

การใช้ยารักษาตนเองและปัจจัยที่เกี่ยวข้อง ในกรุงเทพมหานคร ประเทศไทย

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บทคัดย่อ

ความเป็นมา : การใช้ยารักษาตนเอง เป็นการใช้ยาโดยไม่มีใบสั่งแพทย์ซึ่งมีประโยชน์ต่อทั้งประชาชนและบุคลากรทางการแพทย์ อย่างไรก็ตามการใช้ยารักษาตนเองอย่างไม่เหมาะสมทำให้เกิดความเสี่ยงได้ บุคลากรทางการแพทย์มีหน้าที่รับผิดชอบในการดูแลให้เกิดการใช้ยาอย่างปลอดภัยในประชาชน

วัตถุประสงค์ : เพื่อศึกษาพฤติกรรมการใช้ยารักษาตนเอง ความรู้ในการใช้ยา ความรอบรู้ด้านการใช้ยา และปัจจัยที่มีผลต่อพฤติกรรมการใช้ยารักษาตนเองของประชาชน ในกรุงเทพมหานคร ประเทศไทย

วิธีการศึกษา : การศึกษาแบบภาคตัดขวางดำเนินการในกรุงเทพมหานครระหว่างมกราคม ถึง กุมภาพันธ์ พ.ศ. 2564 เก็บข้อมูลด้วยวิธีการสัมภาษณ์แบบเผชิญหน้า โดยใช้แบบสอบถามแบบมีโครงสร้าง จากผู้ตอบแบบสอบถามจำนวน 383 ราย วิเคราะห์ข้อมูลด้วยสถิติเชิงพรรณนา และสถิติเชิงอนุมาน

ผลการศึกษา : ผู้ตอบแบบสอบถาม ร้อยละ 67.60 มีพฤติกรรมการใช้ยารักษาตนเอง ในช่วง 12 เดือนที่ผ่านมา ใช้ยาลดไข้ (ร้อยละ 25.20) และ ยาแก้ปวดศีรษะ (ร้อยละ 21.60) แหล่งข้อมูลหลัก คือ เภสัชกร (ร้อยละ 28.80) และเหตุผลของการใช้ยารักษาตนเองเนื่องจากเป็นโรคที่ไม่ซับซ้อน (ร้อยละ 40.90) ผู้ตอบแบบสอบถาม ร้อยละ 57.20 และ 55.60 มีความรู้เกี่ยวกับการใช้ยาอยู่ในระดับน้อย และ ความรอบรู้ด้านการใช้ยาในระดับต่ำ ปัจจัยที่มีผลต่อพฤติกรรมการใช้ยารักษาตนเอง คือ รายได้ต่อเดือน (adjOR : 3.69; 95%CI: 1.11-12.25) การมีโรคเรื้อรัง (adjOR : 0.42; 95%CI: 0.18-0.97), และความรู้ด้านการใช้ยา (adjOR : 0.41; 95%CI: 0.19-0.89)

สรุปและข้อเสนอแนะ : ผลการศึกษานี้แสดงให้เห็นว่า โดยทั่วไป ประชาชนใช้ยารักษาตนเองสำหรับโรคที่เป็นความเจ็บป่วยเล็กน้อยและเข้าถึงยาได้ง่าย ปัจจัยรายได้ โรคประจำตัว และความรู้ด้านการใช้ยามีผลต่อพฤติกรรมการใช้ยารักษาตนเองอย่างมีนัยสำคัญ บุคลากรทางการแพทย์โดยเฉพาะเภสัชกรชุมชนควรเพิ่มการให้ความรู้เกี่ยวกับการใช้ยารักษาตนเองที่เหมาะสมแก่ประชาชน

คำสำคัญ : การใช้ยารักษาตนเอง ความรู้ในการใช้ยา ความรอบรู้ด้านการใช้ยา กรุงเทพมหานคร ประเทศไทย

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SELF-MEDICATION PRACTICE AND ITS ASSOCIATED FACTORS IN PHNOM PENH, CAMBODIA

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ABSTRACT

BACKGROUND: Self-medication, which is the practice of taking the medication without any prescriptions, is beneficial for the general public as well as health professionals. However, risks that caused by inappropriate practice cannot be overlooked. The responsibility of health personnel to aid people self-medicate safely is needed.

OBJECTIVE: To investigate self-medication practice, knowledge of medicine use, medication literacy, and factors affecting self-medication practice among people in Phnom Penh, Cambodia.

METHODS: A cross-sectional study was undertaken in Phnom Penh from January to February 2021. A structured questionnaire with face-to-face interviews was employed to collect data from 383 respondents. Data were analyzed using descriptive and inferential statistics.

RESULTS: Among study respondents, 67.60% stated to practice self-medication in the last 12 months. The commonly used medication was antipyretic (25.20%) and a health complaint was headache (21.60%). A pharmacist (28.80%) was the main source of information and uncomplicated disease condition (40.90%) was the leading reason for self-medication practice. It was found that 57.20% and 55.6% of study respondents were in low level of knowledge of medication use and critical medication literacy respectively. Monthly income (adjOR: 3.69; 95%CI: 1.11-12.25), chronic disease (adjOR : 0.42; 95%CI: 0.18-0.97), and medication literacy (adjOR: 0.41; 95%CI: 0.19-0.89) were the three factors which influenced self-medication practice.

CONCLUSIONS AND RECOMMENDATIONS: The results of this study illustrated that self-medication was common among study population with minor illness and easy to access medicines. Variables including income, chronic disease, and medication literacy were significantly affected self-medication practice. Health professionals, especially community pharmacists should provide more education about appropriate self-medication practice.

KEYWORDS: self-medication, knowledge of medication use, medication literacy, Phnom Penh, Cambodia

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BACKGROUND

Self-medication is defined by World Health Organization (WHO) as “the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms”¹. Lifestyle, demographic, socioeconomic, epidemiologic, accessibility, and availability of medicines are the factors impact on the increasing amount of self-medication practice¹. Generally, over-the-counter medicines are used for self-medication because people think they are safe^{2,3}. Over-the-counter or OTC medicine, or non-prescription medicine is the medicine that is available and can be bought without prescription from doctors⁴.

There are several sectors can receive benefit from self-medication practice⁵. First, it allows lay people to participate in their own health management by allowing them to diagnose and treat themselves without having to see a doctor. Second, the rising self-medication practice can expand the pharmaceutical industry market. Third, it can be an advantage for healthcare professionals such as reducing the workload of physician and enhance clinical role of community pharmacist. Fourth, government as well as individual can save their healthcare cost. However, there is a number of risks that we cannot deny if it is an inappropriate self-medication practice⁵. Misdiagnose of some diseases may lead to delaying the best treatment timing or symptoms masking.

Additionally, inappropriate use of medications such as polypharmacy may cause the patient serious side effects or drug interactions. For these reasons, it can illustrate that pharmacists play a very essential role in assisting people to self-medicate because they are the healthcare professional that stay the closest and the most convenience to contact by people. As stated by WHO, pharmacists are the communicators, quality medicine suppliers, trainer and supervisors, collaborators, and health promoters¹.

In Cambodia, medicines are divided into two categories by law: non-prescription and prescription-only medicines. Prescription-only medications can be purchased without a prescription. Generally, when people get sick such as pain, fever, or other diseases that they think it is mild, most of them will consider a community pharmacy as their first choice to buy some medicines. According to the results of a research showed that in Battambang, 58% of medicines were bought without prescription and 84% in Phnom Penh city⁶. Moreover, there is a study stated that 49.90% of their participants' self-medicated with antimicrobial and only 13.30% of them knew about the information of antimicrobial use⁷. Broad-spectrum antibiotic self-medication was widely spread because of misapprehension of antibiotics indication to treat fever, pain, inflammation or common cold⁸.

Additionally, there are limited studies on self-medication in Cambodia. Therefore, it is essential to do research on self-medication practice in order to inform the general public, health authorities, and health professionals about the proportion of people who self-medicate and to promote knowledge about appropriate self-medication.

OBJECTIVES

The objectives of this study were to determine self-medication practices, knowledge about medication usage, medication literacy, and factors affecting self-medication practices among residents of Phnom Penh, Cambodia.

METHODS

This was a quantitative, cross-sectional study conducted between January and February 2021. The study location was in four public parks located in Phnom Penh, which is the capital city of Cambodia and the center of business development as well as health facilities.

POPULATION AND SAMPLE

Study population was the residents living in Phnom Penh more than six months with the age of 18 years old and above. Respondents who could not understand or answer questions in Khmer language or had mental or physical problem that were not able to provide response were excluded. The sample size was calculated as 383 respondents by considering 95% confidence interval, 5% margin of error and following the prevalence of previous study in Ras Al-Khaimah,

United Arab Emirates, which was 52.1%⁹. A convenient sampling technique was applied, and respondents were interviewed by trained research assistant with structured questionnaire.

RESEARCH INSTRUMENT

A structured questionnaire was based on a review of previous studies^{2, 10-14}. It consisted of 4 parts. The 1st part's questions were related to self-medication prevalence, frequently use medicines and health complaint, sources of information and reasons. The 2nd part was measuring participants' knowledge of medicine use by answering 10 items of "Yes, No, Do not know" questions. The 3rd parts were determining participants' medication literacy using six multiple choice questions with only one correct answer. The last part was about sociodemographic characteristics.

The questionnaire was initially written in English; then translated into Khmer language and back into English to check accuracy by a local pharmacist. Validity of questionnaire was assessed by three experts for its contents, readability, comprehensiveness, and appropriate wording with an index of item objective congruence (IOC). The result of IOC score was between 0.67 and 1; and difficulty index was between 0.07 and 0.63. A pre-test of 30 samples was done within Cambodian to check comprehensiveness and sequence of the questions; then difficulty index of questions about knowledge of medicine use was assessed to each item.

DATA COLLECTION

Data collection was performed by face-to-face interview with structured questionnaire which took time around 15 minutes. Five research assistants were initially trained by an expert and the researcher about interviewing technique and details of questionnaire via online class before data collection. While collecting data, online survey application (Kobo toolbox) was used instead of paper-based questionnaire, and face masks were always used to reduce the risk of direct contact with COVID-19 patients.

DATA ANALYSIS

Data were analyzed by program computer²¹. Categorical variables were expressed as percentage while continuous variables were presented as median (inter-quartile range). Multiple logistic regressions were used to determine factors associated with self-medication practice. P-value < 0.05 was considered as statistically significant.

ETHICAL CONSIDERATION

This study received ethical approval from the Cambodia National Ethics Committee for Health Research (Ref. No. 299 NECHR). Due to COVID-19 outbreak, verbally inform consent was obtained instead of written to inform consent from individuals who agreed to participate in the study.

RESULTS

Sociodemographic characteristics

A total of 383 respondents participated in the study and 56.4% was female. The majority (71.30%) were in the age group of 18-29 years old. A great number of respondents (77.50%) were in university or postgraduate degree and students were the leading occupation (42.80%). Approximately 20% of the respondents had an average monthly income between \$251 to \$500. Only 11% of them were healthcare professionals. Almost one-third had healthcare coverage. Less than a quarter of respondents stated that they were having chronic diseases (Table 1).

Self-medication practice

The prevalence of self-medication practice was found among two-thirds of respondents during the last 12 months (Table 2).

The frequently used medicine was antipyretics (25.20%) and analgesics (24.90%) as shown in Figure 2. Meanwhile, headache (21.60%), common cold (20.90%), and fever (19.40%) were the common complaint diseases in self-medication practice (Figure 3).

Pharmacists (28.80%) were the redominant source of information followed by medicine seller (19.90%) and family (16.30%). Mild disease condition was the leading reason for self-medication while prior experience/ familiarity with the medicine (24.80%) and saving time (17.50%) were also the noticeable reasons (Table 3).

Table 1 Sociodemographic characteristics of study respondents (n=383)

Characteristics	Percentage
Gender	
Male	43.60
Female	56.40
Age group (years)	
18 - 29	71.30
30 - 39	15.40
40 - 49	7.60
50 - 59	3.10
60 and older	2.60
Education level	
Elementary	2.60
Secondary	4.20
High school	14.90
Vocational training	0.80
University/postgraduate	77.50
Occupation	
Student	42.80
Private company employee	33.70
Government officer	10.40
Self-employed/Own business	7.00
Housewife	2.60
Retired	2.10
Unemployed	1.00
Others	0.30
Healthcare professional	
Yes	11.20
No	88.80
Average monthly income (n=259)	
≤100\$	12.80
101\$-250\$	13.60
251\$-500\$	19.80
501\$-1000\$	16.20
≥1001\$	5.20
Healthcare coverage	
Yes	30.30
No	69.70
Chronic disease	
Do not know	2.90
No	74.40
Yes (e.g., hypertension, diabetes, cardiovascular diseases, asthma, allergic, migraine, HBV)	22.70

Table 2 Prevalence of self-medication practice in the last 12 months

In the last 12 months, have you ever bought or used medicine without prescription?	Percentage
Yes	67.60
No	32.40

Table 3 Source of information and reasons for self-medication

Items	Percentage
Sources of information	
Pharmacist	28.80
Medicine seller	19.90
Family	16.30
Previous prescription/experience	9.80
Advertisement on media (e.g., internet, TV, radio)	8.00
Physician/nurse (without prescription)	5.10
Friends	4.50
Drug leaflet/label	2.90
Others (e.g., own self)	4.70
Reasons	
Disease is not serious/minor illness	40.90
Prior experience/familiar with the medicine	24.80
Saving time	17.50
Saving money	10.00
Emergency use	6.10
Others	0.60

Table 4 knowledge level on medication use

Level of knowledge	Percentage
High level (knowledge score > 4)	42.80
Low level (knowledge score ≤ 4)	57.20
Median=4, Min=0, Max=10	

Knowledge of medicine use

Total score of knowledge about the indication and risk of medicine use was measured and more than half (57.20%) of respondents were in a low level of knowledge (Table 4).

As shown in Table 5, it was noticeable that a greater percent of respondents known about the indication of paracetamol (68.70%) and were aware about the risk of taking with alcohol (71.80%). On the other hand, according to antibiotics, only 20% of them knew about their side effect and 27% misunderstood that antibiotics were the same as anti-inflammatory drugs.

Medication literacy

In terms of medication literacy, it was divided into three levels: functional, interactive, and critical medication literacy. Over half (55.6%) of respondents were in critical medication literacy (Table 6).

Factors affecting self-medication practice

Multiple logistic regressions were performed between socio-demographic characteristics, knowledge, medication literacy, and self-medication. At p -value < 0.05, there were three factors shown significant association (Table 7). Respondents whose monthly income in the range of \$501-\$1000 were 3.69 times (adjOR: 3.69; 95%CI: 1.11-12.25) more likely to use self-medication than those who \$100 or less. Nevertheless, respondents who did not know whether they had chronic diseases were 58% (adjOR: 0.42; 95%CI: 0.18-0.97) less likely to self-medicate than those who had no chronic diseases. Moreover, respondents who were in critical medication literacy were 59% (adjOR: 0.41; 95% CI: 0.19-0.89) less likely to practice self-medication than those who were in functional medication literacy.

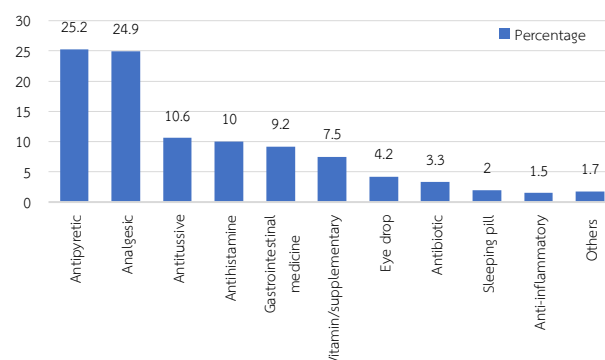


Figure 2 Type of medicine use in self-medication (n=259)

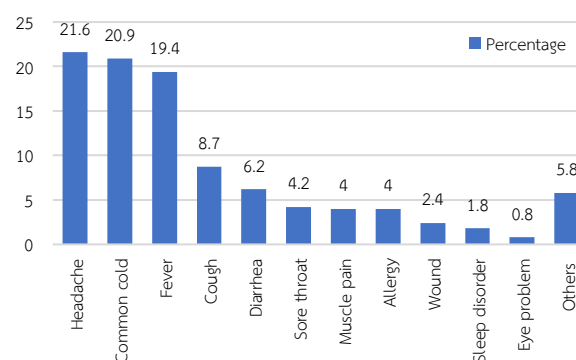


Figure 3 Type of illness complaint in self-medication (n=259)

Table 5 Knowledge about indication and risk of medicine use for self-medication

Items	Correctly answered (%)
I can drink as much as alcohol (e.g. wine and beer) together with paracetamol.	71.80
Paracetamol can be used to treat cough.	68.70
Taking Decolgen Forte® may cause drowsiness.	51.20
Antibiotics can be used to treat diseases cause by virus such as common cold, and flu.	48.60
I can stop taking antibiotic when symptom improve without finishing the full course recommended by doctor or pharmacist.	47.50
Amoxicillin can be used to treat backpain.	33.70
When patient with liver disease takes paracetamol, this may cause a serious problem.	33.40
Antibiotics are the same as anti-inflammatory drugs.	27.20
Aspirin can be used to kill germ (e.g. bacteria, virus).	24.80
Antibiotics (e.g., amoxicillin) may cause side effects such as diarrhea, nausea, and vomiting.	20.60

Table 6 Medication literacy level

Level of medication literacy	Percentage
Functional	24.50
Interactive	19.80
Critical	55.60
Total	100.00

Table 7 Multiple logistic regression analysis of factors affecting self-medication

Variables	CrudeOR (95% CI)	p-value	AdjOR (95% CI)	p-value
Gender				
Male	1.00		1.00	
Female	0.83 (0.54-1.27)	0.387	0.80 (0.43-1.49)	0.487
Age (years)				
18 - 29	1.00		1.00	
30 - 39	0.83 (0.21-3.28)	0.790	4.70 (0.15-149.55)	0.381
40 - 49	1.26 (0.29-5.5)	0.761	6.57 (0.21-208.26)	0.285
50 - 59	1.13 (0.23-5.46)	0.884	4.93 (0.15-161.03)	0.370
60 and older	0.60 (0.10-3.54)	0.572	2.46 (0.07-81.44)	0.614
Education level				
Elementary	1.00		1.00	
Secondary	0.74 (0.20-2.68)	0.645	0.39 (0.05-2.94)	0.364
High school	0.82 (0.29-2.32)	0.710	0.23 (0.05-1.16)	0.075
Vocational training	1.38 (0.73-2.61)	0.323	1.34 (0.51-3.54)	0.554
University/postgraduate	0.99 (0.09-10.10)	0.990	0.32 (0.005-19.74)	0.588
Occupation				
Private company employee	1.00		1.00	
Government officer	0 (0-)	1.000	0 (0-)	1.000
Self-employed/Own business	0 (0-)	1.000	0 (0-)	1.000
Student	0 (0-)	1.000	0 (0-)	1.000
Housewife	0 (0-)	1.000	0 (0-)	1.000
Unemployed	0 (0-)	1.000	0 (0-)	1.000
Retired	0 (0-)	1.000	0 (0-)	1.000
Others	0 (0-)	1.000	0 (0-)	1.000
Healthcare professional				
Yes	1.00		1.00	
No	1.67 (0.79-3.50)	0.179	1.70 (0.50-5.75)	0.391

Table 7 (Cont.)

Variables	CrudeOR (95% CI)	p-value	AdjOR (95% CI)	p-value
Average monthly income				
≤100\$	1.00		1.00	
101\$-250\$	0.82 (0.28-2.35)	0.710	1.28 (0.24-6.72)	0.769
251\$-500\$	2.00 (0.67-5.97)	0.214	3.38 (0.87-13.11)	0.079
501\$-1000\$	2.15 (0.76-6.07)	0.149	3.69 (1.11-12.25)	0.033
≥1001\$	1.30 (0.46-3.67)	0.619	2.05 (0.63-6.66)	0.234
Healthcare coverage				
Yes	1.00		1.00	
No	1.56 (0.96-2.53)	0.074	1.30 (0.63-2.67)	0.472
Chronic disease				
No	1.00		1.00	
Do not know	0.42 (0.236-0.757)	0.004	0.42 (0.18-0.97)	0.042
Yes	0.65 (0.16-2.70)	0.551	0.57 (0.11-2.97)	0.508
Knowledge of medicine use				
High	1.00		1.00	
Low	0.91 (0.59-1.40)	0.674	0.86 (0.47-1.60)	0.642
Medication literacy				
Functional literacy	1.00		1.00	
Interactive literacy	0.69 (0.401-1.17)	0.167	0.49 (0.23-1.03)	0.059
Critical literacy	0.40 (0.23-0.68)	0.001	0.41 (0.19-0.89)	0.025

CONCLUSION AND RECOMMENDATIONS

In conclusion, the prevalence of self-medication was more than half of study respondents. Antipyretics and analgesics were the commonly used medication. Headache, common cold, and fever were the frequently health complaint in self-medication practice. A pharmacist was the main source of information followed by medicine seller and family. Minor illness, previous experience, and saving time were the leading reasons for self-medication. Over half of respondents had low level of knowledge and the majorities were in critical medication literacy. Monthly income, chronic diseases, and medication

literacy were the three variables affecting self-medication practice among respondents. The prevalence of self-medication among Cambodian in this study was 67.60%, which was close to the prevalence rate (62.70%) conducted among adult population by Hassali MA et al. in Malaysia¹⁵. Many studies were conducted in Vietnam and Myanmar reported the prevalence as 83.30% and 89.20%, respectively¹⁶⁻¹⁷.

The different of prevalence rate may be due to healthcare system, and socioeconomic factor in each country or setting. Additionally, different sample groups and recall period (12 months in this research) might possibly affect the result.

Antipyretics and analgesics were the most commonly used medication because these groups were used to treat minor illnesses. Furthermore, they are available in pharmacies and supermarkets. Previous research in India found that antipyretic and analgesic were the popular choice for self-medication^{11,18}. Concerning the health condition, headache, common cold, and fever were found to be the most frequently complaint in the current study. Regarding a systematic review in Ethiopia, it was stated that fever, headache, respiratory, and gastrointestinal tract problem were the leading illness complaint¹⁹. Similarly, studies among Poland and Sweden citizen illustrated that headache, pain, and fever were the frequent complaints in self-medication practice²⁰⁻²¹. In this study, respondents who were self-medicated in the last 12 months stated they particularly received information from pharmacist, medicine seller, and family. Likewise, a study conducted by Eticha T et al. in Ethiopia found that respondents who practiced self-medication obtained advice from pharmacists or employees in pharmacies, doctors or nurses (without prescription), and friends, neighbor, or family¹³. Mild disease condition was the main reason for self-medication followed by familiarity or previous experience with the medicine and time saving. Similarly, some researches in Ethiopia and India demonstrated that uncomplicated illness, prior

experience with the disease or medicine, not having enough time to visit doctor and saving money were the major reasons led to self-medication^{13, 22}.

The majority of respondents in the current study had poor knowledge about the medicine use with limited awareness of indication and risk of those medications. In India, there was a study stated that minority of their respondents had sufficient knowledge about adverse effect of medicines, and the majority were not well informed about contraindications or undesirable effect¹¹. Additionally, a study among Myanmar labor force showed a low knowledge level of self-medication practice¹⁷.

Medication literacy in the study was divided into three categories following previous studies²³⁻²⁵ and over half of respondent were in critical medication literacy level. There was a study in south-east area of Spain demonstrated that 34% of their participants had adequate medication literacy level²⁶. It was very essential for people to be able to receive information written on the medicine label and critically judge those instructions before taking medication. Moreover, communication between healthcare professional and lay people is a crucial component in medication literacy.

Income, chronic diseases, and medication literacy were the three factors affecting self-medication practice. The respondents who had higher monthly income were 3.69 times more likely to self-medicated because they may had higher purchasing power than low income group. Correspondingly, a study in Paris, France found that people with higher wage were more likely to practice self-medication²⁷. Respondents who were not sure if they had chronic diseases were 58% less likely to self-medicate. This might be due to the uncertainty of health condition and hesitation in self-medication practice which was unlike those who had no chronic disease that may had regular health check-up and confident with their medical information. A study in Brazil showed that participants who had chronic disease were more likely to practice self-medication²⁸. Additionally, respondents who were in critical literacy were 59% less likely to self-medicate because they may have knowledge and ability to receive information about the appropriate medication use, or were aware of the risk using medicine without advice from health professional. Similarly, a study in Iran which investigated relationship of self-medication and health literacy described that participants who had higher score of health literacy were less likely to practice self-medication²⁹.

The face-to-face interview method allowed the researcher team to clarify the questionnaire to any respondents who had questions. One of the limitations is that data was collected using a self-report measure so that respondents could respond in a socially acceptable way. As a result, social desirability bias may occur. Additionally, in the gathering of self-reported data, recall bias cannot be avoided. However, the researcher attempted to reduce bias by providing a clear definition of self-medication, which may aid in improving respondents' recall prior to the interview. Furthermore, the ability to generalize the findings of self-medication among Phnom Penh residents to other cities or towns in Cambodia may be limited. As a result, the generalization should be made with caution. However, this study had generated useful baseline information for further research related to self-medication in Cambodia.

In the future research, it is suggested to generalize the study population that can be represented people in Cambodia, and some frequently use medication should be added to the survey questionnaire.

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