

## COMMUNITY PERCEPTIONS AND TREATMENT-SEEKING BEHAVIOUR REGARDING REPRODUCTIVE TRACT INFECTIONS INCLUDING SEXUALLY TRANSMITTED INFECTIONS IN LAO PDR: A QUALITATIVE STUDY

AMPHOY SIHAVONG\*, CECILIA STÅLSBY LUNDBORG†,  
LAMPHONE SYHAKHANG‡, SENGCHANH KOUNNAVONG§,  
ROLF WAHLSTRÖM† AND SOLVEIG FREUDENTHAL¶

*\*Vientiane Capital Health Department, Ministry of Health, Lao PDR, †Division of Global Health (IHCAR), Department of Public Health Sciences, Karolinska Institutet, Stockholm, Sweden, ‡Food and Drug Department, MOH, Lao PDR, §National Institute of Public Health, MOH, Lao PDR and ¶Skaraborg Institute for Research and Development, Skövde, Sweden*

**Summary.** Creating community awareness of reproductive tract infections (RTI), including sexually transmitted infections (STI), and how to prevent them is essential to minimize their spread. Data on people's views about RTI/STI are entirely lacking in Laos. The aim of this study was thus to explore people's perceptions, treatment-seeking behaviour and understanding of information about RTI/STI, in urban and rural communities in two provinces in Laos. Fourteen focus group discussions and 20 in-depth interviews were held with 76 women and 56 men, selected purposively to provide diversity of socio-demographic backgrounds. Qualitative content analysis was employed for the data analysis. The major finding was that both male and female participants had a variety of misconceptions about the causes and symptoms of RTI/STI and their cure, and a reluctance to seek health care, which could cause delay in appropriate diagnosis and treatment. The most common treatment-seeking behaviour was self-medication through private pharmacies, following advice mostly given by friends and drug sellers. The main reasons for not going to health facilities were fear of social discrimination or shyness of genital examination. Complaints were also made about clinicians' negative attitudes towards 'dirty disease'. Although condom use was mentioned as a way to prevent RTI/STI, an unwillingness to use condoms was commonly expressed. The main media sources of RTI/STI information were radio and television, and access to health information was more difficult in rural areas. The health messages provided were mostly

understood, except for some technical terms. The findings indicate that strengthening health education and promotion through interventions at the community level is recommended to improve quality of RTI/STI management. Health education messages should be more accessible in rural areas. There is also an urgent need to improve communication between RTI/STI patients and clinicians.

### Introduction

Reproductive tract infections (RTI) encompass three main groups of infection in men and women: (1) endogenous infections occurring primarily among women as a result of a disturbance of the normal genital tract flora, for example, candidiasis and bacterial vaginosis; (2) sexually transmitted infections (STI) in both men and women, for example, gonorrhoea, chlamydia, syphilis, trichomoniasis, genital herpes, chancroid, genital warts and HIV; and (3) iatrogenic infections, for example pelvic inflammatory diseases (PIDs) acquired following abortion or other transcervical procedures if infection control is poor (UNFPA & Population Council, 2001; WHO, 2005a). To include this whole spectrum of infections, the term RTI/STI is used throughout this paper.

Reproductive tract and sexually transmitted infections constitute an important health threat, both directly and through their potential effect in facilitating HIV transmission (WHO, 2005a). Making the general community aware of RTI/STI and how to prevent them is essential to reduce their spread (United Nations Population Fund, 2004). The World Health Organization estimated that approximately 340 million new cases of curable STI occur each year worldwide, of which nearly half occur in South and South-East Asia (WHO, 2001a). Approximately 4.9 million people were living with HIV in Asia in 2007, 440,000 people became newly infected and 300,000 people died from AIDS-related diseases in that year (UNAIDS & WHO, 2007).

Lao People's Democratic Republic (Lao PDR) is a low-income country with a population of 5.6 million in 2005. The health care spending is about 11.5US\$ per person per year. Out-of-pocket spending accounts for 58% of health care financing, most of it being spent on drugs, and two-thirds of that in private pharmacies, of which less than 10% are run by a qualified pharmacist or an assistant pharmacist (Ministry of Health, 2003). So far the HIV prevalence has been low (0.1%) in Laos (WHO, 2005b), but it is surrounded by more populous neighbouring countries that have reported higher HIV prevalence (Beyrer *et al.*, 2003; Kim *et al.*, 2005; Roberts, 2008; Ki-moon, 2008). However, the risk of an epidemic is increasing in Laos. Due to massive economic expansion and social changes in the last decade after opening its borders to foreign investments and visitors, Laos is facing the challenges of a rise in domestic and cross-border migration, number of sex workers, unsafe sexual behaviour, illicit drug use among the youth (WHO, 2002) and a high prevalence rate of certain STI (e.g. 32% for chlamydia and 14% for gonorrhoea) among high-risk groups (Phimphachanh & Sayabounthavong, 2004). Community-based surveys have shown that 38% of those reporting more than three sexual partners over the previous year had never used condoms (WHO, 2001b). A substantial prevalence of lower genital

tract infections has been reported among antenatal care clinic patients in Vientiane (Thammalangsy *et al.*, 2006). One out of eight women attending a gynaecology clinic in Vientiane had a sexually transmitted infection. Resistance of *N. gonorrhoeae* is nearly total to some common drugs used in Laos (Sihavong *et al.*, 2007b). Self-treatment for RTI/STI is widespread and may contribute to the increase in antimicrobial resistance, which may result in therapeutic failure (Okeke *et al.*, 2005; Sihavong *et al.*, 2006). Thus, prompt and correct treatment with effective drugs for RTI/STI, in combination with health education, is of major public health importance.

What people do when they have symptoms or suspect that they have an RTI/STI has major implications for transmission and disease control, as delays in seeking appropriate treatment can result in continued transmission and risk of adverse sequelae (Ward *et al.*, 1997). Since people's perception of illness influences their behaviours, knowledge of lay people's perceptions of RTI/STI is necessary to design effective STI control strategies (Green, 1992). Data on people's views about RTI/STI and their treatment-seeking behaviour are entirely lacking in Laos. Understanding these issues could help in the design of more effective and appropriate interventions, contributing to improved quality of RTI/STI management.

The aim of this study was to explore perceptions, treatment-seeking behaviour and understanding of information about RTI/STI among community members in two provinces in Laos.

## Methods

### *Study sites and participants*

This community-based exploratory study using focus group discussions (FGDs) and in-depth interviews (IDIs) was conducted in both urban and rural areas in the capital Vientiane and in Champasack Province. The two provinces were chosen because of their proximity to neighbouring countries with higher levels of HIV infections. Vientiane, located in the middle of the country, had a total population of approximately 690,000 in 2005. It is a rapidly growing area, attracting investors and businessmen, construction builders and tourists from, in particular, Thailand, China and Vietnam. Champasack Province, a southern province, had a total population of approximately 603,880 in 2005, and similarly increasing contacts, in particular with Thailand and Vietnam, also due to transit transports performed by lorry drivers. The socioeconomic situation was somewhat better in Vientiane regarding, for example, household economy and education (National Statistics Centre, 2003).

The participants in the FGDs and IDIs were male and female community members aged 18 years or more, selected purposively to provide diversity of socio-demographic backgrounds such as gender, age, marital status, women's child bearing status, occupation and location. Participants' consent was obtained before data collection.

### *Data collection and analysis*

The data were collected during 2002 and 2005. Overall fourteen FGDs and 20 IDIs were held with a total of 132 participants (76 women, 56 men). Eight FGDs

(four groups in the urban areas of Vientiane and four groups in the rural areas of Champasack Province) were conducted in 2002 with, in total, 75 participants (37 women, 38 men) to gain insight into people's understanding of RTI/STI information, and their views on correct treatment and prevention of RTI/STI. Because RTI are gender-sensitive, the FGDs were divided into four groups of women (two groups of younger women aged 18–30 years and two groups of women above 30 years of age) and four groups of men (two groups of younger men aged 18–30 years and two groups of men above 30 years of age) (half in each province). Each FGD consisted of 8–10 participants.

Based on the outcome of the FGDs in 2002, it was identified that there was a need to further explore people's perceptions and understanding of RTI/STI symptoms, causes, transmission routes, risk factors, consequences and prevention, and their treatment-seeking behaviour. Therefore, six more FGDs (four groups of women including two groups of women with children and two groups of women without children, and two groups of men) with a total of 57 participants (39 women, 18 men) were conducted in 2005 in Vientiane. After the FGDs in 2005, a total of 20 participants (14 women, 6 men) were invited to participate in IDIs to gain more insight into the issues brought up during the FGDs. These participants were selected on two grounds, based on observations by the research team during the FGDs. One category of participants were those who showed a particular capability of sharing and describing experiences and beliefs; another those who seemed too shy to take active part in the discussions about a sensitive issue like RTI/STI. The demographic characteristics of participants are shown in Table 1. In the FGDs with women and men above 30 years of age, all were married, and some participants in the groups with younger people (18–30 years old) were also married. All participants had finished at least primary school. Among the most frequent occupations in women groups were housewife, merchant and employee, while the majority of men were labourers and students. In the IDIs with women and men, more than two-thirds were in the younger age groups (18–30 years old), and half were married (Table 1).

The FGDs and IDIs were held at temples (Buddhist Theravada temples), where people like to organize village meetings as they are quiet and spacious locations. Each FGD lasted approximately one and half hours and each IDI lasted about half an hour to one hour. A discussion guide and an interview guide were used during the discussions and during the interviews. The FGD and IDI guides were developed in English, translated into Lao, and finally back-translated into English and pre-tested in areas with similar characteristics as the study sites to ensure that the questions were understood. Before data collection, the research team contacted the head of the concerned village about the study purpose and procedures. Through this cooperation, the selected subjects were asked to participate one to two days before the meeting took place. Participation was voluntary.

Women groups were conducted by a female moderator and men groups by a male moderator. Both were research team members and had previous experience of conducting FGDs. The interviews were made by three members of the research team, always with interviewer and interviewee of the same sex. The moderator started the discussions by introducing the general topics and asking the participants to introduce themselves. The discussions and interviews were audiotaped with the participants'

**Table 1.** Demographic characteristics of focus group discussion (FGD) and in-depth interview (IDI) participants

Characteristics	FGD participants			IDI participants (2005) (N=20)
	2002 (N=75)	2005 (N=57)	Total (N=132)	
Sex				
Women	37	39	76	14
Men	38	18	56	6
Age				
18–30	37	40	77	14
31–50	38	17	55	6
Marital status				
Married	47	26	73	10
Single	28	31	59	10
Education				
Primary school	26	10	36	2
Secondary school	47	38	85	12
University	2	9	11	6
Occupation				
Farmer/labourer	35	19	54	4
Housewife	21	10	31	3
Student	9	13	22	4
Employee	6	8	14	4
Merchant	4	7	11	5
Location				
Urban area	39	29	68	10
Rural area	36	28	64	10

consent. A note-taker listed topics discussed, took note of interactions between the participants, and assisted with the transcription of the taped discussions. The tape-recorded FGDs and IDIs were transcribed verbatim in Lao and then translated into English. The transcriptions were stored and processed using a word processing programme. Sessions were continued until little or no new information was being obtained (data saturation) (Krueger, 1998). The transcribed materials were checked by research team members by comparing the recorded tapes with the transcriptions.

Qualitative content analysis was applied for the data analysis (Graneheim & Lundman, 2004). The FGDs and IDIs were analysed separately. The first author (AS) did the main analysis with additional contributions by co-authors. The transcripts of the discussions and the interviews were read through several times to obtain a sense of the whole. Meaning units were identified, condensed and coded. During the coding procedure, the Lao and English versions were used simultaneously to avoid misinterpretations of the full meaning of the texts. The various codes were compared based on differences and similarities of perceptions, then sorted into sub-categories and categories. Finally, the authors reflected and compared the findings between the different FGDs and IDIs, and formulated three main themes, based on the

relationship between categories. These themes were almost the same as the themes that were intended to be explored, which means that no new theme(s) emerged. Qualitative comparisons were made between men and women, between age groups, between women with and without children, and between urban and rural areas.

### *Methodological considerations*

The study used two types of triangulation – data triangulation and investigator triangulation – in order to improve its trustworthiness (Lincoln & Guba, 1985). Data were collected from a diversity of socio-demographic backgrounds to gather information from a wide spectrum of different perspectives (Patton, 1990). Further, the use of two data sources complemented each other with information from FGDs mainly corroborated by findings from IDIs, and provided additional richness to the analysis. The authors represent different academic perspectives (gynaecology, general practice, pharmacy, public health and anthropology), which served to broaden the data interpretations. The final results represent a negotiated outcome of these perspectives.

It should be kept in mind that, as for qualitative studies in general, the findings of this study cannot be statistically generalized to other social settings. However, the findings provide insights into people's perceptions and health-seeking behaviour related to RTI/STI, and clearly define areas for IEC (information, education and communication) interventions. This could be useful in other contexts, including other social groups in Laos, and perhaps in other similar social settings in low-income countries.

### *Ethical issues*

Ethical clearance was obtained from the National Ethical Committee for Health Research, Ministry of Health, Laos, and the Research Ethics Committee North at the Karolinska Institutet, Stockholm, Sweden. All participants were informed about the study purpose and gave verbal consent after explanation that all collected information would be handled anonymously.

## **Results**

Three main themes – 'Perceptions of RTI/STI', 'Treatment-seeking behaviour for RTI/STI' and 'Understanding of RTI/STI health information' – were formulated. The findings from the FGDs and IDIs are presented under each main theme with quotes from the participants to illustrate the findings. Explanations by the authors are added within parentheses.

### *Perceptions of RTI/STI*

Four categories of perceptions were identified: (1) terms used to describe RTI/STI and symptom recognition, (2) causation and transmission of RTI/STI, (3) risk factors



and consequences of RTI/STI, and (4) ways to prevent RTI/STI and condom use problems.

*Terms used to describe RTI/STI and symptom recognition.* Most participants in the FGDs perceived that the term RTI was unfamiliar to them, and no group could distinguish between the terms RTI and STI. The term RTI was referred to as *Phagnat Gning* (women's disease), *Phagnat Xongkhot* (vaginal canal disease), *Chaep Motloog* (uterine pain), AIDS and syphilis. The term STI was referred to as *Kamalok* (venereal disease), *Nongnay* (gonorrhoea), *Tit Xua Aid* (HIV infection), AIDS and *Honkay* (genital wart).

The most common symptoms stated by the women participants were abnormal vaginal discharge (with odour or itching), lower abdominal pain, genital wart, and pain on urination. The most common symptoms given by the male participants were pain when passing urine, pus coming out first when urinating, genital wart and itching, AIDS lesions, scrotum swelling, fever, painful genital vesicles and infertility.

Interestingly, female participants did not talk about infertility as a symptom of RTI or STI. Since 70–75% of women with chlamydia are asymptomatic (Lazero, 2006), this may result in delay in diagnosis and treatment thereby increasing the potential spread of infections and complications (e.g. ectopic pregnancy, pelvic inflammatory disease and infertility). Thus, there is a need to provide health information about these issues in order to promote appropriate treatment seeking.

*Causes and transmission of RTI/STI.* AIDS, gonorrhoea and genital warts were most commonly named by male participants in the FGDs and in the IDIs as diseases due to sexual intercourse without using a condom, sharing a dirty toilet and lack of hygiene. Several participants exposed limited knowledge about HIV/AIDS and STI. One FGD man asked the moderator: 'Can we get AIDS by sharing a toilet?' Other men stated that they got the disease from going out with *Saobolikan* (service women – which they defined as women working in drink shops, nightclubs or guesthouses selling sex to customers).

Women participants perceived that the diseases were due to unclean sex (no cleaning or washing of genital areas before and after sex), infections caught from male partner when not using a condom, poor hygiene during menses, sharing toilet with infected persons, infections from mother to child, and sharing a needle with infected persons. In the group of women without children, it was perceived that eating some food (such as green papaya salad and fermented fish sauce) might cause *Longkhao* (vaginal discharge) or vaginal canal infection.

Such perceptions have also been reported in other developing countries, for example, consuming foods with perceived hot composition like chicken, red meat or potatoes was reported to be the cause of vaginal discharge (Bhatti & Fikree, 2002); women's discharge or itchiness were perceived to be caused by unclean water or not taking regular baths (Go *et al.*, 2002); and poor hygiene during menses and after childbirth and soaking the body in dirty water while working were also considered to be causes of RTI (Lan *et al.*, 2008).

There were no distinct differences of understanding about the route of transmission between men and women, between age groups and between urban and rural areas.

*Risk factors and consequences of RTI/STI.* The risk factors mentioned by both men and women in the FGDs and IDIs included being someone who likes to go out at night to beer shops or night clubs, having multiple partners, not using a condom, visiting service women or *Saomuethue* (mobile phone women – which they defined as women working in unspecified drink shops or night clubs selling sex to customers through mobile phone contact), being a long distance truck driver or being a drug addict. It was stated by the men's groups that drinking and being drunk resulted in sexual desire and thereby increased the risk of getting infections:

The risky behaviour is drinking alcohol. You are a good person, but when you get drunk your character changes. Drink makes you careless and you start to think that because you only have one life, you should do something that makes you happy like having sex. (FGD young man)

It has been reported that alcohol consumption among STI clinic patients was associated with condom use, but this association differed by gender and partner characteristics; for women, partner type interacted with alcohol consumption such that condom use was less likely when alcohol consumption preceded sex with non-primary partners. The findings suggested the need to strengthen substance-use components in sexual risk reduction interventions for women and their partners (Scott-Sheldon *et al.*, 2009).

Both men and women were afraid of not getting rid of the disease. Several FGD participants stated that they were aware that STI can be cured but that AIDS is more harmful and cannot be treated. The female groups mostly stated that *Chaep Motloog* (uterine pain), cervical and uterine infection and cancer, and AIDS, may lead to body weakness and death. In contrast, male groups were afraid of becoming dysfunctional in their genital organs, getting RTI from women, and spreading disease.

A study conducted by Karasz & Anderson (2003) also found that many women experienced considerable distress over their vaginal symptoms; some women feared that their presumed infection might spread to involve other reproductive organs, leading to sterility, perhaps even death; the infection might lead to cancer in the cervix, the uterus or the bladder.

*Ways to prevent RTI/STI and condom use problems.* Common statements about RTI/STI prevention from both men and women in the FGDs and IDIs included not having sex with infected people, being a faithful couple, and using condoms every time when having sex with multiple partners. Keeping one's body clean and practising hygiene were also mentioned in all groups as ways to prevent the disease. Restriction on eating papaya salad, checking blood before getting married, abstinence during menses and taking traditional medicine *Ya Pheunmuang Lao* (herbal medicine preparations with some kinds of plants) every day were mentioned in the female groups as ways of preventing RTI/STI. Men participants stated that not drinking alcohol can prevent the disease because drinking makes people lose control. Treating the partner(s), consulting a doctor when sick, and health education were also suggested prevention methods.

Among the group of women with children, the main purpose of condom use was for contraception, while the majority of young men and women without children stated that they had heard about condoms but never used them. Male participants



perceived that condoms may make them lose some of the feeling, and that it is not natural. They also found that condoms make them uncomfortable due to the difficulty of using them and the inconvenience of having to purchase them in advance. They also feared that condoms could be torn or cut. Further, they expressed trust in their partners and only used condoms in selected cases (e.g. they used condoms in cases of uncertainty about whether their partners, including service women or sex workers, were infected or not). Female participants also expressed concerns about men's problem of less feeling. They also mentioned that condoms might cause itching, burning and vaginal discharge:

I don't like to use condoms because it's not natural, lack of feeling, and I trust my partners. I started having sex when I was 16 years old. Since then until now I have had three partners. I didn't use a condom because I trust my partners who were all my classmates. For service women, I should ask them whether or not they had any infections. If I don't trust them I would wear a condom. (20-year-old unmarried man from IDI)

The element of trust in this context is of particular interest, although it could only be partly explored in this study. Laos is an ethnically diverse country, but trust in relation to sexual contacts is most likely to occur within ethnic groups and other social contexts such as schools and workplaces. It can therefore be assumed that trust in relationships outside these contexts, e.g. contacts with female sex workers, has to be negotiated from a more neutral or even negative perspective. It was found in a previous study in Laos that people had a general trust in services regulated by government authorities (Syhakhang *et al.*, 2004), but this connection seems not to be appropriate for the contexts discussed here. No more general views were found on this issue, which would lead to the assumption that trust has to be negotiated on an individual basis in each case.

Negative attitudes towards condom use have also been reported elsewhere in Laos (Toole *et al.*, 2006), as well as in other countries (Nuwaha *et al.*, 1999; Abdullah *et al.*, 2002; Rizvi & Luby, 2004; Warner *et al.*, 2008). For example, participants reporting problems with condom use have indicated that condoms are torn, slip off or leak (Warner *et al.*, 2008). This is a reason of concern regarding risks of a more rapid spread of STI/HIV among people who have multiple sex partners and inconsistent and incorrect use of condoms.

### *Treatment-seeking behaviour for RTI/STI*

Three categories of treatment-seeking behaviour were identified: (1) kinds of treatment seeking, (2) reasons for not visiting health facilities, and (3) choice of health care providers.

*Kinds of treatment seeking.* The most common treatment-seeking behaviour mentioned by both men and women was self-medication through a private pharmacy or by using the traditional medicine *Ya Pheunmuang Lao* (herbal medicine such as herbal preparations with some kinds of plants), and then finally visiting a health facility when a variety of other options (e.g. the use of antibiotics following previous treatment with similar symptoms or following drug advertisement or following advice

of other, or the use of herbal medicine *Ya Kanoukham* in the form of vaginal suppository tablets, or daily genital washing with water containing salt) had been tried and had failed. The interval between the onset of symptoms and seeking hospital treatment was given as from within one week to many months, or until the symptoms became serious:

I spent time looking at my symptoms; if there was no improvement I went to hospital. My friend got these symptoms, she got vaginal discharge with pus, genital itching and pain. She used herbal medicine *Tom Bay Syda* (daily genital washing with water containing boiled guava leaves) for two weeks, but didn't get cured, she couldn't walk and then went to hospital. (Woman with children from IDI)

A study in an urban centre of eastern China also revealed that 52% of respondents (including sex workers, STI clinic patients, market employees and rural-to-urban migrants) explained the sequence of treatment seeking for suspected STI, which typically consisted of three stages with the first involving self-diagnosis or accepting the advice of a friend or pharmacy worker with an attempt to self-treat through a visit to the local pharmacy. When this strategy was found to be ineffective, they next sought care at a private clinic for convenience and in order to protect one's privacy and anonymity. While care at private clinics was considered expensive and often ineffective, they finally sought care at a public hospital (Lieber *et al.*, 2006).

There were no distinct differences in treatment-seeking behaviour related to RTI/STI between men and women, or between urban and rural areas. However, the first persons that male participants sought advice from when experiencing symptoms were commonly friends followed by drug sellers, while for female participants they were commonly parents or relatives, followed by friends or drug sellers.

It has also been reported in Vietnam that self-medication was mentioned by both men and women as the first health care action for 'inflammation', and that peers or close friends were often consulted about treatment of RTI/STI symptoms (Lan *et al.*, 2008).

*Reasons for not visiting health facilities.* The main reasons for RTI/STI self-medication included trust or habit (following previous self-treatment with similar symptoms), fear of social discrimination, fear of being criticized, the shame of letting people know about the disease, shyness of genital examination, and not having time or enough money to go to hospital:

... I assume that eighty per cent of men were shy to see physician. Married men also didn't want to see physicians because they were afraid of disclosing their diseases. Also they didn't want other people to know that they play around even when they were married. (FGD unmarried man)

Studies in other Asian countries also reported that some women did not consult a physician because of fear and embarrassment of internal examinations (Chapple, 2001; Whittaker, 2002). Others were reluctant to disclose their condition to physicians, preferring to discuss their symptoms with or seek the advice of close friends and family (Theroux, 2002; Karasz & Anderson, 2003).

Both male and female participants in the FGDs mentioned that the most common place for getting treatment for RTI/STI was drugstores because this is a comfortable option: there is no need to have a genital examination, and it is easy to buy antibiotics

without a physician's prescription. Female participants said that they went to a drugstore nearby and told the drug seller about their symptoms, bought drugs, and then they could get cured. They went to the hospital only in serious cases. Participants in the IDIs also mentioned that it wasted time and money going to hospital and waiting in long queues before seeing physicians when you get sick. The following statement illustrates this:

When I got *Longkhao* (vaginal discharge) for one month, I talked with my friend at the factory about this symptom. She suggested me to see a physician. I had no time to go to the hospital, I had to work. If I go to the hospital I would spend half day or at least two to three hours for waiting in long queue. I went to the private clinic, the physician gave me drugs for taking for 2 to 3 days, I didn't get better and then I went to the hospital. I felt getting better during 2 to 3 months and then it (vaginal discharge) came again, then I went to the same hospital to do culture about vaginal discharge. It took about two weeks before getting the result. The service in the hospital is slow. (Married woman from IDI)

A quantitative community-based study in Laos also revealed that 33% of all respondents ( $n=500$ ) treated themselves for RTI/STI because they didn't have time to see a physician, and that some of the respondents complained about the long waiting times in hospitals (Sihavong *et al.*, 2006). It has also been reported that women practised self-treatment to relieve vaginal symptoms because it is quicker and more efficient than seeking professional treatment (Theroux, 2002).

Other reasons for not using health facilities were that the health services in hospitals were slow and that the provision of treatment and care were sometimes not as good as expected, and some complaints were also made about the negative attitudes of some clinicians regarding 'dirty disease' (such as malodorous vaginal discharge). A FGD woman quoted a male doctor as saying:

...she wears a very nice dress but inside she is very dirty. I told her to go to the toilet, but when she came for her examination with me, it was the same as before, no cleaning, I don't understand what she did in the toilet.

The FGD woman perceived this type of comment as a negative attitude of the doctor towards 'dirty disease' because he said '... she wears a very nice dress but inside she is very dirty ... no cleaning...'. The negative behaviour of health staff might make RTI/STI patients feel guilty when visiting health facilities. Subsequently, people with RTI/STI might hide their diseases, wait for the symptoms to resolve spontaneously or get inadequate treatment. Therefore, communication between clinicians and patients should be improved.

Similarly, in a study in Vietnam complaints were voiced about clinicians' negative attitudes towards RTI/STI patients; for example, doctors shouted at patients and scolded them, and patients had to keep silent and accept the scolding because they feared being denied a cure for their diseases (Lan *et al.*, 2008).

*Choice of health care providers.* Most male and female participants said that they preferred to consult with physicians of their own sex, and also with experienced physicians. A few participants did not mind about consulting with physicians of the opposite sex, as they just wanted to get cured. With respect to the genital examination for women, preference for a female physician was generally based on perceptions that

female physicians would be more understanding simply because they were women, and that they were shy to be examined by a male physician.

A study conducted by Canales *et al.* (2005) also found that most women respondents usually prefer a woman for gynaecological health care needs; with respect to the gynaecological examination, preference for a woman provider was not expressed in terms of competency of the provider or beliefs that women were more medically skilled to perform the examination; preference was strictly based on perceptions that a woman provider would have a better understanding of their bodies and a stronger connection to them based on their shared gender.

#### *Understanding of RTI/STI health information*

Two categories of understanding of health information were identified: (1) sources of health information, and (2) ways to improve information.

*Sources of health information.* Most FGD participants in both urban and rural areas said that the most common sources of RTI/STI information were radio and television. Other sources of health information, including posters, booklets, pamphlets and health education in school, were also mentioned by urban participants. For all FGDs there were no distinct differences in understanding of RTI/STI health information from radio and television between urban and rural areas. Most participants stated that they could understand the messages provided, but in some instances the terms used were too technical and should be explained more clearly.

... sometimes I understood how the disease can be transmitted, sometimes not. People just talked, but didn't explain clearly. I understood a little bit. (FGD woman with children)

*Ways to improve information.* The most common suggestion for improving RTI/STI health information was providing health education in schools, village offices and in the community. Mass media, including radio, television and posters, should reach both urban and rural areas. Peer education, such as through organizing a quiz and group discussions, were also mentioned. Participants in the 'women without children group' had more suggestions about STI than about AIDS.

Radio should reach remote areas. Urban people can receive more health information than the rural people. Most people go to the field and listen to the radio. The language used in the radio should be *Lao Loom* (the national language). It is easy to understand. Also put posters in crowded places not only in urban areas but also in rural areas to inform and educate people how to prevent diseases. (FGD woman without children)

It should be noted that there is regional radio broadcasting in the local dialects such as *Hmong* or *Khmu*. These would be a more effective means of communication for different ethnic groups, particularly in remote areas.

### **Discussion**

The major findings of this study are that both male and female participants have a variety of misconceptions about the causes and symptoms of RTI/STI and their cure,

and are reluctant to visit hospital, which could result in delay in appropriate diagnosis and treatment. It is important to educate people about the benefits of prompt and correct treatment with effective drugs to prevent treatment failure that may cause complications, relapse and further transmission of infection.

The findings from the FGDs and IDIs revealed that both male and female participants had quite good basic knowledge about the transmission routes, risk factors and prevention methods of HIV/AIDS, but had misconceptions about the causes and symptoms of RTI/STI and their cure. People in the study areas obtained information on RTI/STI mainly from their peers and relatives rather than from health professionals. Furthermore, a contributing factor to misconceptions and limited awareness of RTI/STI may be that an open discussion about sexuality is viewed as inappropriate in Laos. This indicates that there is a need to promote health education related to RTI/STI.

Most female participants expressed the opinion that some diseases (such as vaginal discharge) can be due to uncleanliness of genital areas before and after having sex, poor hygiene practice, or ingestion of some kinds of food. Such perceptions have also been reported in other developing countries (Bhatti & Fikree, 2002; Go *et al.*, 2002; Lan *et al.*, 2008). Male participants emphasized that alcohol consumption contributes to sexual desire and thereby the risk of getting infections. This finding did not correspond with the finding previously reported in Laos that there was little acknowledgment among men that drinking and taking other drugs adds to their risk (Toole *et al.*, 2006). That study indicated that individuals perceived little personal risk. It has been shown that using popular community leaders to spread education messages may be effective in changing both men's and women's perceptions of RTI/STI (Kelly *et al.*, 1991).

The most common treatment-seeking behaviour mentioned by both male and female participants was self-medication through private pharmacies. This finding is consistent with a quantitative community-based study in Laos, which showed that more than 80% of respondents reporting symptoms of RTI/STI self-medicated with antimicrobials bought from private pharmacies, and used non-recommended drugs, and mostly not for the recommended time (interruption of treatment before complete dosage was fulfilled) (Sihavong *et al.*, 2006). Limitations in scientific knowledge and low awareness about drug quality has been reported among drug sellers and consumers in Laos (Syhakhang *et al.*, 2004). A study assessing the competence of health providers (medical doctors/assistants, midwives/nurses and drug sellers) in the management of RTI/STI in Vientiane showed that two-thirds of all respondents performed suboptimally regarding health education on RTI/STI prevention, and that drug sellers' scores were significantly lower than those of the medical doctors and medical assistants in all aspects of RTI/STI management (Sihavong *et al.*, 2007a). Similarly, studies in private pharmacies in Vietnam and Brazil found that none provided correct treatment for STI (Chalker *et al.*, 2000; Ramos *et al.*, 2004). Since private pharmacies are a source of advice as regards RTI/STI treatment in Laos, efforts are needed to ensure that correct treatment of the most common RTI/STI is provided, although some pharmacies are run by drug sellers without formal training. Other studies have shown that STI services provided by pharmacy staff can be significantly improved through short-term training, although the improvements have

been shown to be time limited, indicating the need for continued training and supervision (Tuladha *et al.*, 1998; Chuc *et al.*, 2002; Garcia *et al.*, 2003). In addition, in order to encourage appropriate and prompt care-seeking behaviour for RTI/STI, there is a need to improve health education messages, focusing on behaviour change communication for RTI/STI, such as a change in knowledge and practice about RTI/STI treatment. However, it has been well documented that real, long-lasting behavioural change is not the result of simply telling people what to do (UNFPA & Population Council, 2001). To address a sensitive issue like RTI/STI and to promote changes in health-seeking behaviour requires an understanding of people's needs, concerns and perceptions.

It is noteworthy that the main reasons for not going to health facilities for RTI/STI treatment were fear of social discrimination, the shame of letting people know about the disease, or shyness of genital examination. Other reasons could be a stigma associated with genital symptoms (Bhatti & Fikree, 2002), a fear and an embarrassment of internal examinations (Chapple, 2001; Whittaker, 2002) and an experience from clinicians' negative attitudes towards RTI/STI patients (Lan *et al.*, 2008). A study in mainland South-east Asia revealed that health care providers' emphasis upon the role of dirt and germs in gynaecological health may lead them to blame women for their lack of hygiene, resulting in reluctance of women to admit their symptoms to service providers (Whittaker, 2002). Since feelings of shame and stigma play an important role in the health-care-seeking behaviour of patients (Gomez *et al.*, 2009), discussing genital symptoms and sexual activity can be embarrassing to both men and women, leading them to avoid consulting a physician (Arkell *et al.*, 2006). As stigma can result in a general lack of awareness and education about the significance of different symptoms, decisions about when, where and how to seek help and treatment will depend upon cultural norms and social circumstances (Feleke *et al.*, 1990). Most male and female participants reported that they preferred to consult with physicians of the same sex because of shyness felt in consulting a health provider of the opposite sex. Thus there is a need for clinical sensitivity and recognition of gender in this interaction. Health care settings with an atmosphere of privacy and trust, and health providers with appropriate respect and non-judgmental attitudes, are essential to modifying health-seeking behaviour.

Existing communication networks, including training of drug sellers, peer education at school, and mass media, should be used to inform people about the dangers of self-medication in order to promote appropriate RTI/STI management. In addition, publications for lay people containing relevant health information and research findings should be promoted, not only in urban but also for rural areas. Health education messages must be easily accessible, in particular in rural areas, and specific health education messages and strategies need to be designed to meet local information needs (Whittaker, 2002). As an example, promotion of consistent and correct use of condoms among high-risk groups (such as people with multiple partners, service women and their clients) should be one priority in the health education activities for protection against HIV and RTI/STI.

Although condom use was mentioned by both male and female participants as a possible way of preventing RTI/STI, condoms were mostly disliked. Participants expressed that condom use could diminish their sexual pleasure, that they trusted their



partners and only used condoms in selected cases (e.g. when uncertain about whether their partners, including service women or sex workers, had infections or not), and that there was a fear of side-effects (such as genital itching, burning and vaginal discharge) or suspicion about condom efficacy. This is a reason for concern. If men continue to have multiple sex partners among whom condom use is inconsistent, then STI/HIV will spread more rapidly. A negative attitude towards condom use has previously been reported in Laos (Toole *et al.*, 2006), and in other countries (Nuwaha *et al.*, 1999; Rizvi & Luby, 2004; Warner *et al.*, 2008). Since condom use is the single, most efficient and available means of preventing RTI/STI/HIV transmission (WHO, 2006), its promotion should be strengthened through effective health education. Some men could benefit from the provision of instructions on correct condom use to prevent condom breakage (Crosby *et al.*, 2007). It is necessary for women to attain a more empowered position, which would allow them to negotiate safer sexual contact. In particular, sex workers need to be encouraged to use condoms consistently with their clients and regularly attend STI check-ups at assigned clinics. One such intervention is the 100% Condom Use Programme (CUP), which was based on the model successfully implemented in Thailand in 1989. It is widely accepted that the 100% CUP is an effective measure in the prevention and control of HIV infection among sex workers because of the reduction of STI incidence and prevalence and the reinforcement of behaviour change if properly implemented (Saphonn *et al.*, 2004; WHO, 2004; Rojanapithayakorn, 2006). In Cambodia, due to 100% CUP implementation nationwide in 2001, there was a marked decline in STI prevalence among sex workers from 1996 to 2001, but no appreciable decline was observed from 2001 to 2005. Limited coverage and weak implementation capacity of the programme, along with questionable quality of the STI services, were likely to have contributed to the sustained high prevalence (Sopheab *et al.*, 2008). In Laos, the 100% CUP is gradually being implemented, but is still seeking broad political support. Another suggested preventive measure was to treat a patient's partner as well. Since a person often has problems disclosing his or her own STI and delays visiting a health facility until the symptoms become serious, it is difficult for the person to understand the importance of referring his/her asymptomatic partner for STI treatment. It is not just an individual's number of partners that determine their risk of STI acquisition, but their partners' partners and beyond (Ward, 2007). Thus, a stronger effort to increase community awareness about this important issue is necessary.

### Conclusions

This study shows limited awareness and a variety of misconceptions regarding RTI/STI among women and men in two provinces in Laos. Strengthening health education and promotion through interventions at the community level, including rural areas, is recommended to improve the quality of RTI/STI management. Health education messages should be more accessible in rural areas. The promotion of condoms should be a health education priority for protection against HIV and RTI/STI, including the provision of detailed information about the correct use of condoms. Self-medication for suspected RTI/STI should be discouraged, and the seeking of qualified practitioners for proper diagnosis and treatment should be

encouraged. There is also a need to improve communication between RTI/STI patients and clinicians. Health care providers should receive training in communication skills and should be encouraged to assume a non-judgemental attitude in order to modify people's health-seeking behaviour.

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