. Three quarters of the students from Bangladesh agreed about teaching tobacco cessation, and counselling, in a separate module of the medical curriculum.<sup>18</sup>

In our study, 89.8% strongly agreed and agreed to the statement, 'The health education talk and audio-visual show about hazard of smoking'. 61.3% strongly agreed and agree to the statement;



'Health professionals have influence on one's stop smoking'. 89.5% strongly agreed and agreed to the statement; Students who smoke in the campus should be punished. In the following statements, the response of uncertain percent was more increase than other statements, such as 'Health professionals have influence on one's stop smoking'. The response of uncertain percentage was 33.3%.

In a study by Sucakli et al., almost all of the religious officials in the study stated that they should constitute an exemplary model by not smoking among public. Nearly all the respondents recognized smoking as an important health issue for Turkey and expressed their conviction that they should play more active roles in the tobacco control effort.<sup>20</sup>

In a study by Ravara et al., 97.6% of respondents stated that smoking is harmful and 91.8% agreed that the hospital should be smoke free. Most of them (97.3%) believed that tobacco smoke is the principal indoor pollutant and 93.9% agreed with the forthcoming national smoking ban. Most of the hospital staff (74.6%) thought that the national smoking ban would help smokers quit, but only 25.7% admitted complaining about SHS in public places. This physician reported less positive attitudes to tobacco control (TC) policies and less disagreement to SHS exposure. In addition, disagreement with SHS hospital exposure was significantly related to being "role models". Being a smoker was associated with less positive attitudes to hospital smoke-free policy and to the national ban, and with less disagreement with SHS hospital exposure.<sup>15</sup>

## **Conclusion**

The study found out that most of the students had good perception upon most of the statements except perception towards barrier of quit smoking and some statements upon perception towards control activities of smoking. Among these statements, disagree and uncertain percent were found increase than other statements. It was found out that there was significant association between perception and gender and perception and smoking habit. It can be concluded that the student's perception upon legislative measure of smoking was still weak. And also their knowledge on legislative measure of smoking was also low.

Based on the finding, some recommendations were made for strengthening the smoking cessation program among youth also in universities campus including University of Medicine (1) as a smoke-free campus. In this study, their perceptions on tobacco smoking were related with practice of smoking. Their perception would be change by health education methods using individual interview, group discussion and form anti-smoking campaign at University.

**Conflict of Interest:** None declared.

## **References**

1. Backinger CL, Fagan P, Matthews E, Grana R. Adolescent and young adult tobacco prevention and cessation: current status and future directions. *Tob Control* 2003; 12 Suppl IV: iv46-iv53.

2. Lantz PM. Smoking on the rise among young adults: implications for research and policy. *Tob Control* 2003;12 Suppl 1:i60-i70.
3. National Center for Health Statistics. National Health Interview Survey, 2009. Atlanta, GA: U.S. Centers for Disease Control and Prevention. [http://www.cdc.gov/nchs/nhis/nhis\\_2009\\_data\\_release.htm](http://www.cdc.gov/nchs/nhis/nhis_2009_data_release.htm). Accessed October 2, 2012.
4. National Center for Health Statistics. National Health Interview Survey, 2007. Atlanta, GA: U.S. Centers for Disease Control and Prevention. [http://www.cdc.gov/NCHS/nhis/nhis\\_2007\\_data\\_release.htm](http://www.cdc.gov/NCHS/nhis/nhis_2007_data_release.htm). Accessed October 2, 2012.
5. Substance Abuse and Mental Health Services Administration. Results from the 2008 National Survey on Drug Use and Health: National Findings. Rockville (MD): Office of Applied Studies, NSDUH Series H-36, HHS Publication No. SMA 09-4434; 2009.
6. The Global Youth Tobacco Survey Collaborative Group (US Centres for Disease Control and Prevention; the World Health Organization, the Canadian Public Health Association, and the U.S. National Cancer Institute). Tobacco use among youth: a cross country comparison. *Tobacco Control*. 2002, 11: 252-270.
7. World Health. Profile on Implementation of WHO Framework Convention on Tobacco Control in the South-East Asia Region 2011. Available at [www.searo.who.int/LinkFiles/WNTD\\_profile-tfi.pdf](http://www.searo.who.int/LinkFiles/WNTD_profile-tfi.pdf). Assessed June 11, 2011.
8. Jha P, Frank J, Chaloupka, Moore J, Gajalakshmi V, Gupta PC, Peck R, Asma S, and Zatonski W. Disease Control Priorities in Developing Countries. Chapter 46 Tobacco Addiction: 869-885.
9. World Health Organization. World Report on the Global Tobacco Epidemic, 2009: Implementing Smoke-Free Environments. Geneva: WHO, 2009. Available at [whqlibdoc.who.int/publications/2009/9789241563918\\_eng\\_full.pdf](http://whqlibdoc.who.int/publications/2009/9789241563918_eng_full.pdf). Assessed July 2011.
10. Government of Myanmar, Ministry of Health. Brief Profile on Tobacco Control in Myanmar. Yangon, 2009. Available at [http://www.searo.who.int/LinkFiles/Tobacco\\_Free\\_Initiative\\_SEA-TFI-27](http://www.searo.who.int/LinkFiles/Tobacco_Free_Initiative_SEA-TFI-27). DF - Accessed October 2012.
11. World Health Organization. Report on Global Youth Tobacco Survey (GYTS) and Global School Personnel Survey (GSPS) 2007 in Myanmar, New Delhi: WHO-SEARO. Available at [http://www.searo.who.int/LinkFiles/GYTS\\_MMR\\_GYTS\\_GSPS\\_2007.pdf](http://www.searo.who.int/LinkFiles/GYTS_MMR_GYTS_GSPS_2007.pdf) – accessed October 2012.
12. Myanmar GHPSS Medical Fact Sheet. 2009. Available at [www.searo.who.int/LinkFiles/GHPS\\_Myanmar\\_2009\\_Medical.pdf](http://www.searo.who.int/LinkFiles/GHPS_Myanmar_2009_Medical.pdf). Assessed on line 17.1.2012.
13. Glanz K, Marcus Lewis F, Rimer BK. Theory at a glance: a guide for health promotion practice, 2<sup>nd</sup> Ed. Washington DC, National Cancer Institute, National Institute of Health Department of Health and Human Services, 2005.
14. World Health Organization. Tobacco Atlas, second edition, published by American Cancer Society. Available at [http://www.who.int/tobacco/statistics/tobacco\\_atlas/en/](http://www.who.int/tobacco/statistics/tobacco_atlas/en/). Assessed online July 2011.
15. Ravara SB, Calheiros JM, Aguiar P, Barata LT. Smoking behaviour predicts tobacco control attitudes in a high smoking prevalence hospital: A cross-sectional study in a Portuguese teaching hospital prior to the national smoking ban. *BMC Public Health*. 2011; 11: 720.



16. Lucas R, Fraga S, Ramos E, Henrique Barros. Early Initiation of Smoking and Alcohol Drinking as a Predictor of Lower Forearm Bone Mineral Density in Late Adolescence: A Cohort Study in Girls. PLoS ONE. 2012; 7(10): e46940.
17. Freedman KS, Nelson NM MS, Feldman LL. Smoking Initiation Among Young Adults in the United States and Canada, 1998-2010: A Systematic Review. Prev Chronic Dis. 2012;9:110037.
18. Sreeramareddy CT, Suri S, Menezes RG, Kumar HN, Rahman M. Self-reported tobacco smoking practices among medical students and their perceptions towards training about tobacco smoking in medical curricula: A cross-sectional, questionnaire survey in Malaysia, India, Pakistan, Nepal, and Bangladesh. Subst Abuse Treat Prev Policy. 2010; 16;5:29.
19. Lipkus IM, Eissenberg T, Schwartz-Bloom RD, Prokhorov AV, Levy J. Affecting Perceptions of Harm and Addiction among College Waterpipe Tobacco Smokers. Nicotine & Tobacco Research. 2011;13(7): 599-610.
20. Sucakli MH, Ozer A, Celik M, Kahraman H, Ekerbicer HC. Religious Officials' knowledge, attitude, and behavior towards smoking and the new tobacco law in Kahramanmaras, Turkey. BMC Public Health. 2011; 11:602.
21. Passey ME, D'Este CA, Fisher RW. Knowledge, attitudes and other factors associated with assessment of tobacco smoking among pregnant Aboriginal women by health care providers: a cross-sectional survey. BMC Public Health. 2012; 12:165.

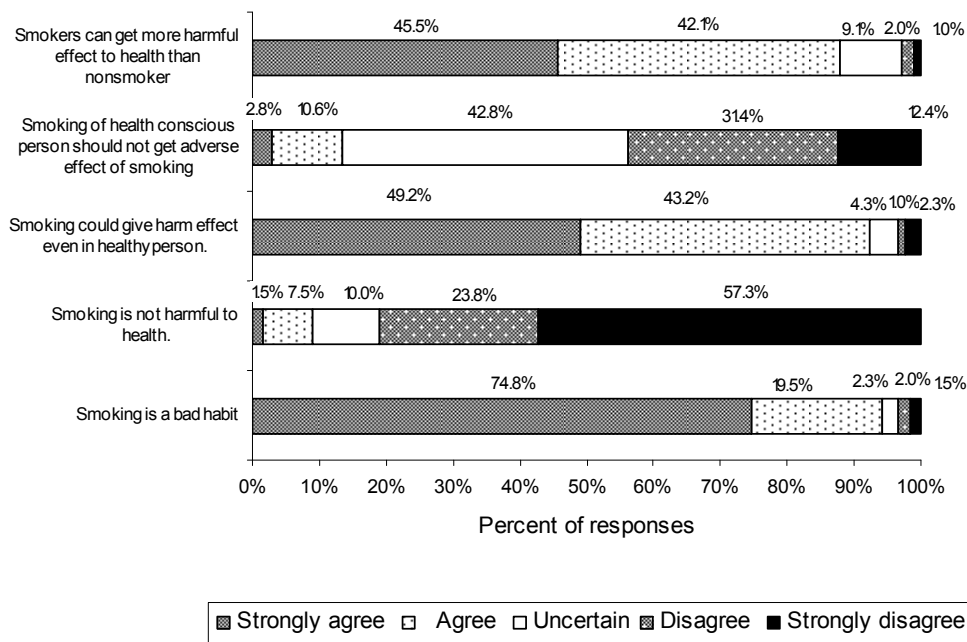


Figure 1: Perception on susceptibility smoking

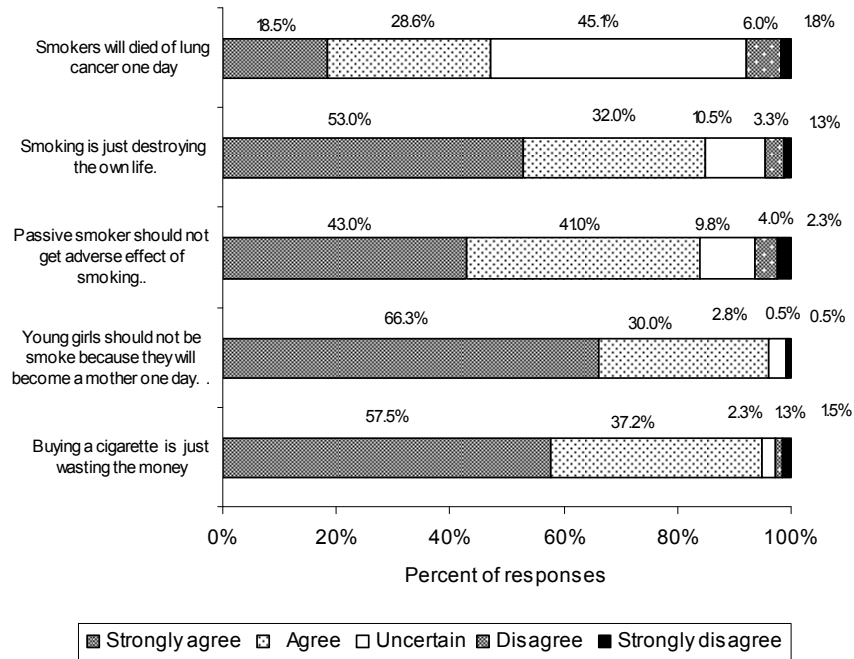


Figure 2: Perception on Seriousness of smoking Statements

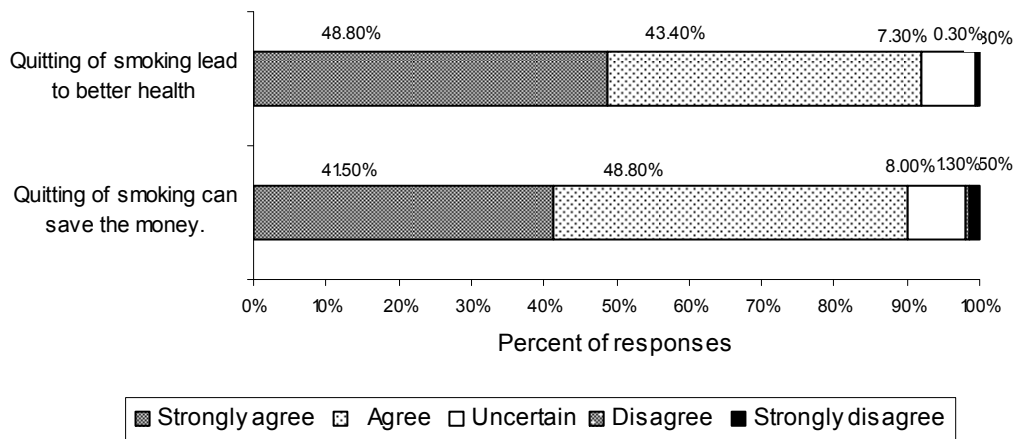


Figure 3: Perception on benefit of quit smoking

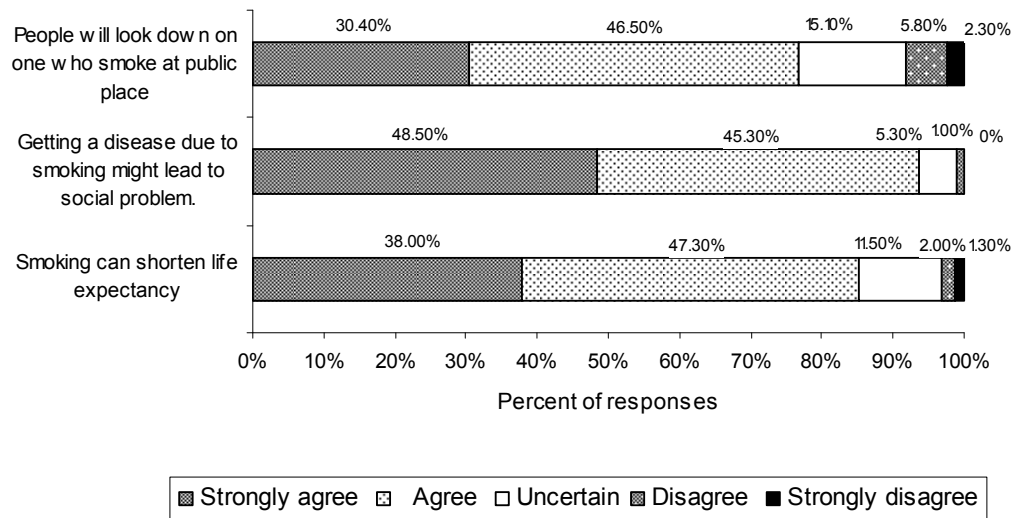


Figure 4: Perception on threat of smoking Statements

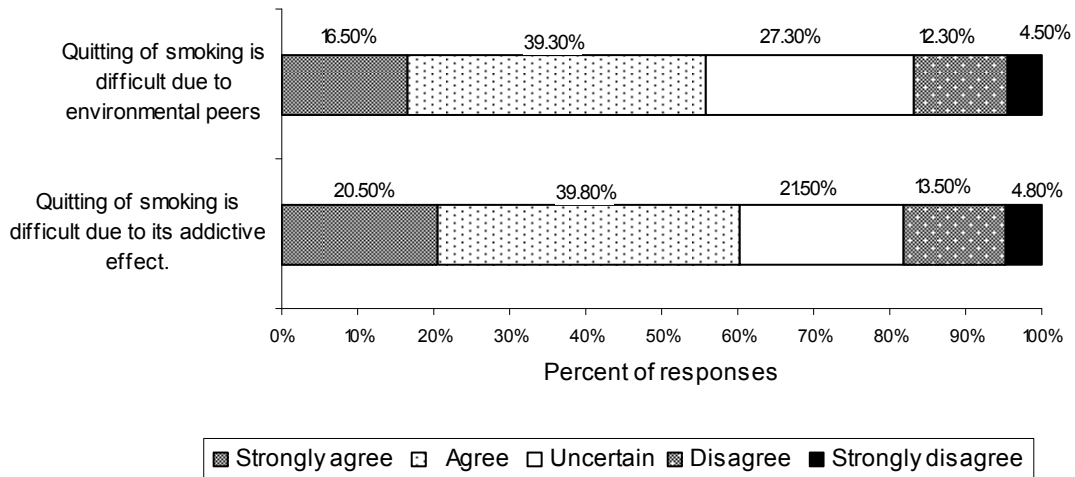


Figure 5: Perception on barrier of quit smoking

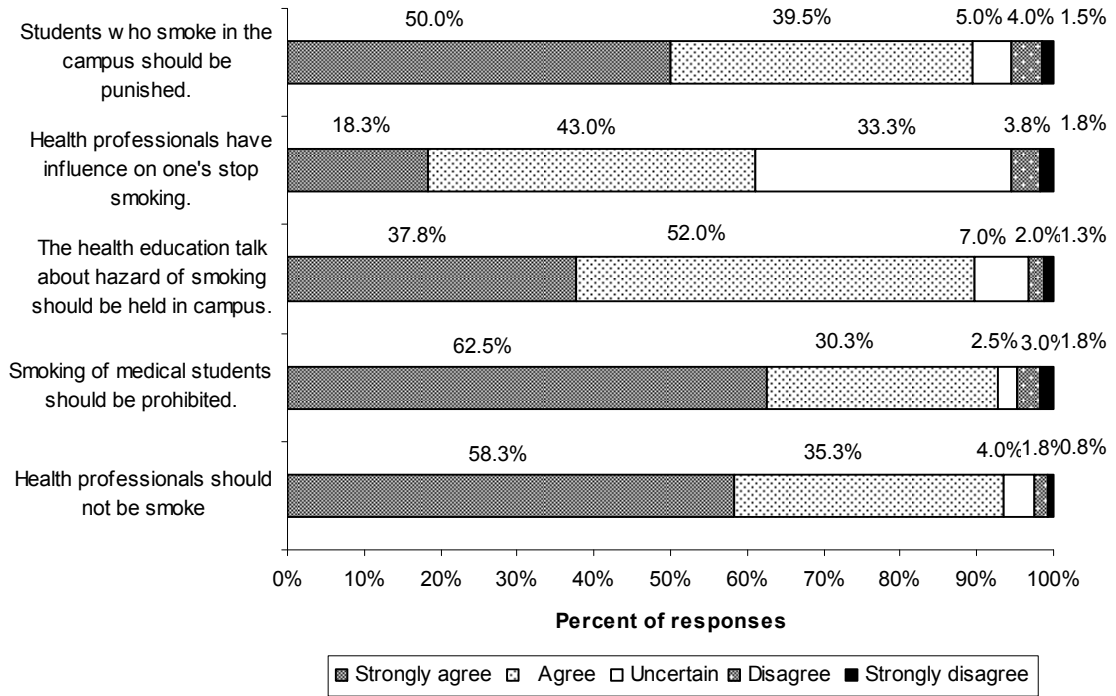


Figure 6.1: Perception on control of smoking

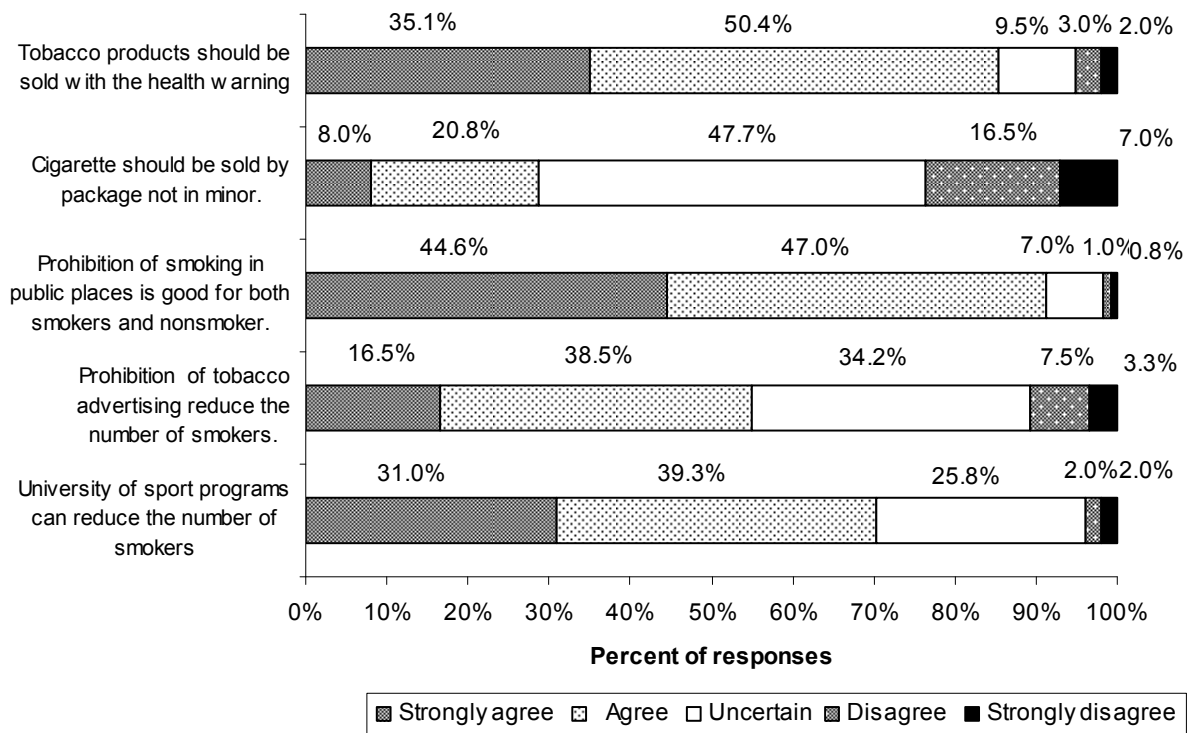
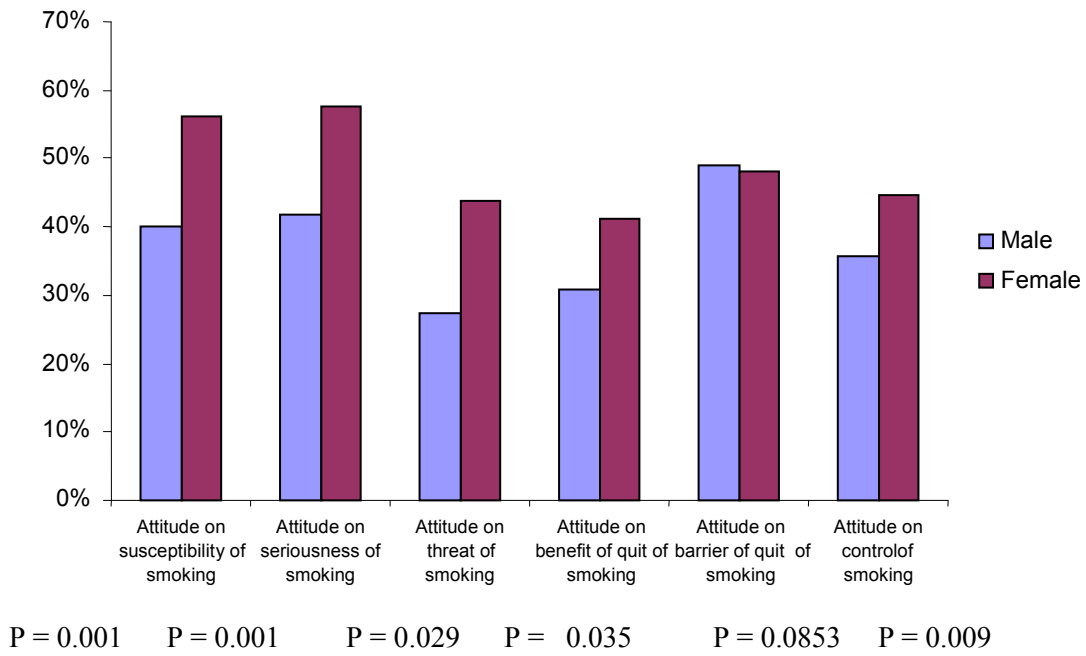


Figure 6.2: Perception on control of smoking



**Figure 7:** Perception on smoking by gender Percent of high perception