

Original article

HEALTH BEHAVIOR OF MEDICAL STUDENTS AT CHIANG MAI UNIVERSITY

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Abstract The health behavior of 1st to 6th year undergraduate medical students at Chiang Mai University was surveyed. From 1,066 medical students, 302 (28.3%) were selected by using stratified random sampling. Fourteen students with health risk behavior were described as follows: failing to have a physical examination (check up) in the past year (85.7%); never or rarely wearing a motorcycle crash helmet (85.1%), failing to have a dental examination (check up) in the past year (46.6%), never or rarely using a car seatbelt (42.2%), not exercising regularly (37.9%), never or rarely using a car seatbelt when driving (25.0%), drinking alcoholic beverages about 1 hour before driving a car (20.5%), drinking alcoholic beverages (20.0%), consuming stimulating drinks (9.3%), drinking alcoholic beverages about 1 hour before riding a motorcycle (9.2%), taking sleeping pills to help sleep or relaxation (8.0%), no interest in learning about health (5.4%), having unprotected casual sexual intercourse in the last six months (2.7%), and often or occasionally smoking cigarettes (1.6%).

A level of 5% was significant when comparing between 14 students with health risk behavior. In each academic year, no difference was found in any risk behavior apart from alcohol consumption, in which students in their first year were significantly different to those in the clinical year. For energy enhancing drink consumption, there was a difference between first and the second year students. Factors that related to alcohol consumption were drinking alcohol one hour before riding a motorcycle, drinking alcohol one hour before driving a car, academic year, smoking and exercise. **Chiang Mai Med Bull 2005;44(4):121-127.**

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Behavior is a factor that indicates the health of an individual. Former studies have shown that many diseases are derived from risk behavior such as inappropriate food consumption, smoking, drinking alcohol, lack of exercise, lack of road safety, unsafe sex, and no health service, all of which can cause non-

transmitted diseases and create large problems for countries including Thailand. Moreover, a number of surveys have indicated that differences of social and economic status influence health behavior.^(1,2)

Medical students are a high risk group. Therefore, the study of health behavior is nec-

essary in order to provide information that would be beneficial for faculty policy development, directions, and prevention of student activities that lead to health risk behavior. Besides, health promotion is in line with the reformation of the National Health Service System strategy, i.e. 'Prevention is better than cure'. Therefore, the purpose of this study was to explore the health behavior of medical students and examine behavioral factors that affect their health.⁽³⁻⁶⁾

Subjects and methods

Undergraduate medical students, from the first to sixth year, were randomized by stratified random sampling. From a total of 1,067 medical students at Chiang Mai University, 302 (28.3%) were chosen as subjects.

A questionnaire was used to ascertain the health behavior of students. It comprised a set of questions that asked for basic information including risky health behavior, which consisted of 14 items, i.e. smoking (rarely, often or usually), drinking alcoholic beverages (yes), wearing a crash helmet when riding on a motorcycle (never or rarely), drinking alcoholic beverages before riding a motorcycle (yes), using a seatbelt when driving a car (never or rarely), drinking alcoholic beverages about 1 hour before driving a car (yes), using a seatbelt when seated in a car (never or rarely), having unprotected casual sexual intercourse in the last 6 months (yes, 1-2 times and more than 2 times), taking sleeping pills to help sleep or relaxation (yes), taking stimulating drinks (yes), exercising regularly (lacking), being interested in learning about health (no), having a dental check up (no), and having a physical check up (no).

Data analyses

The collected data were compiled and pro-

cessed by SPSS for Windows. The analysis included descriptive and analytical statistics by comparing the risk behavior of medical students in each academic year, using Kruskal Wallis technique. Regression with optimal scaling: category regression; was used in analyzing the factors that affect alcohol drinking.⁽⁷⁾

Results

Of 302 subjects, 52.3% were female. One hundred and forty three of the students (47.3%) entered university through the quota examination, while 124 (41%) went through by the entrance examination. Most of the students, 265 (87.7%), stayed at dormitories on the campus. Regarding monthly allowance, most students received about 3,000-4,000 Baht per month. The majority of students, 242 (80.1%), believed that they were in good health, and 28 students (9.3%) felt that they enjoyed very good health. The term 'good health' for most of the medical students (33.9%) referred to being physically, mentally, socially, and spiritually happy. However, 19.3% of the students regarded the term 'good health' as being in a nice environment. With regard to health responsibility, 56.2% of the students believed that they should be responsible for his or her own health. However, 39.1% of the students felt that a physician or health officer should be responsible. Nevertheless, 86.6% of the students believed that they should take care of their health at all times, while 7.4% felt that students should only be concerned about their health when they were ill.

Health behavior data

This study found that the most frequent risk behavior, which occurred in more than 80% of the students, was failing to have a physical check up and not wearing crash helmets. The

least frequent risk behavior was smoking. Details are shown in Table 1.

The risk behavior analysis of medical students in each academic year

A comparison of risk behavior among academic year medical students was performed by using the Kruskal Wallis technique. The results are demonstrated in Table 1.

Table 1 shows that a 5% level of significance bore no difference in the risk behavior of medical students in years 1-6, except for drinking alcoholic beverages and taking energy enhancing drinks. Regarding alcoholic beverage consumption, a clinical category difference was discovered in the 4th-6th academic year. With respect to the incidence of taking energy enhancing drinks, a difference between the first and second year students was seen. These findings might result from changes in the study environment, when second year medical students move from the main to Faculty of Medicine campus, where they have to study harder. Moreover, the general format and teaching and learning methods change. These factors could lead to the use of energy enhancing drinks. Students in higher academic years adapt better to a changing environment. It is noteworthy that students resume taking energy enhancing drinks in their 4th year, when internship commences, i.e. interaction with patients.

The relationship between behavior and certain factors by using Regression with Optimal Scaling: Category Regression at a 0.05 level of significance can be concluded as follows.

1. The behavior of drinking alcoholic beverages

By analyzing some variables, health behavior and basic data relevant to alcoholic

beverage consumption, a 0.05 level of significance was determined. Variables that were associated with the behavior of drinking alcoholic beverages are summarized in Table 2.

It was concluded from Table 2 that the behavior of drinking alcoholic beverages was associated with the following factors: consumption of alcohol before riding a motorcycle, drinking about 1 hour before driving a car, academic year, smoking cigarettes and exercising.

2. The incidence of taking energy enhancing drinks

By using the Regression with optimal scaling; category regression was found at a 0.05 level of significance in two variables that were associated with taking energy enhancing drinks, as shown in Table 3.

Table 3 shows that drinking alcoholic beverages before riding a motorcycle and current academic year were significantly associated with the use of energy enhancing drinks. However, most medical students had never taken energy enhancing drinks. From the sampled group, only 27 students had taken the drinks, and that number was considered too small for significance. Therefore, other possible factors might affect the behavior of taking energy enhancing drinks. As this research aimed to learn about health behavior as a whole among medical students, a study of risk behavior in particular areas is needed; specifically on risk groups, so that findings can be confirmed.

Discussion

According to basic information on health risk behaviour, this study revealed that not having had a physical examination in the past year was the most common. This might imply that medical students do not take care of their health

Table 1. The demonstration of medical student's risky health behavior in percentage

| Risky behavior | Student's academic year | First (%) | Second (%) | Third (%) | Fourth (%) | Fifth (%) | Sixth (%) | Total (%) | p value |
|--------------------------------------------------------------------------|-------------------------|---------------|---------------|---------------|---------------|---------------|-----------|-----------|---------|
| 1. Not having had a physical examination for check up in the past year | 26/31 (83.87) | 58/70 (82.81) | 54/61 (88.52) | 41/49 (83.67) | 39/44 (88.67) | 34/39 (87.17) | 85.7 | 0.915 | |
| 2. Never or rarely wearing a helmet | 5/9 (55.55) | 34/40 (85.00) | 34/39 (87.18) | 27/31 (87.1) | 27/30 (90.00) | 21/25 (84.00) | 85.1 | 0.327 | |
| 3. Not having had a dental examination for check up in the past year | 15/31 (48.39) | 29/70 (41.43) | 32/61 (52.46) | 21/49 (42.86) | 21/44 (47.73) | 19/39 (48.72) | 46.6 | 0.850 | |
| 4. Never or rarely fastening a seatbelt when seated in a car | 5/27 (18.52) | 27/64 (42.19) | 26/54 (48.15) | 21/42 (50.00) | 18/39 (46.15) | 13/35 (37.14) | 42.2 | 0.192 | |
| 5. Did not exercise regularly | 8/31 (25.81) | 27/70 (38.57) | 21/61 (34.42) | 21/49 (42.86) | 14/46 (30.43) | 21/39 (53.85) | 37.9 | 0.154 | |
| 6. Never or rarely fastening a seatbelt when driving | 3/13 (23.08) | 7/36 (19.44) | 5/26 (19.23) | 10/26 (38.46) | 6/27 (22.22) | 6/20 (30.00) | 25.0 | 0.203 | |
| 7. Drinking alcoholic beverages about 1 hour before driving | 1/14 (7.14) | 9/39 (23.08) | 6/25 (24.00) | 4/25 (16.00) | 5/28 (17.86) | 6/20 (30.00) | 20.5 | 0.640 | |
| 8. Drinking alcoholic beverages | 1/31 (3.23) | 14/70 (20.00) | 8/61 (13.11) | 12/49 (24.49) | 13/47 (27.66) | 12/40 (30.00) | 20.0 | 0.35* | |
| 9. Having taken energy drinks | 0/31 (0.00) | 13/64 (20.31) | 3/61 (4.92) | 7/49 (14.29) | 2/44 (4.55) | 2/39 (5.13) | 9.3 | 0.004* | |
| 10. Drinking alcoholic beverages about 1 hour before riding a motorcycle | 0/29 (0.00) | 8/63 (12.70) | 2/56 (3.57) | 6/42 (14.29) | 3/44 (6.82) | 6/37 (16.22) | 9.2 | 0.084 | |
| 11. Having taken sleeping pills to help in sleeping or relaxing | 1/31 (3.22) | 8/64 (12.50) | 2/61 (3.28) | 7/49 (14.29) | 2/44 (4.45) | 3/39 (7.69) | 8.0 | 0.162 | |
| 12. Not interested in learning about health | 1/31 (3.22) | 1/70 (1.43) | 2/61 (3.28) | 3/49 (6.12) | 3/44 (6.82) | 6/39 (15.38) | 5.4 | 0.058 | |
| 13. Having had sexual intercourse in the last six months | 0/30 (0.00) | 2/69 (2.90) | 0/61 (0.00) | 3/48 (6.25) | 1/44 (2.27) | 2/39 (5.13) | 2.7 | 0.345 | |
| 14. Smoking cigarettes Often or occasionally | 0/31 (0.00) | 1/70 (1.43) | 0/61 (0.00) | 3/49 (6.12) | 0/47 (0.00) | 1/40 (2.50) | 1.6 | 0.135 | |

Table 2. The variables associated with drinking alcoholic beverages.

| Variable | Standardized coefficients | F | p |
|------------------------------------------------------------------|---------------------------|--------|-------|
| | Beta | | |
| • Drinking alcoholic beverages before riding a motorcycle | .347 | 38.663 | .000* |
| • Drinking alcoholic beverages about 1 hour before driving a car | .250 | 19.760 | .000* |
| • Academic year | .176 | 13.549 | .000* |
| • Smoking | .104 | 4.364 | .038* |
| • Exercising | .095 | 3.930 | .048* |

*There is a significance at $p < 0.05$

Table 3. The variables that affect the incidence of taking neural stimulating beverages.

| Variable | Standardized coefficients | F | p |
|------------------------------------------------------------------|---------------------------|--------|-------|
| | Beta | | |
| • Drinking alcoholic beverages 1 hour before riding a motorcycle | .305 | 29.197 | .000* |
| • Academic year | -.152 | 7.255 | .000* |

*There is a significance at $p < 0.05$

because of many factors such as studying too hard, feeling in a good health, no abnormal symptoms, no system to take care of their health, etc. There were few differences in risk behavior when comparing medical students at Chiang Mai University, but smoking was performed the least.

Alcohol consumption and smoking tended to accompany each other and the authorities should seriously consider how to prevent and control this risk behavior. We cannot solve health risk behavior by dealing with only one factor because it is a complex issue related to the psycho – social – environment system. When all health risk behavior among medical undergraduate students in each year is compared, this study shows that there is no difference between them except for alcohol and energy enhancing drink consumption. Therefore, if the Faculty of Medicine at Chiang Mai University would like to solve this problem, other factors should be kept in mind too

because health risk behavior is multi factorial.

Lastly, behavior is a prime factor determining individual health. The cause of many diseases comes from simultaneous behavior such as smoking and alcohol drinking together.^(1-2,9-13) Chiang Mai University students have a similar educational background and age. During this age group, regular attendance in a health promotion program can prevent many diseases. This would eventually create a healthy life for the future. Under the development of the health promotion program, the Ottawa health promotion strategy^(3-6,8) and life style modification can be applied to all sectors with the cooperation of the University committee, Faculty staff, health organization, and student organization. However, this goal cannot succeed without the student's cooperation. Students should eagerly participate in the program and take very good care of their own health.

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พฤติกรรมสุขภาพของนักศึกษา คณะแพทยศาสตร์ มหาวิทยาลัยเชียงใหม่

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บทคัดย่อ การศึกษาข้อมูลพฤติกรรมสุขภาพของนักศึกษาแพทย์โดยการสุ่มตัวอย่างนักศึกษาระดับปริญญาตรีแต่ละชั้นปี รวม 6 ชั้นปี อย่างเป็นสัดส่วนกันโดยใช้การสุ่มตัวอย่างแบบแบ่งเป็นชั้นภูมิ (stratified random sampling) ได้จำนวนตัวอย่างจำนวน 302 ราย จำนวน 1,066 ราย คิดเป็นร้อยละ 28.3 พบว่าพฤติกรรมเสี่ยงของนักศึกษาแพทย์ 14 ด้าน เรียงตามลำดับดังนี้ ไม่เคยตรวจสุขภาพในรอบ 1 ปีที่ผ่านมา คิดเป็นร้อยละ 85.7 การสวมหมวกนิรภัย (ไม่เคยสวม, สวมน้อยครั้ง) คิดเป็นร้อยละ 85.1 ไม่เคยตรวจฟันในรอบ 1 ปีที่ผ่านมา คิดเป็นร้อยละ 46.6 การคาดเข็มขัดนิรภัย เวลาโดยสารรถยนต์ (ไม่เคยคาด, เคยคาดแต่น้อยครั้ง) คิดเป็นร้อยละ 42.2 ไม่มีการออกกำลังกายเป็นประจำ คิดเป็นร้อยละ 37.9 การคาดเข็มขัดนิรภัยเวลาขับรถ (ไม่เคยคาด, เคยคาดแต่น้อยครั้ง) คิดเป็นร้อยละ 25.0 การดื่มเครื่องดื่มที่มีแอลกอฮอล์ประมาณ 1 ชั่วโมงก่อนขับรถ (เคยทำ) คิดเป็นร้อยละ 20.5 การดื่มเครื่องดื่มแอลกอฮอล์ คิดเป็นร้อยละ 20.0 การเคยใช้เครื่องดื่มกระตุ้นประสาท คิดเป็นร้อยละ 9.3 การดื่มเครื่องดื่มแอลกอฮอล์ ประมาณ 1 ชั่วโมงก่อนขับรถจักรยานยนต์ (เคยทำ) คิดเป็นร้อยละ 9.2 การเคยใช้ยานอนหลับเพื่อช่วยให้นอนหลับหรือคลายเครียด คิดเป็นร้อยละ 8.0 ความไม่สนใจใฝ่หาความรู้เรื่องสุขภาพ คิดเป็นร้อยละ 5.4 การมีเพศสัมพันธ์ใน 6 เดือนที่ผ่านมา คิดเป็นร้อยละ 2.7 การสูบบุหรี่ (สูบน้อยครั้ง, สูบนานครั้ง) คิดเป็นร้อยละ 1.6 ที่ระดับนัยสำคัญ 5 % เมื่อเปรียบเทียบพฤติกรรมเสี่ยงทั้งหมดในแต่ละชั้นปีพบว่าส่วนใหญ่ไม่มีความแตกต่างกัน ยกเว้นพฤติกรรมการดื่มเครื่องดื่มแอลกอฮอล์ และการเคยใช้เครื่องดื่มชูกำลังของนักศึกษาแพทย์ อย่างน้อย 2 ชั้นปีที่มีความแตกต่างกัน และปัจจัยที่มีผลต่อพฤติกรรมการดื่มเครื่องดื่มแอลกอฮอล์มากที่สุด ได้แก่ การดื่มเครื่องดื่มแอลกอฮอล์ก่อนขับรถจักรยานยนต์ การดื่มเครื่องดื่มแอลกอฮอล์ ประมาณ 1 ชม. ก่อนขับรถยนต์ ชั้นปี การสูบบุหรี่ และการเล่นกีฬา ตามลำดับ **เชียงใหม่เวชสาร 2548;44(4):121-127.**

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