

PRACTICE REGARDING HIV/AIDS PREVENTION OF THE PUPILS IN NAMKEUNG HIGH SCHOOL, TONPHEUNG DISTRICT, BOKEO PROVINCE, LAO IN 2023

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ABSTRACT

Introduction: The study aims to describe the practice regarding HIV/AIDS prevention of the pupils in Namkeung high school in Lao 2023 and its related factors.

Methods: This cross-sectional survey was conducted through a self-administered questionnaire on all 357 pupils in Namkeung High School

Results: The rate of pupils with good practice regarding HIV/AIDS prevention was 51.1%. This 'good practice' was determined based on a set of criteria that included factors such as the number of sexual partners, sexual intercourse with high-risk groups, condom use, and substance use. Regarding associated factors, grade 12th pupils were 4.5 times more likely to practice HIV/AIDS prevention well than grade 10th pupils (72.7% vs. 37.2%; OR=4.5; 95% CI: 1.5-13.8; $p<0.05$). Pupils with good GPA were 3.4 times more likely to practice HIV/AIDS prevention than pupils with average GPA (64.9% vs. 35.1%; OR=3.4; 95% CI: 1.4- 8.7; $p<0.05$).

Conclusions: The rate of pupils with good practice regarding HIV/AIDS was low. The study underscores the critical need for targeted education and early intervention. It recommends that school teachers should coordinate closely with parents in sex education in official lectures, extracurricular activities, classes, and club seminars. These strategies are crucial for improving prevention practices among high school pupils.

Keywords: HIV/AIDS, pupils, high school, Lao PDR.

1. INTRODUCTION

Currently, HIV/AIDS is an urgent pandemic, lacking a specific treatment or vaccine for prevention. The commonly used intervention to prevent the disease is to use communication to change behavior to ensure safe sex. According to the report of UNAIDS, as of 2021, there are 38.4 million people infected with HIV, of whom 1.7 million are aged 0-14, and 54% of the total number of people infected with HIV are women and girls. This data underscores the pressing need for effective prevention strategies [1, 2]. The Lao People's Democratic Republic (PDR) is the only landlocked country in Southeast Asia, bordering Thailand, Myanmar, and Cambodia, the

three countries in the region most heavily affected by HIV [3]. According to UNAIDS (2020), every year in the Lao PDR, there are more than 1,000 new cases of HIV/AIDS infection, and about 10,000 people are infected, of whom 7,000 people access treatment, and about 100 people die [1]. High school pupils are the ones who know about HIV/AIDS, but the practice to prevent the spread of the disease among pupils is still limited. Therefore, improving attitudes and behaviors for pupils is critical and requires proper attention. Although high school pupils know about HIV/AIDS, 59.3% of pupils still have misconceptions about HIV; 31.3% of pupils have a history of sexual

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intercourse, and 70.2% of these pupils have used condoms. Only 43.9% said they used condoms correctly. This data highlights the urgent need for focused attention on improving student attitudes and behaviors [4].

Namkeung High School is located in Tonpheung Township, a small town with a population of over 3,000. Pupils in this area are at high risk of HIV/AIDS infection because of the many restaurants, karaoke bars, and the area's location in the Golden Triangle of drug trafficking. This study aims to describe the practice regarding HIV/AIDS prevention of the pupils in Namkeung high school in Lao 2023 and its related factors.

2. METHODS

2.1. Method design: Cross-sectional study.

2.2. Time and duration: From January to September 2023 at Namkeung High School, Lao PDR.

2.3. Sample size and sampling method

We calculated the sample size using a formula estimating a population with specified absolute precision with $Z_{1-\alpha/2} = 1.96$ and $d = 0.06$ (absolute precision required) and $p = 0.321$, following the good practice regarding HIV/AIDS prevention from the study among male high school pupils in Lao PDR in 2013 [4]. The final sample was all 357 pupils in Namkeung High School.

2.4. Data questionnaire and data collection

The questionnaire was developed following similar previous studies, such as the study among male high school pupils in the Lao PDR [4], the study in Yen The High School on Knowledge, Attitudes, and Practices of HIV/AIDS prevention of pupils in 2015 [5], etc.

2.5. Data analysis

Practice is only counted on the group that has had sexual intercourse and assesses behaviors including: number of sexual partners, sexual intercourse with high-risk groups, condom use, and substance use. Practice is considered to be passed when pupils have ≥ 5 points. The data analyses were carried out using SPSS 20.0. Descriptive analyses include percentages and mean values.

2.6. Ethical issues

The study was approved by the Institutional Review Board of the University of Public Health (No. 89/2023/YTCC-HD3 in 2023).

3. RESULTS

3.1. General information about the pupils

Table 1. General information about the pupils

Information	Frequency (n=357)	Ratio (%)
Grade		
10th	120	33.6
11th	118	33.1
12th	119	33.3
Age group		
<15 years old	38	10.6
16-17 years old	209	58.5
≥ 18 years old	110	30.8
Sex		
Male	190	53.2
Female	167	46.8
Ethnincity		
Lao Lum	300	84.0
Lao Theung	39	10.9
Other (Hmong, La Hou)	18	5.1
Grade point average (GPA)		
Weak	8	2.2
Average	154	43.1
Good	174	48.7
Excellent	21	5.9

Out of the total of 357 pupils from Namkeung High School, the distribution of pupils participating in the study in the three grades was equivalent. In terms of sex, the proportion of male pupils participating in the study was higher than that of female pupils (53.2% compared to 46.8%). In terms of age, there was a significant difference, with the 16-17 age group accounting for 58.5% and pupils under 15 years old accounting for only 10.6%. In terms of ethnicity, the pupils were mainly Lao Lum (84%), while other ethnic groups accounted for 16% including Lao Theung, Hmong, La Hou, etc. Most (91.8%) of the pupils participating in the study had average (43.1%) and good (48.7%) GPAs.

3.2. Practice on HIV/AIDS prevention

Table 2. Practice on HIV/AIDS prevention

Practices	Male n (%)	Female (%)	Total n (%)
	n=190	n=167	n=357
HIV/AIDS test			
Used to	6 (3.2)	5 (3.0)	11 (3.1)
Never	184 (96.8)	162 (97.0)	346 (96.9)
Ever have sex			
Used to	64 (33.7)	24 (14.4)	88 (24.7)
Never	126 (66.3)	143 (85.6)	269 (75.4)
Explore HIV/AIDS			
Used to	134 (70.5)	129 (77.3)	263 (73.7)
Never	56 (29.5)	38 (22.7)	94 (26.3)
Participate in HIV/AIDS communication activities			
Used to	40 (21.1)	56 (33.5)	96 (26.9)
Never	150 (78.9)	111 (66.5)	261 (73.1)

Table 2 shows that although pupils actively learn about HIV/AIDS (73.7%), they have not actively participated in HIV/AIDS prevention and control (26.9%) or actively tested for HIV/AIDS (3.1%). The rate of pupils who have had sexual intercourse is 24.7%, with males (33.7%) being higher than females (14.4%).

Table 3. HIV/AIDS risk behaviour

Practices	Male n (%)	Female (%)	Total n (%)
	n=190	n=167	n=357
Having many sex partners (n=88)			
Yes	15 (23,4)	4 (16,7)	39 (44,3)
No	49 (76,6)	20 (83,3)	49 (55,7)
Used to have sex with high-risk group (n=88)			
Yes	13 (20,3)	4 (16,7)	37 (42,0)
No	51 (79,7%)	20 (83,3%)	49 (58,0)
Used a condom when having sex (n=88)			
Always	28 (43,8)	15 (62,5)	43 (48,9)
Some-times	36 (56,3)	9 (37,5)	45 (51,1)
Use addicted substance			
Đã từng	7 (3,7)	2 (1,2)	9 (2,5)
Chưa	183 (96,3)	165 (98,8)	348 (97,5)

Table 3 shows that among the 88 pupils who reported having had sex, 44.3% of pupils reported having multiple sexual partners, 42% had had sex with high-risk partners, and only 48.9% of pupils reported consistently using condoms during sex. Regarding the use of addictive substances, only nine pupils (2.5%) used them.

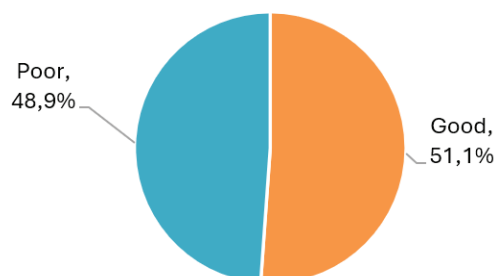


Figure 1. Practice on HIV/AIDS prevention

Research results show that the rate of pupils who have practiced HIV/AIDS prevention is at an average level of 51.1% (Figure 1).

3.3. Some associated factors to practice on HIV/AIDS prevention

Table 4. Associated factors for practice on HIV/AIDS prevention

Factors	Practice		OR (95% CI)	p
	Good n (%)	Poor n (%)		
Grade				
10th	16 (37.2)	27 (62.8)	1	-
11th	13 (56.5)	10 (43.5)	2.2 (0.8 – 6.1)	> 0.05
12th	16 (72.7)	6 (27.3)	4.5 (1.5 – 13.8)	< 0.05
Age group				
<15 years old				
5 (50.0)	5 (50.0)	1	-	
16-17 years old	22 (45.8)	26 (54.2)	0.8 (0.2 – 3.3)	> 0.05
≥18 years old				
18 (60.0)	12 (40.0)	1.5 (0.4 – 6.3)	>0.05	
Sex				
Male	36 (56.3)	28 (43.7)	2.1 (0.8 – 5.6)	> 0.05
Female	9 (37.5)	15 (62.5)	1	-

Factors	Practice		OR (95% CI)	p
	Good n (%)	Poor n (%)		
Ethnincity				
Lao Lum	35 (50.0)	35 (50.0)	1	-
Lao Theung	7 (53.9)	6 (46.1)	1.2 (0.4 – 3.8)	> 0.05
Other (Hmong, La Hou)	3 (60.0)	2 (40.0)	1.5 (0.2 – 9.5)	> 0.05
Grade point average (GPA)				
Weak	1 (100.0)	0	-	-
Average	15 (34.9)	28 (65.1)	1	-
Good	24 (64.9)	13 (35.1)	3.4 (1.4 – 8.7)	< 0.05
Excellent	5 (71.4)	2 (28.6)	4.7 (0.8 – 27.0)	> 0.05

Table 4 shows the association between both demographic characteristics and HIV/AIDS practices of pupils. In terms of grade level, grade 12th pupils were 4.5 times more likely to practice HIV/AIDS prevention better than grade 10th pupils (72.7% vs. 37.2%; OR=4.5; 95% CI: 1.5-13.8; $p<0.05$). Pupils with good GPA were 3.4 times more likely to practice HIV/AIDS prevention than pupils with average GPA (64.9% vs. 35.1%; OR=3.4; 95% CI: 1.4- 8.7; $p<0.05$).

4. DISCUSSION

The study was conducted on 357 pupils studying at Namkeung High School, Tonpheung District, Bokeo Province, Laos. All pupils of the school participated in the survey, providing an overview of the knowledge, attitudes, and practices of HIV/AIDS prevention among pupils at the school.

The proportion of pupils who had ever had sex was 24.7%, with males (33.7%) being higher than females (14.4%). Our study was lower than the study among male high school pupils in Lao PDR in 2013, as 94 (31.3%) pupils had ever had sex, and 70.2% of them used condoms. However, only 43.9% said they regularly used condoms [4]. This shows that pupils have specific concerns about preventing sexually transmitted diseases. According to a study in the US (2015-2017), only 49.3% of pupils have never had sex. This difference is due to cultural differences between the Americas and Asia [6]. A study in Yen The high school in Vietnam shows that

the percentage of pupils who have not had sexual intercourse is higher: the majority of pupils have not had sexual intercourse (93.1%) [5]. This difference is due to the different cultures of different countries and the current time, when pupils have a more open view of sex. The trend of pupils having sex at an early age is increasing, and the importance of educating pupils on safe sex practices is essential and should be given attention by governments and relevant agencies

Regarding practices related to HIV/AIDS, the study only analyzed the group of pupils who had sex. The results showed that pupils actively learned about HIV/AIDS (73.7%) but did not actively participate in HIV/AIDS prevention and control propaganda (26.9%) or actively test for HIV/AIDS (3.1%). Our study was higher than the study in Yen The high school, with 2/3 of the pupils answering that they had learned about issues related to HIV/AIDS (63.8%). 23.2% said they had never learned about topics related to HIV/AIDS, and 13.0% answered that they did not remember [5].

The research results also showed that 51.5% of pupils practiced HIV/AIDS prevention. This result is lower than the rate of 60-70% in the study at Nguyen Tat Thanh University in 2020 [7] and the study on nursing pupils at Hanoi Medical University in 2017 [8]. Grade 12th pupils were 4.5 times more likely to practice HIV/AIDS prevention than grade 10th pupils (72.7% vs. 37.2%; OR=4.5; 95% CI: 1.5-13.8; $p<0.05$). This result is consistent with many previous studies, such as the study at Nguyen Tat Thanh University in 2020 [7] and the study on nursing pupils at Hanoi Medical University in 2017 [8]. Pupils in older grades are exposed to more knowledge from schools and parents, as well as early exploration on social networks, which helps them accumulate knowledge. When they are older, pupils themselves also have more positive thoughts, understand the nature of the problem better, and are aware of the importance of reproductive health to protect themselves. Thus, first-year pupils have not had effective access to communication channels on HIV/AIDS prevention, and further research is needed on the first-year student group to have earlier intervention solutions to improve knowledge and practice on HIV/AIDS prevention in this group.

5. CONCLUSIONS

The study found that the practice of 357 pupils at Namkeung High School in Tonpheung District of Bokeo Province was common. The rate of pupils who had practiced HIV/AIDS prevention was average at 51.1%. Regarding associated factors, grade 12th pupils were 4.5 times more likely to practice HIV/

AIDS prevention well than grade 10th pupils (72.7% vs. 37.2%; OR=4.5; 95% CI: 1.5-13.8; $p<0.05$). Pupils with good GPA were 3.4 times more likely to practice HIV/AIDS prevention than pupils with average GPA (64.9% vs. 35.1%; OR=3.4; 95% CI: 1.4- 8.7; $p<0.05$).

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