

ວາລະສານວິທະຍາສາດມະຫາວິທະຍາໄລສຸພານວົງ, ຄົນຄວ້າວິຈະສະຫະສາຂາວິຊາ, ວາລະສານເປີດກວ້າງ  
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## ບັດໄຈທີ່ກໍໃຫ້ເກີດແຜໃນກະເພາະອາຫານ ແລະ ລໍາໄສ້ອ່ອນທ່ອນຕົ້ນໃນຄົນເຈັບທີ່ໂຮງໝໍ

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### ບົດຄັດຫຍໍ້

ຈຸດປະສົງຂອງການຄົ້ນຄວານີ້ແມ່ນເຜື່ອປັບຫຽບບັດໄຈສ່ວນຕົວລະຫວ່າງກຸ່ມທີ່ເປັນຜະຍາດບາດແຜໃນກະເພາະອາຫານ PUD ແລະ ກຸ່ມທີ່ບໍ່ເປັນຜະຍາດບາດແຜໃນກະເພາະອາຫານ PUD, ເຜື່ອປັບຫຽບບັດໄຈ ລະຫວ່າງ ບຸກຄົນ ຂອງກຸ່ມທີ່ເປັນຜະຍາດ PUD ແລະ ກຸ່ມທີ່ບໍ່ເປັນຜະຍາດ PUD, ເຜື່ອປັບຫຽບບັດໄຈ ດ້ວນວັດທະນະທຳ - ສັງຄົມ ແລະ ກົດໝາຍລະຫວ່າງກຸ່ມທີ່ເປັນຜະຍາດ PUD ແລະ ກຸ່ມທີ່ບໍ່ເປັນຜະຍາດ PUD. ວິທີການວິຈາໃນຄັ້ງນີ້ ໃຊ້ການ ວິເຄາະໂດຍໃຊ້ການສຶກສາກໍລະນີຄວບຄຸມເຜື່ອຊອກຫາບັດໄຈທີ່ສິ່ງຜົນກະທິບຕໍ່ແຜໃນກະເພາະອາຫານ ແລະ ລໍາໄສ້ ອາອນທ່ອນຕົ້ນຂອງຄົນເຈັບທີ່ໂຮງໝໍແຂວງຈຳປາສັກ. ການສຶກສາ ໄດ້ດໍາເນີນໃນລະຫວ່າງເດືອນມັງກອນ 2019 ເຖິງ ເດືອນພຶດສະພາ 2019. ກຸ່ມຕົວຢ່າງເປັນຄົນເຈັບລວມມີ 96 ຄົນ ອາຍຸ 18 ປີຂຶ້ນໄປ, ນັກຄົນຄວ້າໄດ້ແປງ ກຸ່ມຕົວຢ່າງ ອອກເປັນ 2 ກຸ່ມຄື: PUD (ກຸ່ມສຶກສາ) ປະກອບມີ 48 ຄົນ ແລະ ຄົນທີ່ບໍ່ເປັນຜະຍາດ PUD (ກຸ່ມຄວບຄຸມ) ຈຳນວນ 48 ຄົນ. ການເກັບຂໍ້ມູນ ນຳໃຊ້ບົດບັນ ທຶກທາງການແພດ ແລະ ແບບສອບຖາມກ່ຽວກັບຄວາມສ່ຽງດ້ານນີ້ເວດວິທະຍາ. ຂໍ້ມູນໄດ້ຖືກວິເຄາະໂດຍ ໃຊ້ສະຫຼິກ ເຜື່ອຊອກຫາຄວາມຖື່ກີ, ອັດຕາສະເລ່ຍ, ເປີເຊັນ ແລະ ຫາຄ່າຜົນປ່ຽນມາດຕະຖານ ແລະ ການວິເຄາະຂໍ້ມູນໃຊ້ການວິເຄາະການຖືກຖອຍຢ່າງງ່າຍ ແລະ ການວິເຄາະການທິດຖອຍໂລຈິດສົດ. ຜົນໄດ້ຮັບ ສະແດງໃຫ້ເຫັນວ່າກຸ່ມທີ່ມີການຖືດເຊື້ອ *H. pylori* ມີແນວໂນມໍທີ່ຈະເປັນບາດແຜ peptic ຫຼາຍກ່ວາຜູ້ທີ່ບໍ່ມີ ການຕິດເຊື້ອ *H. pylori*. ກຸ່ມທີ່ໃຊ້ຢ່າ *NSAIDs* ມີແນວໂນມໍທີ່ຈະເປັນຜະຍາດ ກະເພາະອາຫານຫຼາຍກວ່າ ກຸ່ມທີ່ບໍ່ໄດ້ໃຊ້ ( $M=107.81$ ). ຄົນທີ່ດື່ມເຫຼົ້າແມ່ນມີຄວາມສ່ຽງສູງກວ່າ ກຸ່ມທີ່ບໍ່ດື່ມ ( $M = 31.61$ ). ກົນອາຫານ ບໍ່ຖືກເວລາ ( $M = 45.22$ ) ມັກຈະເປັນແຜໃນກະເພາະອາການຫຼາຍກ່ວາກຸ່ມທີ່ກົນອາຫານ ຕົງຕາມເວລາ. ຈາກການ ວິເຄາະຫຼາຍໆດ້ານຂອງບັດໄຈຕ່າງໆທີ່ເຮັດທີ່ເຮັດໃຫ້ເກີດແຜໃນກະເພາະອາຫານ ສະແດງໃຫ້ເຫັນວ່າ ຄົນທີ່ມີຫຼຸ່ມັກ ຈະດື່ມເຫຼົ້າ ( $M = 7.37$ ) ກຸ່ມທີ່ມີຄອບຄົວບໍ່ຫ້າມໃຫ້ກົນເຫຼົ້າ ມີແນວໂນມໍທີ່ຈະເປັນໂລກກະເພາະອາຫານຫຼາຍກວ່າ ກຸ່ມທີ່ຄອບຄົວຫ້າມໃຫ້ກົນເຫຼົ້າ ( $M=3.98$ ). ຄົນທີ່ໃຊ້ເຫຼົ້າຫລັງ 16 ມ 01 ນທ ມາດື່ມີຄວາມສ່ຽງ ຕໍ່ກັບຜະຍາດບາດແຜ ໃນກະເພາະອາຫານຫຼາຍກ່ວາຜູ້ທີ່ໃຊ້ເຫຼົ້າໃນເວລາ 08 ມ 00 ນທ -16 ມ 00 ນທ ( $M = 5.02$ ).

ຄໍາສໍາຄັນ: ຜະຍາດກະເພາະອາຫານ, ຄົນເຈັບ, ການປິ່ນປົວ, ບັດໄຈສ່ຽງ

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## Factors contributed to the occurrence of peptic ulcer disease in patients at Champasack Provincial Hospital, Pakse, Laos

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### Abstract

The objectives of this study was to compare the personal factor between the PUD group and the Non-PUD group contributing to occurrence of the peptic ulcer, to compare the interpersonal factor between the group of PUD and Non-PUD group resulting in the occurrence of the peptic ulcer, to compare social-culture factors and law between the PUD group and the non-PUD group leading to the occurrence of peptic ulcer. The method applied was an analytical study using Case-control study to determine factors resulting in the occurrence of peptic ulcers of patients at Champasak Hospital, Lao PDR. The study took place between January 2019 and May 2019. The sample group comprised of 96 patients whose age was over 18. Researchers categorized sample group into 2 groups: PUD (Case) comprised of 48 patients and non-PUD (Control) included 48 patients. Data were collected using medical records and an ecological risk questionnaire form. Data were analyzed using descriptive statistics to find the frequency, average, percentage, and standard deviation  $\chi^2$ . The analysis used simple logistic regression and multiple logistic regression. The study groups with *H. pylori* infection were ( $M=4.88$ ) more likely to develop a peptic ulcer than those without *H. pylori* infection. Non-steroidal anti-inflammatory drugs were more prone to peptic ulcers than non-steroidal anti-inflammatory drugs 107.81. Alcoholic drinking groups were ( $M=31.61$ ) more at risk than those without alcoholics. Having food incorrect time, ( $M=45.22$ ) more likely to develop a peptic ulcer than the group eating food on time. Multivariate analysis of factors related to the occurrence of peptic ulcers showed that those who had close friends were more likely to drink alcohol at ( $M=7.37$ ) more risk than those who did not accepted and those whose families do not have alcohol prohibitions are at greater risk of developing ulcers than those whose families have a prohibition on drinking ( $M=3.98$ ). Multivariate analysis of factors related to the occurrence of peptic ulcers found that those who bought alcohol after 16.01 hrs were more at risk of peptic ulcer than those who bought alcohol at 08.00-16.00 hrs. ( $M=5.02$ ).

**Keywords:** Peptic ulcer disease, Patients, Treatment, Risk factors

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## 1. Introduction

Peptic ulcer disease (PUD) is a lesion caused by the destruction or ulceration of the lower esophagus and the stomach lining (Gastric ulcer (GU) or ulcer. The duodenum ulcer (DU) causes irritation or erosion (Lilawan Unanapirak et al., 2007). Gastric ulcers are caused by the destruction of gastric juice from the stomach known as Pepsin and hydrochloric acid (Hydrochloric : HCL) the stomach is created for digestion . Such gastric juice and acid cause the lining under the skin to become acidic and self-digestion, resulting in the destruction of the mucous layer and muscularis mucosa. Duodenum ulcer is caused by increased acid secretion which may be caused by stimulation of vagus nerves or Helicobacter pylori (H. pylori) infections which cause gastrointestinal and duodenal ulcers (Habeeb et al., 2016; Suchinda Rimsithong et al., 2013)

The occurrence of peptic ulcer disease is a result of an imbalance between aggressive factors and defensive factors (Liwan Unnaphaparak & Deputy, 2007). The causes occurred from destructive factors including hydrochloric acid and pepsin H. pylori infection (Nakai & Fukunaga, 2003; Soll, Feldman & Grover, 2011), non-steroidal anti-inflammatory drugs application (Habeeb et al., 2016), drinking alcohol (Lee et al, 2016), Smoking (Rosenstock et al, 2003), stress (Livawan Unnaphirak et al., 2007), unpunctual meal consuming, and type of food having (Panu Ampornbuchcha, 1998), and etc. The factors caused by protective factors, which are self-defense mechanisms from destruction from internal and external factors, the stomach and duodenum, consisting of superior protective mechanisms epithelium mechanism of protection of the epithelial layer, and the mechanism of protection against the epithelial layer (Liwan Unanapirak et al., 2007).

The causes of this disease appeared on Lao people because they have unhealthy eating behaviors such as unwashed hands before eating, picking food with hands without spoon and most water for consuming is from natural sources. In addition, they preferred to have spicy food such as fermented foods (Wha Kasemsuk, 2016). There will be different eating habit in Laos that contributed to peptic ulcer disease, for example, Lao people in the north prefer to eat salty flavors, but people in the south prefer spicy food (Center for Trade Development and Thai Businessmen in the ASEAN Economic Community Office of Foreign Trade Promotion Vientiane City, Laos PDR, 2014). In addition, there are many tribes of 49 tribes, each tribe has different ways of life, beliefs, society and culture in each locality, such as eating habits. Some tribes like to eat raw cooked food, spicy food, salty food, drinking habits, drink raw water and like to smoke with taps. (Laos National Center, 2008). Peptic ulcer disease is a common disease and appears in many cases. The prevalence of diseases worldwide found that the rate of occurrence of peptic ulcer disease diagnosed by doctors each year is an average of 0.12-1.50 percent (Sung, Kuipers & EL-Serag, 2009). Between the years 2014-2016, in the Champasak Hospital, Lao PDR. The study found that statistics of the number of patients with gastric disease were 2,166, 1,250 and 1,374, and among these, the number of patients with peptic ulcer disease were 224, 266 and 305 cases, respectively.

In the context of the Lao People's Democratic Republic, society is considered an important part for people to smoke and drink alcohol. The cause of disease occurred because of society trend. They has accepted smoking and drinking alcohol as part of daily life whether it is a wedding ceremony, a congratulatory event, birthday party, housewarming and festivals. According to

the 12 traditions and 14 customs of Laos, the traditions will have social gatherings, drinking and smoking together, which is considered an indispensable action. Furthermore, drinking alcohol and smoking are social, as well as showing acceptance and love. And sometimes, smokers tend to look positively because smokers can use it to build good relationships in society (Bub Pha Chan Moon, Atittaya Phornchai Ket Owoung, and Prakayuttri, 2013).

In terms of culture, society and traditions, most of them are similar to Thailand. With temples as a refuge for the mind and the people have cultures and games such as dancing, basketball, dancing, and popular drinking. By drinking large quantities when having a party (Weha Kasemsuk, 2016), most importantly, alcoholic beverages and cigarettes can be easily purchased at general convenience stores. Whoever bought it, regardless of age can buy anytime which violates the regulations governing alcoholic beverage regulations article 53, 54, 55 and 56 and the Tobacco Control Law Articles 48, 49 and 50 of Laos PDR. These have shaped and facilitated drinking alcohol and smoking more. According to a study by Rattiya Buasorn and Chetratchada Pannathikun (2013), it is found that some of the factors related to alcohol drinking behavior are due to easy access to alcohol trading sources. Alcohol is influenced by advertising and public relations sources. Most of the time, about 60.8% of them would drink alcohol at a party with friends, followed by 27.3% in various festivals. Therefore, it can be seen that the factors associated with the occurrence of peptic ulcer disease covering all the factors that directly affect the occurrence of the wound. The factors cause patients have a higher risk of perfection than general people. These factors can be classified according to the conceptual framework of the ecological model into 3

areas which are personal factor. Interpersonal factor, and social-culture and law factor.

### **Research Objectives**

This research examined factors related to the occurrence of peptic ulcer disease in patients at Champasak Hospital, Laos.

1. To compare the personal factor between the PUD group and the Non-PUD group contributing to occurrence of the peptic ulcer.
2. To compare the interpersonal factor between the group of PUD and Non-PUD group resulting in the occurrence of the peptic ulcer.
3. To compare social-culture factors and law between the PUD group and the non-PUD group leading to the occurrence of peptic ulcer.

### **2. Materials and Methods**

This study was an analytical inquiry using Case-control study to find factors contributing to the occurrence of peptic ulcers of patients at Champasak Hospital, Lao PDR. The study was conducted between January 2019 and May 2019. The sample group of this study comprised of 96 patients, both males and females aged 18 years and older. They were separated into 2 groups: 48 cases of PUD (Case) and non-PUD (Control), consisting of 48 patients. Data were collected using medical record form and an ecological risk questionnaire form. Data were analyzed using descriptive statistics to find the frequency, average percentage, and standard deviation  $\chi^2$ , and t-test, and t-test factors contributing to peptic ulcers. The analysis used simple logistic regression and multiple logistic regression.

### **3. Results**

This section described the result of personal factor, interpersonal factor and social-culture and law factor. The results was tabulated in the next section.

## 1. Demographic data

Table 1: Demographic data

Factor	Peptic ulcer				t	p		
	Case(n=48)		Control (n=48)					
	Mean	SD	Mean	SD				
Personal factor								
Age	52.00	9.41	50.90	10.64	.538	.592		

## 2. Personal factor of sample group

Table 2: Personal factors of sample group

Factors	Case (n=48)	Control (n=48)	$\chi^2$	p
	Number (%)	Number (%)		
Gender				
Male	34(70.80)	29(60.40)	1.15	.28
Female	14(29.2)	19(39.60)		
Education background				
Study	36(75.0)	41(85.4)	1.64	.20
No study	12(25.0)	7(14.6)		
Occupation				
Government official	23(47.9)	28(58.3)	1.04	.30
Retired official	25(52.1)	20(41.7)		
Farmer				
Income /month				
More than 1,000,000	22(45.8)	36(75.0)	8.53	.003 <sup>+</sup>
Lower than 1,000,000	26(54.2)	12(25.0)		
Peptic ulcer history				
No	35(72.9)	43(89.6)	4.37	.03 <sup>+</sup>
Yes	13(27.1)	5(10.4)		
H. pylori diagnose				
No	19(39.6)	37(77.1)	13.88	<0.001 <sup>+</sup>
Yes	29(60.4)	11(22.9)		
<b>H. Pylori infection</b>				
Water source for consuming				
Water container	38(79.2)	35(72.9)	.51	.47
Natural water source	10(20.8)	13(27.2)		
Water consuming for household				
Distilled water	48(100)	47(97.9)	1.01	.31
Other	0(0.00)	1(2.1)		
Water cleaning technique for drinking				
Boiled/distilled	43(89.6)	44(91.7)	.12	.72
Other	5(10.4)	4(8.3)		
Cooked food				
Every time	34(70.8)	40(83.3)	2.12	.14
Other	14(29.2)	8(16.7)		

**The application of Nonsteroidal anti-inflammatory drugs (NSAIDs)**

The application NSAIDs

No	8(16.7)	44(91.7)	54.37	<0.001 <sup>+</sup>
Yes	40(83.3)	4(8.3)		

Time period of using NSAIDs

Time taking < 1 /wk	18(45.00)	4(100)	4.40	.03 <sup>+</sup>
Time taking ≥ 1/wk	22(55.00)	0(0.00)		

Frequency of using NSAIDs

Use < 1 time/wk	40(100)	4(100)	4.40	.03 <sup>+</sup>
Use ≥ 1 time/wk	0(0.00)	0(0.00)		

Source of obtaining NSAIDs

Doctor prescription	0(0.00)	1(25.0)	10.23	.09
Self-purchase	40(100)	3(75.0)		

**Smoking**

Smoking

No	26(54.2)	45(93.8)	19.52	<0.001 <sup>+</sup>
Yes	22(45.8)	3(6.3)		

Smoking for sociality

No	3(13.6)	0(0.00)	1.00	.67
Yes	19(86.4)	3(100)		

Smoking for relax

No	19(86.4)	3(100)	1.00	.67
Yes	3(13.6)	0(0.00)		

Number of smoking taking per day

1-4 cigarette	20(90.9)	3(100)		
More than 5 cigarettes	2(9.1)	0(0.00)	1.00	.77

Bars are the place can found smokers

No	18(81.8)	2(66.7)	.50	.50
Yes	4(18.2)	1(33.3)		

Accommodations easily smoke than other place

No	4(18.2)	1(33.3)	.50	.50
Yes	18(81.8)	2(66.7)		

Smoking history in family

No	10(45.5)	1(33.3)	1.00	.59
Yes	12(54.5)	2(66.7)		

Alcohol consuming

No	7(14.6)	35(72.9)	33.18	<0.001 <sup>+</sup>
Yes	41(85.4)	13(27.1)		

Cause of smoking for sociality

No	4(9.8)	2(15.4)	.62	.44
yes	37(90.2)	11(84.6)		

Number of glass for drinking

< 5 glasses	20(48.8)	8(61.5)	.64	.42
> 5 glasses	21(51.2)	5(38.5)		

Kind of alcohol				
Alcohol	10(24.4)	3(23.1)	1.00	.62
Beer	31(75.6)	10(76.9)		
Frequency of drinking alcohol				
0-4 days/wk	36(87.8)	12(92.3)	1.00	.55
≥ 5 days/wk	5(12.2)	1(7.7)		
Drinking opportunity				
Drink for sociality and friendship				
No	10(24.4)	2(15.4)	.70	.39
Yes	31(75.6)	11(84.6)		
Drinking when go out				
No	31(75.6)	11(84.6)	.70	.39
Yes	10(24.4)	2(15.4)		
Clubs sells a lot of alcohol				
No	15(36.6)	5(38.5)	1.00	.57
Yes	26(63.4)	8(61.5)		
Accommodation is place where drinking alcohol			1.00	.57
No	26(63.4)	8(61.5)		
Yes	15(36.6)	5(38.5)		
Supermarket sells a lot of alcohol				
No	24(58.5)	8(61.5)	.03	.84
Yes	17(41.5)	5(38.5)		
Beverage store sells a lot of alcohol				
No	17(41.5)	5(38.5)	.47	.49
Yes	24(58.5)	8(61.5)		
Drinking history in family				
No	32(78.0)	12(92.3)	.42	.23
Yes	9(22.0)	1(7.7)		
Stress				
No	34(70.8)	41(85.4)	2.98	.08
Yes	14(29.2)	7(14.6)		
Continuously stress				
1-2 days	13(92.9)	6(85.7)	1.00	.56
More than 3 days	1(7.1)	1(14.3)		
Stress form illness				
No	14(100)	5(71.4)	.10	.10
Yes	0(0.00)	2(28.6)		
Stress according to poor economic				
No	0(0.00)	2(28.6)	.10	.10
Yes	14(100)	5(71.4)		
<b>Food consuming habit</b>				
Eating did not cover three meal				
No	5(10.4)	43(89.6)	60.16	<0.001 <sup>+</sup>
Yes	43(89.6)	5(10.4)		

Unpunctual food taking				
No	2(4.2)	43(89.6)	70.31	<0.001 <sup>+</sup>
Yes	46(95.8)	5(10.4)		
Eating fermented food				
No	7(14.6)	44(91.7)	57.26	<0.001 <sup>+</sup>
Yes	41(85.4)	4(8.3)		
Food consuming such as sour, salty, spicy and etc.				
No	16(33.3)	45(93.8)	37.81	<0.001 <sup>+</sup>
Yes	32(66.7)	3(6.3)		

### 3. Interpersonal factors of sample group

Table 3: Interpersonal factor of sample group

Factors	Case (n=48)	Control (n=48)	$\chi^2$	p
	Number (%)	Number (%)		
<b>Friend factor and pressure from friends</b>				
Having friends who drink alcohol				
No	16(33.3)	26(54.2)	4.23	.04 <sup>+</sup>
Have	32(66.7)	22(45.8)		
Opinion from friends in drinking				
Unacceptable	7(14.6)	27(58.7)	21.51	<0.001 <sup>+</sup>
acceptable	41(85.4)	19(41.3)		
Socializing in drinking				
No	18(37.5)	29(61.7)	6.00	.01 <sup>+</sup>
Yes	30(62.5)	18(38.3)		
Time period when drinking with friends				
No	17(35.4)	28(58.3)	5.06	.02 <sup>+</sup>
Yes	31(64.6)	20(41.7)		
Pressure from friends in drinking				
No	19(39.6)	26(54.2)	2.05	.15
Yes	29(60.4)	22(45.8)		
Always drinking when was invited				
No	15(31.3)	26(55.3)	6.09	.01 <sup>+</sup>
Yes	33(68.8)	21(44.7)		
Have friends in smoking				
No	29(60.4)	40(83.3)	6.23	.01 <sup>+</sup>
Have	19(39.6)	8(16.7)		
<b>Family factor</b>				
Opinion from family in drinking				
Unaccepted	21(43.7)	22(45.8)	.04	.83
accepted	27(56.3)	26(54.2)		
Alcohol regulation				
Have	17(35.4)	32(66.7)	9.37	.002 <sup>+</sup>
No	31(64.6)	16(33.3)		

Opinion from family in smoking					
Unaccepted	22(45.8)	29(60.4)	2.05	.15	
accepted	26(54.2)	19(39.6)			
Smoking regulation					
Have	18(37.5)	42(87.5)	8.00	.005 <sup>+</sup>	
No	30(62.5)	6(12.5)			
<b>Social-culture factor and law factor</b>					
Factors	Case (n=48)	Control (n=48)	$\chi^2$	p	
	Number (%)	Number (%)			
Opinion from society in smoking cigarette					
Unaccepted	24(50.00)	16(33.3)	2.74	.09	
accepted	24(50.00)	32(66.7)			
Accommodation facilitates for smoking than other places					
No	25(52.1)	29(60.4)	.67	.41	
Yes	23(47.9)	19(39.6)			
Festival is the place where has a lot of smokers					
No	23(47.9)	19(39.6)	.67	.41	
Yes	25(52.1)	29(60.4)			
Supermarket is the place can buy cigarette					
No	47(97.9)	42(87.5)	3.85	.05	
Yes	1(2.1)	6(12.5)			
Grocery store is the place can buy alcohol					
No	1(2.1)	6(12.5)	3.85	.05	
Yes	47(97.9)	42(87.5)			
Traditional festival participation					
No					
Participation	36(75.0)	35(72.9)	.05	.81	
12(25.0)	13(27.1)				
<b>Law factor</b>					
Seller's experience in checking identification card when selling cigarette					
Check	0(0.00)	3(6.2)	.24	.12	
No	48(100)	45(93.8)			
Seller's experience in checking identification card when selling cigarette					
Check	1(2.1)	5(10.4)	.20	.10	
No	47(87.9)	43(89.6)			

Opinion of enabling buying cigarette					
More than 18 years old	0(0.0)	4(8.3)	.11	.05	
Unlimited age	48(100)	44(91.7)			
Opinion of enabling buying alcohol					
More than 18 years old	0(0.00)	4(8.3)	.11	.05	
Unlimited age	48(100)	44(91.7)			
Time of buying alcohol					
08.00 – 16.00	8(16.7)	20(41.7)	7.26	.007 <sup>+</sup>	
After 16.01	40(83.3)	28(58.3)			

#### 4. Discussion

##### 4.1 Personal factors

Groups with *H. pylori* infection were ( $M=4.88$ ) more likely to develop a peptic ulcer than those without *H. pylori* infection ( $OR = 4.88$ , 95% CI: 1.87-12.73,  $p = .001$ ). When Bacteria enter the body in the antrum stomach and cause inflammation. Gastrin levels are higher, creating more acid. This part of the stomach is the source of culture and transmits it into dudnam. A lot of acid flows down into the odinum Chronic mucosa causes the mucous membrane to change, like gastric metaplasia, which is suitable for the infection to survive. Causing duodenitis. *H. pylori* can move in very sticky mucus and create urease which turns into ammonia, resulting in alkaline conditions around the organism. Therefore , it can be in acid Infections produce protease that destroys mucus glycoprotein and detoxifies the mucous membrane. Resulting in the mucus becoming thinner. The lining is therefore easily damaged and ulcers may occur if there are other auxiliary factors.

##### 4.1.1 Application of NSAIDs

Non-steroidal anti-inflammatory drugs were more prone to peptic ulcers than non-steroidal anti-inflammatory drugs 107.81 ( $OR = 107.81$ , 95% CI: 12.64-919.11,  $p = <0.001$ ). A study by Wolfe & Lichtenstein (1999) found that patients receiving traditional NSAIDs were at risk of side effects, resulting in a complete risk of ulcer disease 4 times compared to those without a non-steroidal anti-inflammatory drug. Even low-dose aspirin (from 300

milligrams or more) increases the risk of bleeding from gastrointestinal bleeding.

##### 4.1.2 Alcohol consuming

Alcoholic drinking groups were ( $M=31.61$ ) more at risk than those without alcoholics ( $OR = 31.61$ , 95% CI: 3.38-295.66,  $P = .002$ ). According to Chari, Teyssen and Singer studies (1993) found that low levels of alcohol stimulate the secretion of acids By acting on the gastric mucosa according to the work of the autonomic nervous system (cholinergic system) and directly acting on the gastric mucosa to secrete cyclic AMP and histamine, while high concentrations of alcohol have no effect on stimulating secretion acids and pepsin like in low concentration alcohol Which still do not know the obvious reason.

##### 4.1.3 Unpunctual meal having

The group that having food in the incorrect time, ( $M=45.22$ ) more likely to develop a peptic ulcer than the group eating food on time ( $OR = 45.22$ , 95% CI: 4.84-422.05,  $p = .001$ ). Periodic eating is one of the reasons that causes PUD, since it is secreted that gastric juice will be released. But when there is no food to digest, gastric juice with strong acidic effect will cause irritation to the stomach. (Chudaporn Bunpeng, 2008; Mitros & Rubin, 2008) and eating before going to bed will cause more gastric acid to secrete. Therefore, it can result in a perfect wound (Jintorn Duangsaeng, 2008; Martin , 2005).

##### 4.2 Interpersonal factors

Multivariate analysis of factors related to the occurrence of peptic ulcers showed that those who had close friends were more likely to drink alcohol at ( $M=7.37$ ) more risk than those who did not accept (OR = 7.37, 95% CI: 1.47-36.87,  $p = .01$ ) and those whose families do not have alcohol prohibitions are at greater risk of developing ulcers than those whose families have a prohibition on drinking ( $M=3.98$ ) (OR = 3.98, 95% CI: 1.24-12.21,  $p = .02$ ) because the family is one part that encourages family members to emulate and drink alcohol.

#### **4.3 Social-culture factors and law factors**

Multivariate analysis of factors related to the occurrence of peptic ulcers found that those who bought alcohol after 16.01 were more at risk of peptic ulcer than those who bought alcohol at 08.00-16.00 hrs ( $M=5.02$ ). (OR = 5.02, 95% CI: 1.42-17.72,  $p = .01$ ) since the Lao PDR is a country with traditions and values. Society recognizes that it is an important part of making people drink alcohol. It occurred because society has accepted alcohol as part of daily life, whether it be a wedding ceremony, a congratulatory event, birthday party, housewarming and other festivals. According to the twelve-fourteen tradition will have social gatherings, drinking and smoking together, which is considered an indispensable thing causing the youth who grew up in a society with such values to have an understanding of drinking is something that society can accept. Together with young people who are curious to try and it easily influenced by friends. Therefore, causing teenagers to drink alcohol continue until reaching adulthood. In addition, alcohol is used to solve problems and relieve stress and is social. As well as showing the acceptance of each other and showing love to each

other as well (Bu Pha Jan Moon, et al., 2013).

#### **5. Conclusion**

##### **5.1 Personal factors**

Personal factors include *H. pylori* infection (OR = 5.13, 95% CI: 2.11-12.47), non-steroidal anti-inflammatory drugs (OR = 55, 95% CI: 15.37-196.69), smoking (OR = 12.69, 95% CI: 3.46-46.54), Drinking alcohol (OR = 15.76, 95% CI: 5.66-43.88), eating have no cover 3 meals (OR = 73.96, 95% CI: 19.96-274.02), unpunctual eating (OR = 197.80, 95% CI: 36.43-1073.8), eating fermented food (OR = 64.42, 95% CI: 17.55-236.42), and eating spicy food (OR = 30, 95% CI: 8.06-111.6).

##### **5.2 Interpersonal factors**

Interpersonal factors include having close friends who drink alcohol (OR = 2.36, 95% CI: 1.03-5.4), acceptance of peers towards alcohol drinking (OR = 8.94, 95% CI: 3.32-24.02). Alcohol drinking occurs when establishing conversations with friends (OR = 2.77, 95% CI: 1.21-6.34). Drinking alcohol with friends increases the duration of drinking (OR = 2.55, 95% CI: 1.12 -5.82), drinking alcohol every time when friends invite (OR = 2.82, 95% CI: 1.22-6.52), having close friends who smoke (OR = 3.27, 95% CI: 1.26-8.5) absence from family prohibition of drinking alcohol OR = 3.64, 95% CI: 1.57-8.47) and the absence of family prohibitions for smoking (OR = 4.2, 95% CI: 1.49-11.83).

#### **5.3 Social culture factors and law factors**

Social-culture factors and law factors include Alcoholic beverages purchased after 4:00 pm (OR = 3.57, 95% CI: 1.37-9.24)

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