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ORIGINAL ARTICLE

Preventive behavior of sexually transmitted diseases among high school students in Vientiane, Lao P.D.R.

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Abstract

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This study was conducted in Vientiane Capital City, Lao P.D.R. The study aimed to identify preventive behavior regarding sexually transmitted diseases (STDs). The study sample was 275 high school students of grades 5-7 by using simple random sampling.The data were collected by using a self-administered questionnaire and analyzed by using descriptive statistics and multiple logistic regressions. A questionnaire consisted of 5 parts:- Socio-demographic, communication towards STDs, perception of STDs preventive, knowledge of STDs and behavior, and STDs preventive,

The study revealed that the average age of the respondents was 17.23 years old (SD = 0.99), and the range of age was 15-19 years old. About 51% were male. The majority of them (81.1%) stayed with their parents. Most of them (60.7%) practiced good STDs preventive behavior. Communication towards STDs preventive was significantly associated with STDs preventive behavior (OR = 2.37, 95% CI = 1.30-3.71) when adjusting for other factors in the model.

Regarding the findings, it is necessary to provide appropriate STDs and safe sex education among high school students and arrange a proper environment in which students are able to discuss sexual and related problems with their teachers. It is also important to encourage them to continuously practise safe sex for STDs preventive since they had good STDs preventive behavior.

Keywords: Sexually transmitted diseases, prevention, students, Lao P.D.R.

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พฤติกรรมการป้องกันโรคติดต่อทางเพศสัมพันธ์ของนักเรียนระดับมัธยมศึกษา ในนครเวียงจันทน์ ประเทศสาธารณรัฐประชาธิปไตยประชาชนลาว

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การศึกษาเรื่องพฤติกรรมการป้องกันโรคติดต่อทางเพศสัมพันธ์ของนักเรียนระดับมัธยมศึกษา ในนครเวียงจันทน์ ประเทศสาธารณรัฐประชาธิปไตยประชาชนลาวนี้ ทำการศึกษาในโรงเรียนระดับมัธยมศึกษาจำนวน 3 แห่ง เพื่อศึกษาพฤติกรรมการป้องกันโรคติดต่อทางเพศสัมพันธ์ กลุ่มตัวอย่างที่ใช้ในครั้งนี้เป็นนักเรียนระดับมัธยมศึกษา ที่ศึกษาอยู่ระหว่างเกรด 5 – เกรด 7 จำนวน 275 คน ได้มาโดยการสุ่มอย่างง่าย เก็บข้อมูลโดยใช้แบบสอบถามที่ให้เขียนตอบเอง แบ่งออกเป็น 5 ส่วน ได้แก่ ข้อมูลพื้นฐาน การสื่อสารที่มีต่อการป้องกันการติดต่อทางเพศสัมพันธ์ การรับรู้เกี่ยวกับการป้องกันโรคติดต่อทางเพศสัมพันธ์ ความรู้เกี่ยวกับโรคติดต่อทางเพศสัมพันธ์และพฤติกรรม การป้องกันโรคติดต่อทางเพศสัมพันธ์ ส่วนการวิเคราะห์ข้อมูลใช้สถิติเชิงบรรยาย และการวิเคราะห์การถดถอยโลจิสติก

ผลการศึกษา พบว่าอายุเฉลี่ยของนักเรียน เท่ากับ 17.23 ปี มีช่วงอายุ ระหว่าง 15-19 ปี ประมาณร้อยละ 51 เป็นชาย นักเรียนส่วนใหญ่ ร้อยละ 81.1 อาศัยอยู่กับบิดา มารดา ประมาณร้อยละ 60 มีพฤติกรรมการป้องกันโรคติดต่อทางเพศสัมพันธ์ในระดับดี และยังพบว่าการสื่อสารเกี่ยวกับการป้องกันโรคติดต่อทางเพศสัมพันธ์มีความสัมพันธ์กับพฤติกรรมการป้องกัน (OR = 2.37, 95% CI = 1.30-3.71) เมื่อควบคุมตัวแปรอื่นๆ

จากข้อค้นพบ จึงจำเป็นที่จะต้องให้การศึกษาเรื่อง โรคติดต่อทางเพศสัมพันธ์ และการมีเพศสัมพันธ์ที่ปลอดภัยแก่นักเรียนระดับมัธยมศึกษาและควรสร้างสภาพแวดล้อมที่เอื้อต่อการที่นักเรียนและครูจะได้พูดคุย ถกเถียงกันถึงปัญหาเรื่องเพศ และประเด็นที่เกี่ยวข้อง รวมทั้งควรสนับสนุนให้นักเรียนให้มีพฤติกรรมการป้องกันโรคติดต่อทางเพศสัมพันธ์อย่างต่อเนื่อง แม้ว่าจะมีการป้องกันที่ดีแล้วก็ตาม

คำสำคัญ: โรคติดต่อทางเพศสัมพันธ์ การป้องกัน นักเรียน ประเทศลาว

Introduction

Eighty-eight million new sexually transmitted disease (STD) cases are reported every year and it is estimated that one million people are infected STDs every day in the world. The disease causes chronic infections, serious delayed consequences and acute conditions such as ectopic pregnancy, cervical cancer, infertility and the untimely death of infants[1].

In Lao P.D.R, STDs have rapidly spread through all provinces especially among the youth aged between 15 and 24 years[2]. The number of STDs has increased every year. The current Lao government has tried to implement STDs prevention among young people, but many factors have been associated with preventive practices, such as lack of full package for STDs preventive programs, inadequate facilities, and refusal to teach safe sex to young people due to the fact that the issue is very sensitive in traditional culture[3]. In addition, national hospitals have no existing database on STDs[4]. This has led to dangerous consequences, especially for young people engaging in unsafe sex who would be more likely to acquire STDs. STDs preventive could be successful acknowledging the multi-partner approach including defined activities and responsibilities[5].

In 2008, the youth clinic, a program of the women's union, was introduced in Lao P.D.R to prevent STDs among young people. It provided youth-friendly services like clinic services and counseling on STDs. Many negative factors had been shown to be related to these interventions, such as using only the syndrome approach to the treatment of STDs, lacking of a laboratory for STDs, providing only counseling, inadequate staff, supervisors not supervising though they were experienced and knowledgeable in youth-friendly services, few primary issues related to serving youth, and no uniformity in filling up of client's medical forms. Moreover, youth were charged for specific methods and services. Finally, the youth clinic might not be appropriate intervention for STDs among young people. This led to young people (14-19 years) did not utilize any services with respect to sexual and related problems[6].

A previous study of O'Toole[7] (2007) found that over 200 young people aged 12-20 years old did not have knowledge on STDs/HIV, and one third of young people aged 15 years old and over did not have knowledge on using condoms but had experience with sexual intercourse. Moreover, a previous study of Papu[8] (2008) found a significant association between perception and STDs preventive behavior. In addition, the Ngyen's study[9] (2002) suggested that even though perception was significantly associated with STDs preventive behavior, a perception based on a low level of knowledge on STDs would decrease perceptions on STDs preventive. It was suggested that appropriate information in the classroom was associated with appropriate STDs preventive behavior. Since Lao PDR. is now changing to be the economic situation, many clubs, hotels and restaurant have opened to serve the number of tourists who has been increasing rapidly. Lao tradition is now popular among foreign tourists while new generation youth in urban area of Lao are interesting to be more westernization by time to time. This change among young people has led to increase risky sexual behavior. In contradiction, high school students were limited to access the information on STDs and safe sex activities because of Lao tradition. This will be the cause make them facing the high risk situation.

According to those reasons and the present situation, high school students in Lao P.D.R. need to get more knowledge and skills to protect them from risk behavior by practicing safe sex behavior. The appropriate health education on safe sex is the main factor to reduce STDs among young students.

Methods

The study design of this study was a cross-sectional study to identify STDs preventive behavior among high school students in Vientiane, Lao P.D.R. The study population comprised of students from 10 high schools, aged between 15 and 19 years, approximately 40 classrooms. The sample was selected by simple random sampling among 3 high schools. Then the researcher selected 3 classrooms from the 3 high schools. In each classroom, simple random sampling was used to obtain 30 students. On total, the number of respondents was 275 students.

The researcher collected data by distributing a self-administered questionnaire to high school students. The questionnaire consisted of 5 parts: socio-demographic characteristics, perceptions towards STDs preventive, communication towards STDs preventive, knowledge on STDs, and STDs preventive behavior. The questions regarding perception towards STDs preventive was conducted based on the Health Belief Model (HBM)[10].

There were 9 questions of knowledge on STDs. The respondents could answer one of 4 choices. The total score was computed and classified in three groups: high, moderate, and low. The score 7-9 (more than 80%) was considered as an indication of a high knowledge level, 4-6 (60-80%) was considered as moderate level, and 0-3 (less than 60%) was considered as low level.

Perception towards STDs preventive consisted of 3 parts: perception on severity, barriers, and benefits. A positive score of 5 was given if the respondents answered strongly agree, and 1 was given if they answered strongly disagreed. According to the minimum, maximum, mean and standard deviation (SD) scores, the perceptions towards STDs preventive were classified into two levels: positive was more than or equal to mean, and negative was less than the mean.

Communication towards STDs preventive consists of 6 parts. The researcher asked whether parents ever talked with their child about safe sex activities to prevent STDS. The score was given as 1 = yes and 0 = no. According to the minimum, maximum, mean and standard deviation (SD) scores, the communication towards STDs preventive was classified into two levels: good was greater than or equal to mean score, and poor was less than the mean.

The questionnaire was checked for content validity examining by two experts; then it was translated into Lao before conducting pretest. The pretesting of the questionnaire was managed by using 30 high school students, excluded from the three high schools for this study. The pretest was conducted twice to determine the reliability of the questionnaire. The first result of KR20 was 0.47 for knowledge and 0.37 of Cronbach's Alpha for perception. Therefore, the researcher modified the questionnaire by improving knowledge and perception, and conducted a second pretest with the result that KR20 was 0.52 and 0.65 for Cronbach's Alpha. Statistical significance was set at 95%.

Regarding STDs preventive behavior, this part consisted of 3 questions on safe sex activities, 1) using a condom during having sex 2) having sex with a single partner and 3) avoiding sexual intercourse. The answer could be yes or no. The score was given as 1= yes, and 0= no. A total score was recorded to frequency of safe sex activities such as having sex using a condom, having sex with a single partner and avoiding sexual intercourse. The sexually transmitted diseases preventive behavior was classified into two levels: first level was good, there were at least 2 safe sexual activities and second level was poor, there were less than 2 safe sexual activities.

The data were entered using the Epidata program. The quality control in this study was assured through the Epidata program. Data analysis using Minitab described frequency distributions and determined the association between dependent and independent variables by multiple logistic regression.

Results

Total of 275 respondents, more than half were male, and nearly half of the respondents were female. The average age was 17.23 years old (SD = 0.99), and the range of age was 15-19 years old. A majority of high school students (81.1%) stayed with their parents. About halfof high school students (56.2%) received an allowance more than 290,232 kips/month. The most common religion was Buddhism (Table 1).

Overall of STDs preventive behavior, 60.7% of high school students had high STDs preventive behavior (Table 2). The majority (80.9%) of high school students used a condom during having sex. Nearly three quarters (73.8%) of high school students had sex with single partner, and 73.0% of high school students avoided sexual intercourse (Table 3). Condom used was the main method for STDs preventive behavior (Table 3). In terms of STDs preventive behavior, females had better behavior than males.

This study shows that most of high school students had positive perceptions on STDs preventive behavior. About 60% of high school student had perception on benefit and most of them agreed that the persons who don't take regularly medicine will not be recovered. In term of communication towards STDs preventive, more than half of high school students had good level of communication towards STDs preventive behavior, the mother was shown to be the most important person, followed by father and teacher.

Chi-square test showed that perception on severity, perception on barrier and perception on benefit significantly associated with STDs preventive behavior (P-value<0.001).The result also showed that communication towards STDs preventive significantly associated with STDS preventive behavior (P-value <0.001). Age group, sex, education level, current living status and allowance did not effect to STDs preventive behavior (Table 4).

The multiple logistic regression test revealed that communication towards STDs preventive was the significant predictor of STDs preventive behavior among high school students in the Vientiane Capital City, Lao P.D.R. The estimated odd ratios of communication towards STDs preventive was 2.37 with 95% CI = 1.30-3.71 (p<0.001) (Table 5).

Discussion

The Lao government has tried to implement STDs preventive among young people. However, STDs is still not under the national surveillance system, and the STDs cases are not followed-up. Moreover, the national hospital cannot test for specific STDs[11].

Interestingly, even though the youth clinic was introduced in Lao P.D.R. to provide youth-friendly services like clinic services and counseling on STDs, they received few young clients aged 14-19 years while STDs continue to increase every year.

Many challenges hinder STDs preventive among young people in Lao P.D.R., influencing high school students to participate in risky sexual behavior, for example, the internet, which provides easy access to messages on sexual activities, and night clubs. This can cause the number of sexually active high school students to increase because it provides the opportunity for risky sexual behavior, which can lead to infection with STDs. The Lao government does not have a management policy for solving this problem.

Nearly half of high school students receive low allowance. One report stated the low allowance influenced opportunities to obtain proper education. More than a million young people of 16-24 years of age do not attend educational institutes because these young people need to work. Many of these young people are vulnerable and are facing obstacles. Disadvantaged young people are more likely to develop risk behaviors[12].

This study showed that overall of STDs preventive behavior, 60.7% of high school students had a high level of STDs preventive behavior. The STDs preventive behavior of high school students was observed to be slightly higher than the Ounaphon's study[13] that found only 38% had a high level of STDs preventive behavior. It could be because Lao P.D.R. had conducted youth clinics on STDs to support health education on STDs at younger age[14]. Furthermore, the research was conducted in a city with a high prevalence of STDs, and where media coverage of the epidemic was increasing over the time, leading to a better opportunity to receive information and a better understanding of STDs among high school students[15].

STDs preventive behavior methods of this study was found that condom use was the main method for STDs preventive behavior. This reason could have resulted from the free condom used project that was conducted in Lao P.D.R[16]. This study contradicted a previous study[17] that found a higher percentage of youth avoiding sexual intercourse to prevent STDs than in this study. It might be due to the fact that the respondents should have read sexual education magazines, journals, and books about STDs.

Several previous studies had found that females were more likely to have a higher level of STDs preventive behavior than males[18]. Similarly, this study also found that females were more likely to have a higher level of STDs preventive behavior than males. This might because females perceived that they closed with parentsmore than males, and differences of physical and psychological factors between the sexes. Females commonly get frustrated with each other because females see a lot of problematic issues completely different than their male counterparts[19]. It is time for policy makers to recognize that males are vulnerable and facing obstacles in STDs preventive.

Owing to the perceptions on severity, most high school students had perceive on severity and as strongly

agreed that STDs caused serious health problems. This could be explained by the STDs project was conducted in Lao providing information that STDs caused serious health problems that led to greater perception on severity[20].

Regarding the communication towards STDs preventive, it was shown that the mother was the most important person and the teacher was the least important. This may have stemmed for the fact that talking about sex among the teachers and prohibited, teacher believe that talking about sex is very sensitive in traditional and thus many teacher do not want to talk about sex with their students. Furthermore, it might have been caused by various reasons such as feelings of embarrassment[21].

This study showed that more than half of high school students had positive perceptions towards STDs preventive. It was similar to previous studies[22]. It might because of the study was conducted in area of high prevalence of STDs led to greater positive perceptions towards STDs preventive. Moreover, they recognize that they are vulnerable and facing obstacles in STDs treatment.

The multiple logistic regression result showed that communication towards STDs preventive was the only significant predictor of STDs preventive behavior (OR = 2.37, 95% CI = 1.30-3.71). This might because of the majority of high school students stayed with their parents. One of previous study found that more than 50% of high school students was living with their parents[23].

This study had some limitations. More details of STDs cases were not valid.Many likely factors related to STDs preventive behavior were found previous study such as number of family members, frequency of attending the class and personal characteristics are not taken into account. The data was only collected by self-administered questionnaire that led to a lack of actual information related to STDs preventive behavior. This aspect warrants further investigation.

Recommendations

According to high school students refused to support STDs information in classroom. The policy makers should recognizes that safe sex education and STDs preventive is necessary for high school students and consider including safe sex education and STDs preventive in the school curriculum.

Regarding communication towards STDs, the teachers were the least important person. Policy makers should strengthen communication between teachers and high school students and open the environment where students are able to discuss with teachers about their sexual and related problems.

The finding of this study, the father was a less important person than the mother for communicating STDs preventive behavior with their children. The father should listen and provide valuable time to discuss and provide reasons regarding their children's lives. These should include providing skills for STDs preventive to children, enhancing discussion with children and more frequent talk regarding STDs preventive and outlining time for children to directly discuss STDs preventive.

In the future, a cross-sectional study should be conducted in every high school in Vientiane Capital City to identify more details of factors that affect STDs preventive behavior. Researchers should construct self-administered questionnaires with high validity and reliability to reduce error and biased information. In-depth interviews and group discussion might be useful to identify all the significant factors influencing STDs preventive behaviors of high school students.

Table 1 Number and percentages of respondents by socio-demographic characteristics

Socio-demographic factors	n	%
Age group (years)		
15-17	155	56.4
18-19	120	43.6
Mean = 17.23, SD = 0.99		
Gender		
Male	140	50.9
Female	135	49.1
Religion		
Buddhism	233	85.7
Christian	26	14.3
Levels of allowance		
High allowance (≥290,232 kips)	153	56.2
Low allowance (<290,232 kips)	119	43.8
Mean = 195,000 kips, SD = 56000		
Current living		
Stay with parents	223	81.1
Stay with relatives	50	18.2
Stay in dormitory	2	0.7

Table 2 Number and percentages respondents by levels of STDs preventive behavior

Level of STDs preventive behavior	Sexually transmitted diseases preventive behavior	
	n	%
Good	167	60.7
Poor	108	39.3

Table 3 Number and percentages ofsexually transmitted diseases preventive behavior method

Sexual preventive method	Preventive behavior	
	n	%
Condom use (n=167)		
Yes	149	81.0
No	18	19.0
Having sex with single partner (n=164)		
Yes	121	73.8
No	43	26.2
Avoid sex intercourse (n=167)		
Yes	122	73.0
No	45	27.0

Table 4 Number and percentages of respondents by knowledge levels, perception levels and communication levels towards STDs preventive

	n	%
Levels of Knowledge		
High	59	21.5
Low	216	78.5
Perceived towards STDs preventive		
Positive	154	56.0
Negative	121	44.0
Communication towards STDs preventive		
Good	170	61.8
Poor	105	38.2

Table 5 Association between study factors and STDs preventive behavior

Factors	Good		Poor		Chi square (df)	p-value
	n	%	n	%		
Age groups						
15-17	88	56.8	67	43.2	2.37	0.127
18-19	79	65.8	41	34.2	(1)	
Sex						
Male	83	59.3	57	40.7	0.25	0.618
Female	84	62.2	51	37.8	(1)	
Education levels						
Grade 5	76	82.6	16	17.4	41.53	<0.001*
Grade 6	59	62.8	35	37.2	(2)	
Grade 7	32	36.0	57	64.0		
Current Living					0.20	0.65
Stay with parent	134	60.1	89	39.9	(1)	
Stay with relative	33	63.5	19	36.5		
Levels of allowance					0.21	0.65
High	91	59.5	62	40.5	(1)	
Low	74	62.2	45	37.8		
Perceived barrier					15.93	<0.001*
Negative	85	71.4	34	28.6	(1)	
Positive	74	47.4	82	52.6		
Perceived severity					15.63	<0.001*
Negative	85	74.6	29	25.4	(1)	
Positive	82	50.9	79	49.1		
Perceived benefits					48.65	<0.001*
Negative	38	35.2	70	64.8	(1)	
Positive	129	77.2	38	22.8		
Knowledge					2.11	0.15
High	31	52.5	28	47.5	(1)	
Low	136	63.0	80	37.0		
Communication towards STD prevention						
Good	118	69.4	52	30.6	14.08	<0.001*
Poor	49	46.7	56	53.3	(1)	

*p-value<0.05

Table 6 Multiple logistic regression of factors associated with STDs preventive behavior

Variables	STDs preventive behavior[r]			
	Adjusted OR	95% CI of OR		P-value
		Lower	Upper	
Communication towards STDs preventive				
Good	2.37	1.30	3.71	0.001*
Poor	1			
Perceived severity				
Positive	0.42	0.15	1.51	0.063
Negative	1			
Knowledge				
Good	0.90	0.54	1.51	0.692
Poor	1			
Perceived barrier				
Positive	1.09	0.61	1.93	0.773
Negative	1			
Allowance				
High	0.36	0.16	0.79	0.581
Low	1			

[r] The poor level of STDs preventive behavior is the reference group

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