
Knowledge, Attitudes, and Practices of Senior High School Students Regarding Human Immunodeficiency Virus Infection

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Abstract

A survey of knowledge, attitude and practice (KAP) regarding human immunodeficiency virus infection was performed on 899 students from 3 government-administered high schools located in the Bangkok Metropolitan area. Initially, all students completed a written questionnaire (pre-test) regarding HIV/AIDS. Following this, they attended a slide lecture presentation given by a specialist physician. The same test questionnaire was then completed by the same students six weeks (post-test) later for comparison of their previous KAP. The subjects composed of male to female ratio equal to that of the median age 15-16 years old. Sixty-seven per cent of the subjects were living with their parents, 16.3 per cent with relatives and 15 per cent with friends. Ninety nine per cent of the subjects had received information on HIV/AIDS before enrollment to this study. The source of knowledge ranged from television (89.1%), teachers (81.6%), pamphlets (80.2%), newspapers (75%), radio (55%), health care workers (53.4%), friends (38.6%) and only 32.5 per cent from their parents. The subjects' knowledge about HIV/AIDS and risk factors in the post-test questionnaire was significantly increased ($P < 0.001$) from the pre-test status. However, their attitudes to an HIV infected person were not significantly changed in the post-test questionnaire: only the "attending school" question showed significantly ($P < 0.05$) increased numbers of agreement. Similarly, the attitudes and practices to prevent HIV infection were not significantly ($P > 0.05$) different between pre-test and post-test questionnaires. The result of this study is to recommend regular school-based programs of education to increase awareness of preventive strategies for HIV/AIDS and sexually transmitted diseases.

Since the first cases of acquired immunodeficiency syndrome (AIDS) were reported in 1981,^(1,2) the global impact of this pandemic disease has been dramatic. The World Health Organization estimated that until mid 1996 there were

27.9 million people worldwide infected with human immunodeficiency virus (HIV)⁽³⁾. The majority of HIV-infected individuals, especially young adults, were in sub-Saharan Africa (68% of the global total) and in South and South East Asia (18% of

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the global total)⁽³⁾. Adolescent AIDS cases (15 to 19 years old) reported to the Ministry of Public Health in Thailand, accounted for only 1.3 per cent of the total⁽⁴⁾. However, the mean latency time from HIV infection to time of illness is estimated to be 8 years. Therefore, most HIV-infected adolescents would not become ill until adulthood. The large number of AIDS cases reported in people between 20 and 29 years of age is around 42 per cent of the total in every period since the AIDS epidemic in Thailand⁽⁴⁾. Undoubtedly, most of these young adult patients were infected while teenagers or during their high school student period. Adolescence is a time of dramatic physical, psychological, and social development and consequently vulnerability to the profound social and medical impact of HIV/AIDS is increased^(5,6). The aim of this study is to compare the knowledge, attitude and practice (KAP) of HIV/AIDS prevention prior to and following the provision of information in a slide-lecture presentation by a specialist physician. Our goal is to collect the basic data required to establish a HIV/AIDS preventive strategy which can be delivered to all young Thai adolescents especially high school students.

MATERIAL AND METHOD

We randomly selected three government-administered high schools located in the Bangkok Metropolitan area and sought permission for study enrollment from the principal of each school. The study was performed between January and March 1995. School-health teachers were assigned to assist in the randomization of students from different classrooms. The pre-test questionnaire was completed by all students before a specialist physician gave an hour slide-lecture presentation providing information on HIV/AIDS (TC). Six weeks later, the school-health teachers of each school distributed the post-test questionnaire to the same students for the comparison of KAP of HIV/AIDS preventive interventions. Each subjects' data, collected *via* the pre-test and post-test questionnaire, was used for statistical evaluation. Secret name or identification code on the questionnaires was chosen by the subjects themselves. The data from each subject was analysed by percentage and Chi-Square test. The knowledge related to HIV/AIDS of the subjects before and after lecture intervention was compared by Barlett's test for homogeneity of variance and Kruskal-Wallis test whereas the atti-

tude and practice of the subjects was compared by Chi-Square test.

RESULTS

Eight hundred and ninety-nine students from grade 10 and 11 of three high schools located in Bangkok Metropolitan area, were enrolled in the pre-test questionnaire and then attended an hour lecture related to HIV/AIDS knowledge. Of the sample, 892 (99%) students completed the post-test questionnaire 6 weeks later. The questionnaires were collected by the school-health teachers and transferred to that of the investigators. The subjects had a male to female ratio equal to that of the median age of 15-16 years old (range 14-19) (Table 1). Sixty-seven per cent of the subjects were living with their parents whereas 16 per cent and 15 per cent lived with relatives and friends, respectively (Table 1). Only 0.7 per cent of the subjects had never received any HIV/AIDS information before the study enrollment. The subjects sources of knowledge about HIV/AIDS information were as follows: 89.1 per cent from television; 81.6 per cent from teachers; 80.2 per cent from HIV/AIDS pamphlets; 75 per cent from newspapers, 55 per cent from radio; 53.4 per cent from health care workers; 38.6 per cent from friends and only 32.5 per cent from parents (Table 2). From the post-test questionnaire, 0.4 per cent of the subjects had never received any HIV/AIDS information, which may be due to the carelessness of subjects. The sources of HIV/AIDS knowledge in the post-test question-

Table 1. General information of the subjects.

	Number	%
● Number	899	100
● Gender		
- Male	426	47.4
- Female	409	45.5
- no answer	64	7.1
● Age (year)		
< 15	17	1.9
15	318	35.4
16	325	36.2
17	95	10.6
> 17	68	7.6
unknown	76	8.2
● Living with		
- Parents	599	66.6
- Relatives	146	16.3
- Friends	135	15.0
- Others	19	2.1

Table 2. Sources of knowledge regarding HIV/AIDS information of the subjects.

	Pre-Test	%	Post-Test	%	P
HIV/AIDS information					
Ever	893	99.3	888	99.6	NS
Never	6	0.7	4	0.4	NS
Sources of information					
Health care workers	447	53.4	629	70.7	< 0.05
Parents	290	32.5	375	42.3	< 0.05
Teachers	729	81.6	773	87.1	NS
Friends	345	38.6	474	53.4	< 0.05
Television	796	89.1	811	91.4	NS
Radio	492	55.1	618	69.7	< 0.05
Newspapers	674	75.5	706	79.6	NS
Pamphlets	716	80.2	746	84.1	NS
Others	33	3.7	23	2.6	NS
No answer	2	0.2	0		NS

NS, not significant ($P > 0.05$)

Table 3. Comparison of pre-test and post-test of subjects knowledge regarding HIV/AIDS information and risk factors.

HIV/AIDS	Pre-Test (%)	Post-Test (%)	P
General information :-			
n	897	883	
No. of correct answers	7.5±1.53	8.51±1.18	
: mean ± SD			
: range	1-10	3-10	
: median	8	9	< 0.001
Risk factors :-			
n	891	878	
No. of correct answer	10.73±1.49	11.10±1.37	
: mean ± SD			
: range	1-12	1-12	
: median	11	12	< 0.001

naire from health care workers (70.7%), radio (69.7%), friends (53.4%) and parents (42.3%) were all significantly ($P < 0.05$) increased from the pre-test questionnaire data (Table 2). Other source of knowledge from television, (91.4%), teachers (87.1%) pamphlets (84.1%) and newspapers (79.6%) were all not significantly ($P > 0.05$) increased from the pre-test questionnaire data (Table 2). The subjects' knowledge about HIV/AIDS general information and risk factors in the post-test questionnaire was significantly ($P < 0.05$) increased from the pre-test questionnaire (Table 3). The subjects' attitude to HIV/AIDS patients responding to the questions :- "limited living area",

"not to be a cook", "public participation", "not provide support", "social discrimination" and "social worthiness" were not significantly different ($P > 0.05$) in pre-test and post-test questionnaires (Table 4). Only the question "attending school" showed a significantly ($P < 0.001$) increased number of agreement in the post-test questionnaire (Table 4). The subjects' attitude and practice toward HIV/AIDS prevention responding to the questions:- "avoid drug addiction", "avoid blood donation", "avoid public toilet", "promote condom usage", "sterilization caused spreading of HIV", "avoid multiple sexual partners" "avoid sex with homosexual person" and "AIDS campaign among

Table 4. Comparison of pre-test and post-test of student's attitude to HIV/AIDS patients.

Attitudes	Pre-Test			Post-Test			P
	not agree	agree	NA	not agree	agree	NA	
- limited living area	401	387	111	392	355	145	NS
- attending school	158	554	187	102	640	150	< 0.05
- not to be a cook	312	382	201	292	369	231	NS
- public participation	63	792	44	51	767	74	NS
- not provide support	789	77	33	745	87	60	NS
- social discrimination	646	132	121	577	153	162	NS
- social worthiness	39	816	44	45	779	68	NS

NA, not analysed (no answer and equivocal agreement)

NS, not significant ($P > 0.05$)

Table 5. Comparison of subjects pre-test and post-test attitude and practice to prevent HIV infection.

Attitudes	Pre-Test			Post-Test			P
	not agree	agree	NA	not agree	agree	NA	
● avoid drug addition	18	852	29	34	815	43	NS
● avoid blood donation	622	112	165	592	95	203	NS
● avoid public toilet	493	150	256	491	144	257	NS
● promote condom usage	81	655	163	91	564	237	NS
● sterilization cause spreading of HIV	458	104	337	523	114	295	NS
● avoid multiple sexual partners	40	830	29	43	783	66	NS
● avoid sex with homosexual person	41	785	73	62	760	70	NS
● AIDS campaign among teenagers	37	840	22	41	804	47	NS

NA, not analysed (not answer and equivocal agreement)

NS, not significant ($P > 0.05$)

teenagers" were not significantly different ($P > 0.05$) in pre-test and post-test questionnaire (Table 5).

DISCUSSION

The global pandemic of HIV infection has been widely distributed to every society with increased impact on adolescents⁽⁷⁾. The HIV/AIDS epidemic in Thailand has grown from a handful of infections to become a major public health problem with wide ranging medical, social, and economic consequence for the country. Our results from this KAP study in high school students is of major importance for the provision of fundamental information on HIV/AIDS prevention to Thai young

adults. Two-thirds of our subjects lived with their parents, whereas, 15 per cent lived with their friends; an environment which might be more vulnerable in contracting HIV infection. Almost all (99.3%) of the subjects had HIV/AIDS information before enrollment in the study, with the common sources of knowledge being television, teachers, pamphlets, newspapers and others similar to several previous studies^(8,9). The percentages of sources of knowledge in the post-test increased significantly ($P < 0.05$) compared to the pre-test status, especially from health care workers, parents, friends and radio. This changing outcome of HIV/AIDS knowledge might be the result of the slide-lecture presentation by the specialist physician.

Their post-test knowledge about HIV/AIDS general information and its risk factors was also increased significantly ($P < 0.001$) from the pre-test situation. It was obvious that most of the Thai young adults' knowledge concerning HIV/AIDS problem was better than stated in reports^(8,10). Only the attitude of students toward "HIV infected persons attending school" was significantly increased ($P < 0.05$), where the number of agreements in the post-test reflects more understanding of the natural history of HIV/AIDS transmission. The subjects attitudes and practices to the prevention of HIV infection did not change between pre-test and post-test (6 weeks period); this might be due to the relatively short period of testing.

Repetition of the HIV/AIDS information by school-health teachers, or occasionally, health care workers is necessary to increase the students' awareness of prevention of this dreadful disease.

Several concrete actions are required in order to provide young Thai adolescents with the knowledge and skills to protect themselves from HIV infection. Enhanced-school based programs of HIV/AIDS and sexually transmitted disease education should be regularly implemented in their curriculums, not only at high school level but also at university level.

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ความรู้, ทัศนคติและพฤติกรรมของนักเรียนชั้นมัธยมศึกษาตอนปลายเกี่ยวกับโรคเอดส์†

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การศึกษาวิจัย ความรู้, ทัศนคติและพฤติกรรมที่เกี่ยวกับโรคเอดส์ของนักเรียนมัธยมศึกษาตอนปลายของกรมสามัญศึกษา 2 แห่ง และวิทยาลัยพาณิชยการของกระทรวงศึกษาธิการอีก 1 แห่ง โดยทำแบบสอบถามก่อนการอบรมให้ความรู้เกี่ยวกับโรคเอดส์แก่นักเรียนโดยวิทยากรท่านเดียว ด้วยวิธีการบรรยายและใช้สไลด์ภาพนิ่ง และทำแบบสอบถามชุดเดิมอีกครั้ง 6 สัปดาห์หลังการอบรม นักเรียนรวมทั้งสิ้น 899 คน เป็นเพศชายและหญิงในอัตราส่วนที่เท่ากัน อายุส่วนใหญ่ประมาณ 15-16 ปี (71.6%) นักเรียนประมาณ 2 ใน 3 พักอาศัยกับบิดามารดา 16.3% อาศัยกับญาติและ 15% อาศัยกับเพื่อน เกือบทั้งหมด (99.3%) ของนักเรียนเคยได้รับข่าวสารเกี่ยวกับโรคเอดส์มาก่อน โดยได้รับจากสื่อต่างๆ เรียงลำดับจากมากไปสู่น้อยดังนี้ โทรทัศน์ ครู แผ่นพับ หนังสือพิมพ์ วิทยุ บุคลากรทางสาธารณสุข เพื่อน บิดามารดา เป็นที่น่าสังเกตว่านักเรียนได้รับข่าวสารจากบิดามารดาน้อยที่สุดแค่ 32.5% เกี่ยวกับความรู้ ความเข้าใจ และปัจจัยเสี่ยงเกี่ยวกับโรคเอดส์หลังการอบรมบรรยายนักเรียนมีความรู้เพิ่มขึ้นชัดเจนแตกต่างจากก่อนการอบรมอย่างมีนัยสำคัญทางสถิติ ($P < 0.001$) ทัศนคติของนักเรียนต่อผู้ติดเชื้อเอชไอวี พบว่าไม่แตกต่างกันก่อนและหลังการอบรม ยกเว้นความเห็นที่ว่า "ควรให้ไปโรงเรียนได้" พบว่าหลังการอบรมมีผู้เห็นด้วยเพิ่มขึ้นจากก่อนการอบรมอย่างมีนัยสำคัญทางสถิติ ($P < 0.05$) ซึ่งแสดงให้เห็นว่านักเรียนมีการยอมรับและเข้าใจในโรคเอดส์มากขึ้น ส่วนผลการวิจัยทัศนคติ, พฤติกรรมการป้องกัน การติดเชื้อเอชไอวีของนักเรียนพบว่าไม่แตกต่างกันทั้งก่อนและหลังการอบรมอย่างมีนัยสำคัญทางสถิติ ($P > 0.05$) ซึ่งแสดงให้เห็นว่าอาจต้องมีการให้ข้อมูลข่าวสารเกี่ยวกับโรคเอดส์ที่ถูกต้องบ่อยๆ เพื่อให้เกิดความตระหนักและสำนึกในการหลีกเลี่ยงพฤติกรรมเสี่ยงต่อการติดเชื้อเพื่อป้องกันตัวเองและผู้อื่นจากการติดโรคเอดส์

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