

Pornography Watching and Associated Factors among University Students at the University of Health Sciences, Lao PDR

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Abstract

Background: Pornography watching has become an extensive social phenomenon worldwide and has contributed to changes in the terrain of human sexuality causing both positive and negative attitudes. Pornographic sources (Internet, smartphones, movies/videos, television, and magazines/books) have made pornography available faster and easier than ever before. The students often deliberately search for these materials due to their curiosity. This paper has the aim of describing the frequency of watching pornography and associated factors among students at the University of Health Sciences (UHS).

Method: The PRECEDE–PROCEED Theory was used to guide this study. The study adopted a cross-sectional design. The study was conducted at the UHS, Lao PDR, from January to March 2019. A sample of 365 university students was selected for this study using cluster and multi-stage sampling. The data was collected by self-administered questionnaires and analyzed by using statistics software, namely SPSS version 13.1. In addition, descriptive and inferential statistics were applied.

Results: Participants included in this study totaled 365 adults. The mean age of participants was 21.9 years. There were a higher percentage of females (55.3%) than males. The results showed that the frequency of erotic pornography was high, averaging at 40.9% (62.0% for males and 23.8% for females). The factors associated with watching pornography were sex, participants having partners, a positive attitude towards pornography watching and having supportive friends. Male participants were 4.6 times more likely to watch erotic pornography than female participants (AOR=4.6, 95%CI=2.9-7.4, $P<0.000$). Participants who had partners were 1.9 times more likely to watch erotic pornography than those who were single (AOR=1.9, 95%CI=1.1-3.2, $P<0.009$). Participants who

had positive attitudes were 1.8 times more likely to watch erotic pornography than those who had negative attitudes (AOR=1.8, 95%CI=1.1-2.9, $P<0.014$), and participants who had friends to support pornographic viewing were 1.8 times more likely to watch erotic pornography than those who did not have persuasive friends (AOR=1.8, 95%CI=1.6-2.9, $P<0.010$).

Conclusion: The frequency of watching erotic pornography detailing sexual intercourse was high among university students. The factors such as being male, having partners, maintaining a sympathetic attitude and having influential friends were significant motivators associated with watching erotic pornography. Therefore, it is important to provide adequate reproductive health education for students and establish policies about pornography.

Keywords: Pornography, viewing, university students, UHS

Background

Pornography has a high rate of viewing among young people [1]. It can leave a lasting impact on a young person. It can influence their sexual lifestyle, sexual practices, and attitudes and decrease their concern about unsafe or unprotected sex. It can also impact on their well-being, relationships, sexual outlook and psychological development [2]. For example, viewing pornography can start people down a path towards psychological problems such as depression, anxiety, loneliness and stress [3]. More than 80% of people engaged with pornographic materials experience problematic effects following usage of such items and 54% of them have sexual problems [4, 5].

Across the world, pornography watching (PW) has become a common viewing habit for millions of youths in their homes, at work, at school or at college. In the digital age where there is a world without borders the utilization of pornography has increased in both developed and developing countries [6]. In addition, pornography has become easier to access, not overly expensive, frequently anonymous, and relatively private [7]. A report by the National Center on Sexual Exploitation (NCOSE) showed that 64% of people ages 18–24 used pornography weekly or more often [8]. Among youth, pornography users accounted for 87% of males and 31% of females [9]. Globally, youth are exposed to pornography before having sex at an average of 53% and 30 million youths were infected with a sexual transmitted diseases (STDs) including the Human Immunodeficiency Virus (HIV), while others had early pregnancies and abortions [10].

Laos is a country in the process of a rapid socio-economic transition which is also influencing the sexual attitudes and behaviors of Lao youth. There is increasing Internet use with a rise of 36.7% users per month recorded in 2017 [11]. Hence the concern for the increasing influence of PW on youth behavior, attitudes, and beliefs [12].

University students reportedly have the highest rate of pornography viewing [3]. This may be due to the fact that students are at a crucial stage in life and they have a great deal of freedom to choose their own perspective about sexuality. In addition, they want learn about the physiology of their bodies and sexual techniques from pornography [13]. Pornography is considered to be a significant and popular sex educator for young people [14]. According to Wamathai and Park (2014) it was reported that 40% of students viewed pornography during their lifetime, with 48.8% of students viewing pornography to get aroused and masturbate, 39.5% out of curiosity and 28.5% because it was perceived as being cool [3, 15]. Hence reason the study was conducted in the UHS located in Vientiane, the capital of Lao PDR, which has approximately 2,500 students at its campus. The UHS students come from different ethnic groups and learn anatomy and physiology with information

technology (IT) applications as well as having easy access to the Internet. They are in the transition phase into adulthood and interested in their in sexuality is generally high. Thus, this study aimed to explore the frequency of PW and the factors associated with the usage of PW among students at the UHS.

Methods

Study design and setting

The study adopted a cross-sectional design with a quantitative data collection method by using self-administrated questionnaires to get information. The data collection was conducted at the UHS from January to February 2019. The population for this study comprised of undergraduate students who were youths between the ages of 18 and 24 years. The UHS was established in 2001, and comprises of two cabinets namely administrative and academic affairs, one institute for research and education development, and six faculties (Faculty of Medicine, Faculty of Pharmacy, Faculty of Dentistry, Faculty of Nursing, Faculty of Medical Technology and Faculty of Public Health). The students come from different ethnic groups including Lao, Hmong, Iu Mien, Khmu and Akha, and they have student representatives. The students involved in the survey were full-time undergraduates.

Participants

The study participants were UHS students aged 18 to 24 years who were enrolled as regular full time undergraduate student in the 2019 academic calendar. Theorists and researchers suggest that university students' interest in pornography can be attributed to their evolved interest in sexual variety and multiple partners [16]. Pornography provides sexual intercourse content and details sex for students with a variety of physically attractive movements which help to provide physical gratification about sexual activities [17].

The sample size was calculated using a known population formula based on the assumption of a 50% proportion (P) of pornography watchers among university students, a 95% confidence level ($Z_{\alpha/2}$), a 5% margin of error (e), a design effect of 1.3 and a 10% non-response rate.

A multi-stage sampling method was conducted. Two faculties, namely the Faculty of Medicine and the Faculty of Pharmacy, were selected and then proportional sampling was applied and a total of 365 students were selected from these two faculties with students representing all grades.

Conceptual framework

This study will build upon the PRECEDE–PROCEED theory to explain the behavioral changes identified. It provides a comprehensive structure for assessing health and quality of life needs. In this theory framework there are eight phases (Social Diagnosis, Epidemiological, Behavioral & Environmental Diagnosis, Educational & Ecological Diagnosis, Administrative & Policy Diagnosis, Implementation, Process Evaluation, Impact Evaluation and Outcome Evaluation). For this study we carried out two phases (phase two and three, namely Epidemiological, Behavioral & Environmental Diagnosis, and Educational & Ecological Diagnosis). PRECEDE-PROCEED provided the structure for planning a targeted and focused public health program and structure for implementing and evaluating the public health program. A comprehensive structure for assessing health needs involves designing, implementing, and evaluating health promotions and other public health programs to meet the target needs.

Measurements

The independent variables included socio-demographic factors, the attitudes of students towards to pornography, the influence of friends and family on pornography watching, and sources of pornography. The socio-demographic characteristic of students included sex, age, faculty, marital status, parental status and family status.

The questions for attitudes towards to pornography watching were developed according to the Bente Traen and Kristin Spitznogle Attitudes Scale [18]. Each question was answered on a four-point Likert Scale for attitude statements ranging from strongly disagrees (recorded as zero) to strongly agree (recorded as three). The attitudes towards pornography watching included 20 items. A summated composite score had a minimum score of 20, the mean score was 46, and the maximum score was 73. The actual scores were classified into two groups, namely scores 20-46 (<71%) were regarded as the respondents indicating a negative attitude and scores 47-73 (>71%) were regarded as the respondents indicating a positive attitude.

The questions on family and friends' influence was classified as yes or no to refer to whether or not a student was under the family or friend's influence when encouraged to watch pornography. For sources of pornography participants answered multiple choice questions, of which they could choose more than one choice.

The dependent variable was measured by the frequency of watching erotic pornography and incorporating five questions related to pornography watching. The respondents were asked: Have

you watched erotic pornography through the Internet, movies/videos, smartphones, television and magazines/books in the last month? The responses were measured on a four-point Likert Scale (which ranged from zero to three), which included never (recorded as zero), rarely (recorded as once), often (recorded as 2-3 times) and always (recorded as more than four times) per week [19, 20]. There were three categories of pornography (i.e., mild, moderate and erotic pornography) and five questions about watching pornography through media (i.e., Internet, movies/videos, smartphones, television and magazines/book) that related to the main content of pornography watching among youth. The variables were then classified in two groups (No and Yes) based on the number of viewings meaning that if they watched erotic pornography through the various media forms less than two times it was regarded as not watching pornography actively [21].

Statistical analyses

The data were entered, validated and cleaned using Epi Data software version 6.0. The data were analyzed using SPSS version 13.1. Descriptive statistics were applied to analyze the frequency and percentage of the independent and outcome variables. Tests of significance using univariate and multivariate logistic regression were performed to calculate the odds ratio and this was used to assess the presence of association between independent and outcome variables. A 95% confidence interval was used for estimating the precision of the odds ratio, and the respective variables with significant associations. A value of $p < 0.05$ was considered statistically significant.

Ethical approval

The study was approved by the National Ethics Committee for Health Research, Ministry of Health, Lao PDR (Ethical Presentation Certificate Number: 108/18, Date 07/02/2019) and reviewed by the International Review Board of the Hanoi University of Public Health (Ethical Presentation Certificate Number: 471/2018/YTCC-HD3, Date 21/12/2018). Verbal consent was obtained from participants prior to the interviews due to the sensitive topic examined in the questionnaire. Participants were informed about the confidentiality agreement that was used to ensure the privacy of the participants. The participation of all participants was voluntary and measurements were taken to assure respect, dignity and freedom of each individual participating in the study.

Results

Socio-demographic characteristics

The socio-demographic features for the respondents are presented in Table 1. There were more female respondents (N=202, 55.3%) than male. The participants were between 18 and 24 years of age (Min=18, Mean=21.9, Max=24, SD=1.7) and most of the participants were between 23 and 24

years of age (N=170, 46.5%), ethnic Lao (N=254, 69.6%) and Buddhist (N=263, 72.0%). More than two thirds (70.9%) of the participants were single and lived with their family (46.6%) at the time of interview.

Table 1: Socio-demographic personal and family characteristics of respondents (N=365)

Demographic variables	Frequency (N=365)	Percentage (%)
Sex		
Female	202	55.3
Male	163	44.7
Ages		
18-20	90	24.6
21-22	105	28.8
23-24	170	46.6
Min=18, Mean=21.9, Max=24, SD=1.7		
Ethnicity		
Lao	254	69.6
Akha/Hmong	74	20.3
Khmu	37	10.1
Faculty		
Pharmacy	146	40.0
Medical	219	60.0
Marital status		
Single	259	70.9
With partner	106	29.1
Live with whom		
Family	170	46.6
Living alone	35	9.6
With roommate, boy/girl friend	160	43.8
Parental status		
Together	333	91.2
Separated	17	4.7
Widowed	15	4.1
Family status		
Poor	33	9.0
Average	295	80.8
Wealthy	37	10.2
Source of money		
Get from parents	279	76.4
Earn money by yourself	86	23.6

Sources: computed from field survey data during 17-18/1/2019 at UHS.

Frequency of pornography watching

Table 2 shows the frequency of pornography watching. The results revealed that nearly half (40.9%) of the respondents had watched erotic pornography during the months prior to the survey. Male students watched erotic pornography more than female students (23.8% & 62.0%). Moreover, male students watched moderate pornography more often than female students (71.8% & 41.1%). However, more male and female students watched mild pornography than erotic pornography.

The results above showed the frequency of pornography watching among university students through three types 1) mild pornography, 2) moderate pornography and 3) erotic pornography. In the study, the researchers could not use all three types of pornography watching for their analysis because mild pornography and moderate pornography were not regarded as serious and only having indirect significance to public health concerns about pornography watching amongst youth. Therefore, the researcher chose the erotic pornography type to be the dependent variable for examining the associated factors of pornography watching. This type has seriously affected personal lives, physical well-being and has made youths change their behavior to become infatuated pornography addicts [22].

Table 2: Frequency of pornography watching among UHS students

Variables	Female (N=202) N (%)	Male (N=163) N (%)	Total (N=365) N (%)
Mild Pornography Type			
No	83 (41.1)	40 (24.5)	123 (33.7)
Yes	119 (58.9)	123 (75.5)	242 (66.3)
Moderate Pornography Type			
No	119 (58.9)	46 (28.2)	165 (45.2)
Yes	83 (41.1)	117 (71.8)	200 (54.8)
Erotic Pornography Type			
No	154 (76.2)	62 (38.0)	216 (59.1)
Yes	48 (23.8)	101 (62.0)	149 (40.9)

Attitude of students towards to pornography

Table 3 presents attitudes towards to pornography watching among students. The results showed that more than half (56.2%) of the students had positive attitudes and accepted that they watched pornography without reservations. The proportion of male students having positive attitudes towards pornography watching was higher than females (63.9% & 50.0%).

Table 3 Attitude towards to pornography watching

Variables	Female (N=202)	Male (N=163)	Total (N=365)
	N (%)	N (%)	N (%)
Negative attitude	101 (50.0)	59 (36.1)	160 (43.8)
Positive attitude	101 (50.0)	104 (63.9)	205 (56.2)

Sources of pornography

Table 4 presents the sources of pornography watching. The main source of pornography watching for students was the Internet due to its availability and easy access. In addition, the smartphone was cited as the second source of pornography watching due to the higher degree of privacy it provides when searching for pornography.

Table 4: Sources of pornography among students

Sources of pornography	Frequency (N=365)	Percentage (%)
Internet	302	82.7
Smartphone	234	64.1
Movie/Video	163	44.7
Television	106	29.0
Magazine/Book	98	26.8
School resources	11	3.0
Materials at home	7	1.9

Multivariate relations between erotic pornography watching and associated factors

An attempt to identify the best model for pornography watching analysis was presented in Table 5. After making these adjustments, the factors significantly associated with erotic pornography used were sex, marital status, a positive attitude towards watching pornography and the influence of friends. The male students were nearly five times more likely to watch erotic pornography compared to females (AOR=4.6, 95% CI=2.9-7.4, $p<0.05$). The students with a partner were nearly two times more likely to watch erotic pornography compared to singles (AOR=1.9, 95% CI=1.1-3.2, $p<0.05$). The participants with a positive attitude were nearly two times more likely to watch erotic pornography compared to those who had negative attitudes (AOR=1.8, 95% CI=1.1-2.9, $p<0.05$). University students who had influential friends were nearly two times more likely to watch erotic pornography compared to those who did not (AOR=1.8, 95% CI=1.6-2.9, $p<0.05$).

Table 5: Multivariate relations between erotic pornography watching and associated factors

Variables	Erotic Pornography				OR (95% CI)	AOR (95% CI)	P-value
	Watching						
	No (N=216)		Yes (N=149)				
	N	%	N	%			
Sex							
Female	154	76.2	48	23.8	1	1	
Male	62	38.0	101	62.0	5.2 (3.3-8.2)	4.6 (2.9-7.4)	<u>0.000*</u>
Marital status							
Single	167	64.5	92	35.5	1	1	
With partner	49	46.2	57	53.8	2.1 (1.3-3.3)	1.9 (1.1-3.2)	<u>0.009*</u>
Attitude							
Negative	112	70.0	48	30.0	1	1	
Positive	104	50.7	101	49.3	2.2 (1.4-3.5)	1.8 (1.1-2.9)	<u>0.01*</u>
Influential friend							
No	124	69.7	54	30.3	1	1	
Yes	92	49.2	95	50.8	2.3 (1.5-3.6)	1.8 (1.6-2.9)	<u>0.01*</u>

Note: *significant association (p<0.05)

Discussion

Frequency of erotic pornography watching

The findings showed that there was a high frequency (40.9%) of erotic pornography watching among university students. The results were surprising because this was the first study of its type in Laos and it was not anticipated that such a high frequency already existed in the target group. However, the proportion of UHS respondents who reporting watching erotic pornography were similar to previous studies done in countries such as Australia, Kenya, China and Taiwan because of globalization and Laos becoming increasingly mainstreamed into regional and international networks. Modern technology and trends have given university students easy access to pornographic material (via various media outlets) [23]. Our findings were high, however, not as high as other previous studies. These differing results were most likely due to different methods, criteria, and sample groups. For instance, the present study recruited undergraduates who are more likely to have had access to affordable pornography and been able to exchange it without time limits [24]. As we know pornography watching is common and the convenience of doing it is high due to the unlimited access to digital sources so that anyone can view pornography if they really desire [25]. In fact, students are at a crucial stage in life where they are making choices that affect their sexuality and they have freedom to choose their own relationships and sexual activities [3] and they are curious and interested about sexuality [26]. In addition, they believe that watching

pornography with modern devices helps them to succeed in sexual exploits and makes their partners happy [27]. Due to inadequate discussions and a lack of guidance from parents, young people look elsewhere for sex education [28]. Furthermore, viewers of pornography believe using such materials creates a more stimulating sex life for them [29].

Factors associated with erotic pornography

The key findings of this research indicated that the factors significantly associated with erotic pornography were 1) sex, 2) marital status, 3) personal attitude and 4) the influence of friends.

Pornography watching was a common practice among young males [25], and males paid more attention to watching pornography than females [30, 31]. Males were actively watching pornography due to common behavioral aptitudes [32]. For example, males were more likely to watch and accept pornography, as well as use it alone, whereas females were more likely to view pornography with a sexual or dating partner [33]. Recent research has found some evidence of an association between pornography use and male sexual health disturbances [34, 35].

The UHS students who had partners were significantly associated with erotic pornography watching. Viewing pornography together with partners may be common for particular youths. Just over half of the respondents had been asked to watch pornography together by a dating or sexual partner, and tried to do something sexual that a partner had seen in pornography [36]. There was also a strong likelihood that youths would do something they had seen in pornography to learn about sexual organs and functions, the mechanisms of sex, and to further their sexual identity's development [37]. In addition, they watched pornography before having sex and emulated what they had seen in pornographic materials [38]. Furthermore, partners watched pornography to have greater openness concerning their sexuality and to develop a willingness to experiment with their sexual practices, and to enhance the relationship of their sex life by openly expressing feelings of eroticism in a way they felt confident with [39].

Participants who have positive attitudes were also more likely to watch pornography and to believe that pornography reflects real-world sexual practices [40]. According to a previous study it was found that males and females agreed that viewing sexually explicit material was an acceptable way to express one's sexuality [9]. In fact many youths in another study regarded viewing pornography as a positive outcome because they had increased satisfaction, satisfied their curiosity and heightened their sexual learning through sexual interactions [41]. Pornography has been found to function as a form of sex education for youth that can provide information about the human body

and sexual practices, thus increasing a sense of sexual competence and liberalization, while also decreasing sexual shame [19]. The main benefits, in order of reporting, were making viewers feel less repressed about sex, making them more open-minded about sex, increasing their tolerance of other people's sexualities, giving pleasure to the viewer, providing educational insights, and sustaining sexual interest in a long-term relationship [42]. Positive attitudes made viewers more attentive to a partner's sexual desires, helped viewers find an identity or community and helped them to talk to their partner about sex [43].

Males and females frequently reported their friends' influence was very important during their student life. In this study the university students were more likely to discuss and share impressions about pornography with their friends than their family members. Males often discussed ways to find and share pornographic materials among friends. Females also accepted that friends who watched pornography influenced them. This study revealed that most males shared their pornography watching experiences with their friends and also encouraged their friends to do the same. These findings are similar to those of research conducted in other Asian countries [10]. Youths spend more time out of the house with friends as a group, so it is understandable that peer' influence on attitudes, speech, interests, looks and behavior outweighs the influence of family [44]. Friends also served as a source of pornographic information [33], and friends who viewed pornography regularly would encourage their friends to watch the same things they had seen [45]. However, there is concern regarding the impact of pornography watching affecting the health of university students such as early sex, pre-marital sex, abortions, and STD infections [46, 47].

There were limitations in this research. Firstly, to our knowledge, this study was the first of its kind. Therefore, the comparative data and statistics came from research in other countries. Secondly, the questionnaire for pornography watching was quite sensitive so that the answers from participants were under reported, especially females because of the social desirability effect. Finally, the researchers chose the third category (erotic pornography) to be the dependent variable for their examination of associated factors for pornography watching. This type of pornography viewing seriously affects people's lives when it contains sadistic, chauvinistic and dehumanizing content.

Conclusions

We found that a high frequency of students watched erotic pornography at the UHS. The key associated factors were male students, participants who had a partner, persuasive friends and a positive outlook which were significantly correlated with pornography watching. Pornography appears to be fairly acceptable in large segments of the UHS student population. The majority of the

students have been exposed to some form of pornography materials. The factors which contributed to pornography viewing included the students' need to satisfy their sense of curiosity, a pursuit of deeper knowledge for sexuality education and for entertainment. Therefore, parents, educators, policymakers, and health and law enforcement professionals should have more knowledge and a better understanding of the current pornography situation and examine this issue to find solutions. For example, the Lao education sector management should come up with curricula and programs appropriate for sexual education in schools and colleges/universities. These programs should provide sexuality information and highlight the negative effects of pornography when youth are free to engage and seek clarification on sexual issues. Therefore, future researchers should seek to do qualitative research and more in-depth investigations to fully unpack the issue and factors that motivate student's interest to watch pornography.

Abbreviations

PW: Pornography Watching

SEM: Sexual Explicit Material

NCOSE: National Center on Sexual Exploitation

UHS: University of Health Sciences

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Authors' contributions

SX performed the literature review and drafted and revised the manuscript. SX performed the statistical analysis. KC and BTTH made contribution to the statistical analysis, interpretation of results and made contributions to manuscript revision. All authors read and approved the final manuscript.

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Availability of data materials

The datasets analyzed during the current study are not publicly available due to the privacy policy imposed by the UHS, but may be available from the corresponding author on reasonable request.

Ethics approval and consent to participate

This study was approved by the National Ethics Committee for Health Research, Ministry of Health, Lao PDR and reviewed by the International Review Board of the Hanoi University of Public Health. All students who are included in the sample agreed to participate in the survey and signed the informed consent form.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

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