

KNOWLEDGE, ATTITUDES, AND PRACTICES (KAP) ON ASTHMA AMONG THAI ADULTS: A CASE STUDY IN RATCHABURI PROVINCE, THAILAND

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ABSTRACT: The objectives of this study were to explain the demographic characteristics, knowledge, attitudes, and practices of preventive behaviors of Thai adults with asthma at Ratchaburi province, Thailand, and to identify the relationship among these variables. It was a cross-sectional study with 441 samples who were aged over 18 years old. Data collection was between February to March 2011. Descriptive statistics was employed (frequency, percentage, mean, standard deviation) and Chi-square Test was used to find the relationship among demographic characteristics, knowledge, attitudes, and practices of preventive behaviors regarding asthma. The results showed that 55.1% of the subjects were females and 44.9% were males, majority of the respondents (79.6%) were aged between 18-59 years old. More than half (54.0%) were married, and 53.1% were in the range from 3 and 4 persons in the family. Most of subjects (68.3%) had secondary school or higher education. In terms of occupation, 31.3% of the subjects were agricultural workers. Forty two percent of the subjects had an income less than 10,000 baht per month, while 54.8% had a monthly expenditure less than 10,000 baht. Most subjects (68.8%) had been suffering for asthma mostly between 2-9 years. The result also found that 78.9% of the subjects were non-smokers. Among the total samples, 90.0% did not have a check on peak expiratory flow (PEF) to control asthma symptoms. Regarding level of KAP, 20.9% of the subjects had high level of knowledge of asthma, 68.5% had low level of attitudes, and 32.4% had high level of practice. There was an association between knowledge and attitude ($p < 0.001$), knowledge and practice ($p < 0.001$), and attitudes and practices ($p < 0.001$). The result of the study can be used as a baseline data for further studies to prevent asthma symptoms among Thai adults.

Keywords: KAP survey, preventive behaviors, asthma OPD patient, Photaram Hospital

INTRODUCTION

Asthma is a chronic lung disease characterized by inflammation and spasm of the bronchial airways. It is functionally characterized by the presence of airflow obstruction which varies over a short period of time [1]. According to the World Health Organization, asthma is the worldwide problem with an estimated 300 million affected individuals. It is anticipated that an additional 300 million persons with asthma might exist by 2025 [2].

The number of disability-adjusted life years (DALYs) lost due to asthma on a global basis has been estimated to be about 15 million per year. In 2005 in the United States, asthma affected more than 22 million people including 6 million children. Asthma accounted for nearly 500,000 hospitalizations. In England, an estimate of 261,400 people were newly diagnosed with asthma in 2005, a number of 5.7 million people had an asthma diagnosis and were prescribed 32.6 million asthma-related prescriptions. WHO estimated that there are between 15 and 20 million people with asthma in

India [3]. In Thailand context, asthma is a common chronic disease. The prevalence of asthma is estimated at 6.8% affecting more than 4 million Thai adults and there will be 1,000 asthma patients die annually [4]. It is unfortunate that 70 percent of these patients die because they come to the hospital too late [5]. The reason patients suffer from a fatal asthma attack is that they do not regularly use the medicines or they wrongly use them. It is also the fact that asthma is a chronic disease which needs ongoing medical treatment and exercises. Regarding the study site, Ratchaburi province is located in the central Thailand composing of ten provinces. The area's total population is 835,231 and those aged over 18 accounts for 629,491, divided into 308,184 males and 321,307 females [6]. As of end January 2011, the number of asthma patients in Ratchaburi hospitals were: Photaram Hospital 1,081; Banpong Hospital 955; and Damnoensaduak Hospital 655. In order to better assess the situations of asthma in Ratchaburi, the objectives of this study were to explain the demographic characteristics of Thai adults' with asthma, to study the level of knowledge [7], attitudes, and practices of preventive behaviors

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Table 1 Level of knowledge, attitudes, and practice on asthma (n=441)

	Knowledge		Attitudes		Practice	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
Low level	133	30.1	302	68.5	163	37.0
Moderate level	216	49.0	44	10.5	135	30.6
High level	92	20.9	95	21.5	143	32.4

Table 2 Association between knowledge and attitudes on asthma (n=441)

Knowledge status	Attitudes status				χ^2	p-value
	Low	Moderate	High	Total		
	N (%)	N (%)	N (%)	N (%)		
Low	105(85.4)	7(5.7)	11(8.9)	123(100.0)	76.507	.000
Moderate	169(74.8)	11(4.9)	46(20.3)	226(100.0)		
High	48(52.2)	6(6.5)	38(41.3)	92(100.0)		
Total	322 (68.5)	24(10.0)	95(21.5)	441(100.0)		

Table 3 Association between knowledge and practices on asthma (n=441)

Knowledge status	Practice status				χ^2	p-value
	Low	Moderate	High	Total		
	N (%)	N (%)	N (%)	N (%)		
Low	87(65.4)	34(25.6)	12(9.0)	133(100.0)	111.07	.000
Moderate	64(29.6)	63(29.1)	89(41.2)	216(100.0)		
High	12(13.0)	38(41.3)	42(45.7)	92(100.0)		
Total	163(37.0)	135(30.6)	143(32.4)	441(100.0)		

Table 4 Association between attitudes and practice on asthma (n=441)

Attitudes status	Practice status				χ^2	p-value
	Low	Moderate	High	Total		
	N (%)	N (%)	N (%)	N (%)		
Low	133(44.1)	85(28.1)	84(27.8)	302(100.0)	56.419	.000
Moderate	12(27.3)	14(31.8)	18(40.9)	44(100.0)		
High	18(18.9)	36(37.9)	41(43.1)	95(100.0)		
Total	163(32.5)	135(31.4)	143(36.1)	441(100.0)		

regarding asthma, and to identify the relationship among them.

MATERIALS AND METHODS

At the time of data collection, only Photaram Hospital was available to the researcher, a cross-sectional study was conducted at this Hospital between February to March 2011. To recruit the subjects, purposive sampling method was used with the inclusion criteria that the subjects were asthmatic Thai adults aged over 18, both males and females and were willing to participate in the study. A total of 441 subjects were interviewed with structured interview questionnaire. The validity of the questionnaire was checked by three experts. Reliability was satisfactory at 0.810 for both knowledge and attitudes parts and at 0.922 for practice part of preventive behaviors regarding asthma, measured from the pilot test with 20 respondents from Bangkok suburbs. There was an ethical review protocol approved by the Ethical Review Committee for Research Involving Human Research Subjects of Chulalongkorn University, Bangkok, Thailand. For data analysis, descriptive statistics was employed and Chi-square Test was

used to determine the relationship between knowledge, attitudes and practice of preventive behaviors regarding asthma.

RESULTS

The demographic characteristics of 441 subjects revealed the mean age of 40.89 years (S.D. 19.57) with a majority (79.6%) aged between 18-59, 55.1% females and 44.9% males. More than half (54.0%) were married and 53.1% had 3 to 4 persons family members. Most of the subjects (68.3%) had secondary school or higher education. Thirty one point seven percent had primary school or lower education. In terms of occupation, 31.3% of the subjects were agricultural workers, and 68.7% were non-agriculture workers. Forty two percent of the subjects had an income less than 10,000 baht per month, while 54.8% had a monthly expenditure of less than 10,000 baht. The majority (78.9%) of the subjects were non-smokers. The period of suffering from asthma was between 2-9 years for 68.8%, ≤ 1 year for 15.9 %, and > 9 years for 15.2%. The findings showed that 90.0% of the subjects did not measure PEF as recommended by the doctors. Eighty seven point five percent of the subjects did

not have a checked PEF to control asthma symptoms, and 94.5% of the subjects did not have constant monitoring PEF even when they were feeling well.

Table 1 shows the knowledge level of asthmatic Thai adults participants. A 30.1% of the subjects had low level of knowledge about asthma, followed by 49.0% with moderate level of knowledge, and 20.9% only with high level of knowledge. For attitudes, more than half (68.5%) of participants had low level of attitudes, 10.5% had middle level while 21.5% had high level. For practice of preventive behaviors regarding asthma, 32.4% had high level of practice, 30.6% moderate, and 37.0% low level.

As presented in Table 2, there was a significant association between knowledge and attitudes of preventive behaviors regarding asthma ($p < 0.001$) in the Table 3. Subjects with high level of knowledge had high level of attitudes at 41.3% and low level of attitudes at 52.2%. On the other hand, subjects with low level of knowledge had high level of attitudes at 8.9% and low level of attitudes at 85.4%. There was a significant association between knowledge and practices of preventive behaviors regarding asthma ($p < 0.001$). Subjects with high level of knowledge had high level of practice at 45.7% and low level of practice at 13.0%. On the other hand, subjects with low level of knowledge had high level of practice at 9.0% and low level of practice at 65.4%. There was also a significant association between attitudes and practice of preventive behaviors regarding asthma ($p < 0.001$). Subjects with high level of attitudes had high level of practice at 43.1% and low level of practice at 18.9%. On the other hand, subjects with low level of attitudes had high level of practice at 27.8% and low level of practice at 44.1% in the Table 4.

DISCUSSION

Based on the study, females were more than males. This is consistent with the study by Kaldi [8]. The subjects had moderate level of knowledge on asthma, low level of attitudes, and also low level of practices (Table 1). Those with low knowledge had low attitudes and with high knowledge also had low attitudes (Table 2). However, those with high knowledge and high attitudes had high practice (tables 3 and 4). In a Qatari population, there were 607 females (54.9 %) and 499 were males (45.1%) [1] whose proportion is similar to Thai population in this current study. The majority of the asthmatic subjects (79.6%) were aged between 18-59. This age prevalence in Thailand is similar to that of the United States of America [9]. The findings of the current study showed that 90.0% of the subjects did not measure PEF to control asthma. Today worldwide, PEF is used for asthma patients to control their asthma symptoms both by themselves and by the doctors. It is absolutely necessary for asthma patients to check their lung function to

control their asthma. Doctors or nurses should help asthma patients by producing a tailored-made self-management plan with PEF and to show the patients of how-to use it to control asthma with PEF at home [3]. The goal is to get better quality of life for asthma patients. In the test of association, there was a significant association between knowledge and attitudes of preventive behaviors regarding asthma ($p < 0.001$). This result is consistent with the finding of a study in the United States of America that found significant association between knowledge and attitudes [2]. There was a significant association between knowledge and practice of preventive behaviors regarding asthma ($p < 0.001$). This result is consistent with the finding of the study by Rubin in which statistic significance was found between knowledge and practice [10].

There was also a significant association between attitudes and practice of preventive behaviors regarding asthma ($p < 0.001$). This result is consistent with the findings of the study in Iran in which a significant association was found between attitudes and practice of pregnant women in Oral and Dental Care [11]. The result of the study can be used as a baseline data for further studies to prevent asthma symptoms among Thai adults.

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