YANGON UNIVERSITY OF ECONOMICS

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A STUDY ON HEALTH SEEKING BEHAVIORS AND BARRIERS TO SERVICE ACCESS OF SEXUALLY TRANSMITTED DISEASES AMONG MEN WHO HAVE SEX WITH MEN (YANGON REGION)

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EMPA - 29 (15th Batch)

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A thesis submitted in partial fulfillment of the requirements for the degree of Master of Public Administration (MPA)

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ABSTRACT

Yangon Region is home for nearly 20% of Myanmar's population of men who have sex with men (MSM) and high HIV/AIDS prevalence and new HIV/AIDS infection rate. Sexually Transmitted Infections (STIs) have long been recognized as a major health problem in Myanmar because STIs and their sequelae contribute significantly to morbidity and mortality in the community. This study identified the level of awareness for STDs and STD treatment seeking behaviour among MSM in Yangon and assessed their barriers and challenges affecting STD treatment-seeking behaviour. This study is a quantitative research study which was conducted by collecting data using the quantitative cross-sectional questionnaire survey to explore the health seeking behaviour in relation to sexually transmitted disease among men who have sex with men in Yangon, Myanmar. 200 respondents form each township of Yangon are conducted for study. Most of the respondents received STD knowledge from health personels and social network. Awareness score is especially lowest in 'Tha-nge' MSM category. Mean period of treatment seeking interval was 12.4 days among 59 respondents of the 200 sample having an STD history within 6 months, and all took treatment from healthcare workers for their last STD episode. Awareness raising activities should be targeted on all MSM, especially to the "Tha-nge". Healthcare personals should be trained for providing proper health education and appropriate STD care and treatment, including unique behaviour and needs of the MSM community.

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ABBREVIATIONS

AIDS	- Acquired Immune Deficiency Syndrome
ANOVA	- Analysis of variance
App	- Mobile application
GUD	- Genital Ulcerative Disease
HIV	- Human Immunodeficiency Virus
IBM	- International Business Machines Corporation
IEC	- Information, Education and Communication Technologies
IHR	- Institute of Health Research
LGBT	- Lesbian, Gay, Bisexual and Transgender
MSM	- Men who have Sex with Men
NGO	- Non-Governmental Organization
NSP	- Myanmar National Strategic Plan for HIV/AIDS (2016-2020)
OS	- Operating System
PWID	- People Who Inject Drugs
SEARO	- World Health Organization, South-East Asia Regional Office
SPSS	- Statistical Package for Social Sciences
STDs	- Sexually Transmitted Diseases
STIs	- Sexually Transmitted Infections
TOP	- Targeted Outreach Program
UD	- Urethral Discharge
UNAIDS	- Joint United Nations Programme on HIV/AIDS
UNESCO	- United Nations Educational, Scientific and Cultural Organization

CHAPTER I
INTRODUCTION

1.1 Rationale of the Study

Sexually Transmitted Infections (STIs) have long been recognized as a major health problem in Myanmar because STIs and their sequelae contribute significantly to morbidity and mortality in the community.

Sexually transmitted diseases (STDs) can be transmitted mainly by the sexual route between one human and another, through various route including vaginal intercourse, anal sex, and/or oral sex. However, transmission of some STDs is also possible from mother to child during pregnancy, childbirth, and breastfeeding. It is also possible that the STD can be transmitted transfusion of blood products (Abubakar, 2016) . Due to the stigma and the secrecy leading to inadequate reporting, the actual incidence of STD worldwide is not exactly known (Park, 2015). World Health Organization (2015) estimated that there are more than 1 million STDs acquired every day worldwide. It is also estimated that there are annually population of 357 million newly infected with any of 4 STDs (chlamydia, gonorrhoea, syphilis and trichomoniasis).

The burden of STD is not only affecting the patients, but also the health systems and health expenditure. STDs can cause considerably high clinic visits for clinical consultations, even when HIV/AIDS is excluded in the STD list. Moreover, STD is also attributable to substantial productivity loss in affected individuals and community. In developing countries, STD is one of the leading causes of disability adjusted life years (DALY) lost for women within reproductive age (World Bank, 2007).

STDs are mostly asymptomatic or exhibit mild symptoms, thus patients, leaving diseases unnoticed and untreated and ultimately leading to immediate consequences of the STDs themselves as well as further reproductive health complications (World Health Organization, 2018). The risk of HIV infection might be increased to three folds or more in an STD-infected individual. The presence of some STDs in pregnancy also lead to mother-to- child transmission, ultimately resulting in

the stillbirth, neonatal death, low birth weight and prematurity, sepsis, pneumonia, neonatal conjunctivitis and congenital deformities (Park, 2015). Over 900,000 pregnant women were contracted with syphilis in 2012 and 350,000 adverse birth outcomes including stillbirths were observed as a result of mother-to-child transmission of syphilis (World Health Organization, 2018). If the STD are left untreated for a prolonged period, they will result in various gynaecological complications such as pelvic inflammatory disease, infertility and various malignant conditions, as well as obstetric complication like adverse pregnancy outcomes (R. Eng and T. Butler., 1997).

STD are more prevalent in those having higher number of sexual partner change and practicing unsafe sex. The highest prevalence is seen in young sexually active people, especially among sex workers and their clients, people who inject drugs (PWID) and men who have sex with men (MSM). Sex workers and MSM are proportionately larger in urban populations than PWID (Abubakar, 2016). A higher prevalence of syphilis was found globally in female sex workers and MSM – 2.3% (0.1-53.0%) and 5.3% (0.3-32.2%) respectively (World Health Organization, 2015). (Chan, 2011) stated that there was an increasing risk for various STDs in China and some countries in South-East Asia such as Thailand and Indonesia.

There is also a problem of drug resistance problem related to sexually transmitted diseases, especially gonorrhoea. During recent years, South East Asian Region has been facing the drug resistance problem in the treatment of gonorrhoea. Various types of resistance have been identified against potent antibiotics such as ciprofloxacin, tetracycline, spectinomycin and penicillin. Countries in the region, including Myanmar, has recommended to use third- generation cephalosporins instead of using quinolones. At the same time, the drug-resistance to the oral third-generation cephalosporins has been emerged in the region. Without control of antibiotic use and proper management of gonorrhoea, which is available through desirable health seeking behaviour, it might be untreatable unless vaccines or new drugs are developed (Chen, L., Petersen, E. and Schlagenhauf-Lawlor, 2017)

Despite this high STD prevalence, the need of proper health seeking behavior practice and receiving an appropriate STD treatment, health disparity is unavoidable for gay men and other men who have sex with men (MSM) in accessing the health care services when it comes to socially stigmatized diseases such as HIV and STDs (Hafeez, Zeshan, Tahir, Jahan and Naveed, 2017).

MSM are facing an additional stigma on consultation with the healthcare providers for the medical conditions relating to homosexuality and discussing about some MSM-specific sexual practices. This might be attributable to lack of appropriate training for physicians and healthcare disparities. (Schmidt, A. and Marcus, U, 2011); (Moses, S., et al, 1994).

Legal factors are also pushing the MSM away from access to healthcare providers and systems. According to UNAIDS (2018), the risk of acquiring HIV is 28 times more in MSM than the general population because of legal factors together with biological and behavioural factors (Joint United Nationas Programme in HIV/AIDS, 2015). In addition to these social stigma, sex between men is punishable from some years' imprisonment, even up to the death penalty in many countries across the world (Caroll, 2016). Not only the social stigma but also the legal barriers play a critical role in hindering the MSMs from seeking medical treatment and regular STD screening provided in both public and private health facilities.

1.2 Objectives of the Study

The objectives of the study are as follow:

a. To identify the level of awareness for STDs and treatment seeking behaviour for those diseases in MSM community in Yangon
b. To assess barriers and challenges of MSMs which might affect STD treatment-seeking

1.3 Method of Study

This study is a quantitative research study which was conducted by collecting data using the quantitative cross-sectional questionnaire survey to explore the health seeking behaviour in relation to sexually transmitted disease among men who have sex with men in Yangon, Myanmar. Quantitative methods emphasize objective measurements and the statistical, mathematical, or numerical analysis of data collected through polls, questionnaires, and surveys, or by manipulating pre-existing statistical data using computational techniques. Quantitative research focuses on gathering numerical data and generalizing it across groups of people or to explain a particular phenomenon. (Babbie, 2010)

A cross-sectional study design was applied to this study to explore possible research opportunities regarding the health seeking behaviours regarding STD among the MSM community in Yangon. The findings from this quantitative study was attempted to abide by the strict standard of science, including objectivity, controllability and replicability (Bradford and Cullen, 2012) Thus, this study is believed to assist in stimulating further quantitative and qualitative studies with more financial support and wider time frame to better understand MSM's health seeking behaviour for STD.

1.4 Scope and Limitation of the Study

The study explored the health seeking behavior of MSM for those who affected the sexual transmitted infections in Yangon Region. Although study was covered MSM population in Yangon Region, we didn't do every MSM in Yangon Region. There was a similar study of health-seeking behaviour for STD in MSM conducted in 2012, but it was not focused only in Yangon – it included the other two main cities in Myanmar, namely Mandalay and Pyay. The current study will try to focus the MSM population in Yangon with additional interacting factors of interest for health seeking behaviour for STD. The current study used the study questionnaires validated in the previous study and the survey questionnaire mainly contained closed end questions.

1.5 Organization of the Study

This thesis is organized into five chapters. Rationale, objectives of the study, method and scope and limitation of the study are presented in the Chapter I. MSM and their health related problem, knowledge and attitude for STD among MSM and barriers and challenges to access treatment of STD are described in literature review Chapter II. Chapter III deals with background information, burden of STD in society. Findings which are the most important part of the study are presented in Chapter IV. Finally, Chapter V concludes the study with summary of findings and recommendations.

CHAPTER II
LITERATURE REVIEW

2.1 MSM and Related Problems

WHO, SEARO (2010) provided a key message regarding the term men who have sex with men (MSM) as The term MSM denotes all men who have sex with men, regardless of their sexual identity, sexual orientation and whether or not they also have sex with females.

Local MSM community self identifies by local terms that reflect distinction made on the basis of sexual orientation, gender identity, and public expression of gender identity, including three distinct group identities in Myanmar (National AIDS Program, 2016b) –

Apwint - who are biologically men, but openly behave and dress as women and mostly called 'ah-chauk' and transgender women,

Apone - who are biologically men and have feminine characteristics; in relationship with male partners, but may hide their identity of being gay to the general public and dress as men and

Tha Nge - partners of Apwint and Apone who behave and identify as men, may have sex with both men and women, and does not admit to being gay.

These group identities are commonly applied in Myanmar to conduct research and studies – one of the examples is Integrated Biological and Behavioural Survey conducted in 2015 (National AIDS Program, 2016a). Moreover, there is additional 'undisclosed' MSM in Myanmar. However, there is a need for further understanding on their risks and needs for services (National AIDS Program, 2016b).

Same sex behaviour has been identified in all societies for ages. However, there has been stigma and discrimination against homosexual acts and often the homosexual ones are being socially excluded in many parts of the world. Based on the risk of acquiring HIV/AIDS, there are three key affected populations for HIV/AIDS: people who inject drugs and men who have sex with men and female sex worker, the latter two with the high risk of acquiring other STD. However, access to prevention, diagnosis, care and treatment for STD and HIV/AIDS is still limited in relation to the

disease burden borne by these key affected populations (WHO, SEARO, 2010).Among the factors leading to low access to prevention and care services for STD and high incidence and prevalence of STD including HIV/AIDS, social determinants are a stand out, reflecting discrimination and inequality of social, economic, organizational and political power for many MSM populations. The overall prevalence of self-reported discrimination for being MSM observed in various studies were 27.7% in Brazil, 24.7% in Namibia, 27.4% in Botswana and 19.1% in Malawi (Magno, L., et al, 2017) and (Fay, H., 2011). In recent studies, it is still observed that uninfected persons had an attitude that HIV-infected persons were the ones who should be blamed for being HIV-positive and that they had a subtle clue that the uninfected persons seemed uncomfortable being around them (Jeffries at al, 2015) In addition, seeking STD treatment is still regarded by the community as embarrassing and disgraceful for infected patients in a study in China (Xu and Yu, 2017).

Despite the high HIV prevalence and the findings suggestive of considerable STD incidence among the MSMs in Myanmar (National AIDS Program, 2016a); (National AIDS program, 2018), Myanmar's MSMs are still facing the social stigma in the community, exacerbated by strong gender and masculinity norms (Joint United Nationas Programme on HIV/AIDS , 2014). As a result, many MSMs are reluctant to utilize the existing healthcare services in fear of stigma and discrimination coupled to being MSM, having an STD and/or being infected with HIV/AIDS (Joint United Nationas Programme in HIV/AIDS, 2015). In addition to the social stigma and cultural norms, MSM's access to healthcare services is also limited by the legal barriers in Myanmar. Myanmar is one of 72 countries in which the same- sex sexual acts are illegal. According the penal code 377, the same-sex sexual acts are regarded as unnatural sexual offenses in Myanmar and is punishable by imprisonment which may extend to ten years, and shall also be liable to fine (Caroll, 2016).

However, the National AIDS Programme in Myanmar has been attempting to create an enabling environment to improve the provision of healthcare services regarding HIV/AIDS and STD to the key affected populations including MSM in its National Strategic Plans (NSP). In the latest NSP (2016-2020), 330 townships across the country were prioritized based on the criteria of high, medium or low risk/burden townships scored against estimated township key population and other quantitative and qualitative criteria. Among 45 townships in Yangon Region, there are 20, 22 and 3 high, medium and low risk/ burden townships respectively (National AIDS

Program, 2016b). Although the HIV epidemic is declining overall, the new infection rate among MSMs and their partner is stagnating, contributing 24% of Yangon's estimated new HIV infection. More than 50% of the estimated countrywide new HIV infection by male to male sex transmission is shared by Yangon Region (National AIDS program, 2018). In a study conducted in 2012, 25.7% of 300 participants responded that they have history of STD within previous six months and only 80.5% of those having STD took STD treatment from doctor (Kyaw T. A., 2012).

In response to this, while conducting the implementation of MSM-friendly programmes, the Myanmar NAP should consider the practical barriers of MSM to reach healthcare providers, which have been observed in various studies carried out in many countries. During a study conducted in Brazil, the prevalence of self-reported discrimination is higher in younger populations (<21 years of age) and in MSM population with higher levels of education (> 8 years of education) (Magno, L., et al, 2017). Therefore, it is important to find younger MSMs to be able to link them to prevention and care programmes, who are at risk of STD and HIV/AIDS because of perceived discrimination. The sexual orientation-based discrimination was also found to be associated with HIV/STD high-risk behaviour among urban-dwelling MSM and it is needed to address the environmental sources of this form of discrimination and psychological support for the affected MSMs (Frye et al, 2014). Enabling easy access to rapid STD/HIV testing through decentralized healthcare settings is also of importance in provision of HIV/STD testing services to the MSMs, who have not tested before (Bien et al, 2015). During the provision of services, perceived sympathy from the healthcare provider from whom the MSMs take their HIV and STD care and treatment is also critical for taking regular HIV and STD testing and treatment (Jing Gu et al, 2015).

2.2 Knowledge and Attitude towards the STDs among MSMs

Men who have sex with men have a higher risk of contracting with sexually transmitted diseases including HIV/AIDS for different reasons such as engaging in unprotective receptive and insertive anal intercourse (Vittinghoff et al, 1999) and other risk factors such as multiple sexual partners, rougher sex, more chance of sex when under the influence of drugs or alcohol (Johnathan Elford and Graham J Hart, 2010). MSM use saliva as lubricant during anal sex and it may lead to transmission of CMV and HHV-8 viruses. Urethral STD can be acquired through unprotected

insertive anal sex, and pharyngeal STD during orogenital and oroanal sexual contact (Meyer, K.H., 2012). Despite these reasons for a higher chance of acquiring STD and HIV/AIDS, it seems difficult to reach the STD prevention and treatment knowledge to them, which might be because the MSMs have a diverse population and multiple layers of social and sexual networks.

They might have been suffering from varying degrees of stigma and discrimination, which was governed again by the local society values and cultural attitudes against homosexuality. Therefore, the information imparted to the MSMs should not only include the STD information but also sensitized and adapted local information which might be of benefit for both the MSMs and the local people (European Centre for Disease Prevention and Control, 2016).

It was found in a study conducted to 423 MSM in Yangon and Mandalay by an NGO in Myanmar in 2007 that 32% of transgenders had an unprotected anal sex with a male commercial partner and 35% with a male casual partner during the past month. In the same survey, it was also observed that 45% of respondents also had sex with women. Despite these risk factors observed, it was found out that 90% of MSM in the 2007 study believed they were not at risk of HIV (Asia Pacific Network of People living with HIV, 2010).

In an attempt to reduce the risk imposed upon the high-risk populations and implementation of health promotion programmes, the Health Belief Model is a commonly used theory to formulate how the programme should do its work. According to the model, an individual's perceived susceptibility and perceived severity of the disease/ risk factor lead to the perceived threat prompted to the individual. The perceived threat can be modified by other social, demographic and economic factors as well as by cues to action, and it can mobilize the individual to be convinced of the threat imposed by the disease/ risk factor. The perceived threat pushes the individual to have a high likelihood of behaviour change, which can be modified again by perceived benefits or barriers. The more the perceived benefits, the more behavioural change happens, and the opposite is true for perceived barriers (Stretcher and Rosenstock, 1997). To inform to get to the right perceived severity, susceptibility, threat and benefits, more efforts should be put into redesigning messages so that they would be visible and relevant to the targeted audience. Various communication channels and methods have been used mass advertising in various print and broadcasting media, production of information, education and

communication (IEC) materials, conducting outreach work, arranging community debate, individual communication (counselling, telephone conversation over the health hotline) and online communication (social media and smartphone applications). When considering choosing among the communication channels, three factors should be taken into consideration – reachability to the target audience, complexity of the message and resources available (European Centre for Disease Prevention and Control, 2016).

Imparting health messages and health education is critical in implementation of STD prevention programmes. In a study conducted in China (Xu and Yu, 2017), a high prevalence of STD among the MSM together with the low proportion of them seeking appropriate STD treatment is estimated to be contributing to the possible growing HIV epidemic among Chinese MSM. The study warrants the urgent need of regular screening and health education regarding STD, especially among low-income MSM. It is also important to establish proper health education to the MSM attending the healthcare facilities and sensitizing the healthcare workers to the MSM coming to the clinic (Meyer,2012).

Moreover, it is also important to consider how the MSM is behaving in his community. Coming out is a critical process by which the undisclosed MSM can get out of the closet and change his behaviour, i.e., an ‘Apone’ can become an ‘Apwint’. As sexual identity and behaviour are different among the different MSM categories, it is also good to know how the health message is organized to reach the intended MSM category. As the same sex behaviour is a social stigma in Myanmar and ‘Apone’ and ‘Tha-nge’ might have difficulty in getting to the source of information about STD and its treatment. Providers need to engage the ‘Apone’ and “Tha-nge’, who are relatively hard-to-reach than ‘Apwint’ through the locally available options, such as hotlines, the media and social networks. Providers can also contact with positive role models and champions to engage in health education activities through the media or by inviting to events such as “World AIDS Day” celebration (Meyer,2012). Health education sessions provided by the healthcare workers is another important channel for MSM to acquire STD knowledge and change their attitude towards STD treatment seeking in a positive way. Training should be provided to the healthcare workers, including medical doctors and nurses, so that the culturally and clinically competent care is ensured. Provision of trainings will also enable them to provide of health

education session to the MSM in relation to STD and HIV/AIDS is conducted at health facilities (Wirtz,2014).

If there is a lack of information because of health education messages inaccessible to the targeted MSM groups, the lack of knowledge about the STD will become unavoidable. It there is any scarce STD knowledge in the community, it might become a barrier in self- suspicion of STD and seeking treatment for presumptive STD symptoms (Tilson,2004).

In general, knowledge of STD and attitude towards seeking treatment for STD depends on not only the socio-demographic characteristics but also the information channel through which the STD knowledge is imparted to different categories of MSM. Knowledge and attitude might influence seeking STD treatment which might delay the interval between the appearance of symptom and taking treatment at healthcare providers.

2.3 Barriers and Challenges of MSMs Affecting their STD Treatment-Seeking Behaviours

Health seeking behaviour is an important aspect of a community in how community members utilize appropriate health services for the specific health problem to gain recovery from that health problem. Health seeking behaviour can be influenced by the affordability, accessibility and acceptability of the service seekers and availability and appropriateness of the services as well as confidentiality and privacy concern(Parrish, 2008) and (Tilson,2004).

According to 2008 report of the HIV sentinel sero-surveillance survey, the prevalence of syphilis (active and confirmed) was found to be 14.1% in Myanmar. However, multiple barriers, that interfere with the MSM's access to health care for prompt STD diagnosis and treatment, are still necessary to be addressed for the reduction in STD prevalence and hence HIV incidence among the MSM community (WHO, SEARO, 2010). Although legal barriers have been spelt out in most of the health-related documents in relation to the MSM community, three are many more socio-economic barriers as well as structural barriers to be addressed, in addition to the awareness-related delays in treatment seeking.

One of the studies conducted in China filled the gaps in finding related to STD treatment seeking behaviours in the MSM community. Higher education and higher income were found to be associated with a higher chance of seeking STD treatment in

clinics among Chinese MSM (Xu and Yu, 2017). Lower financial status was associated with poorer access to STD treatment facilities for many reasons – inability to afford for education as well as STD services, general lack of healthcare resources in certain lower socio-economic status communities, preference to purchase antibiotics in easily accessible pharmacies to avoid time-consuming and potentially costly clinic visits (Selesho, 2012).

One of the other common barriers highlighted by most MSM in Asian countries is the widespread stigma and discrimination by healthcare providers (Chakapani, Babu and Ebenezer, 2004; Asia Pacific Network of People living with HIV, 2009). Lesbian, gay, bisexual and transsexual (LGBT) youths are already at risk of a variety of social problems such as substance abuse, being bullied, isolation, social rejection, leading to emotional and psychological problems such as depression, anxiety and suicide. However, there has not been a sufficient response from the healthcare providers to make themselves aware of MSM's behaviour and problems and to get themselves sensitized to the unique needs of the MSM community. In this way, LGBT individuals, especially Youth LGBT, find themselves difficult to disclose their sexual identity and related sexual behaviour, violence and social problems leading to communication failure. This communication failure is responsible for lack of appropriate STD and HIV-related education, inadequate scheduled STD screening and poor trust on the healthcare providers, contributing for further vulnerability to risky behaviour for STD and HIV ((Hafeez, Zeshan, Tahir, Jahan and Naveed, 2017); (Jeffries at al, 2015)).

Two aspects of health-seeking behaviour is observed in the prevention and care of STD– care seeking interval and the preference in the choice of healthcare provider. A shorter delay in health seeking and choosing an appropriate healthcare provider will be of benefit not only in the rapid cure of the STD but also in the reduced duration of infectiousness. This will result in breakage of chain of transmission from the patient to another individual. It is also imperative to the right choice of the care provider for the reason of getting better quality STD case management. The health education information provided during the clinical consultation session, if done by the trained healthcare provider, will result in the reduction of transmission and hence reduced future infection ((Voten, 2001); (Somse' et al, 2000); (O'Hara, Voeten and Kuperus, 2001). The treatment seeking behaviour for suspected STD cases among the MSM were observed in various studies conducted

in various countries [South Africa, 49.8% ((Rispel and Metcalf, 2011)Indonesia 44.4% (Morineau, 2009); China, 35.7% (Xu and Yu, 2017)].

Sources for seeking STD treatment can be divided into three interrelated sectors – popular, folk and professional. Popular system comprises of treatment by the client himself and seeking advice from friends and relatives. Folk system includes seeking treatment from traditional medical practitioners and sacred and secular healers. Professional system encompasses seeking STD treatment through organized health agents at government hospitals, clinics run by international medical non-government organizations and for-profit private clinics (Klienman, 1980). In a Kenyan study, it was observed that the strongest determinant for delayed care seeking was seeking STD treatment elsewhere, apart from the appropriate health facilities (Moses,1994).

Delayed health seeking interval is also related to more morbidity and complications due to STD. In the same Kenyan study involving men and women in general population, 41.9% had a health seeking interval of one week after presentation with STD symptoms, and 23.1% had a delay for more than two weeks. Before coming for the final consultation for STD symptoms at the health centre, 23.7% of the study populations had sought treatment from practitioners in the informal sectors – pharmacists, traditional medicine practitioners, drug peddlers and others. Both men and women who had contact with sex trade sought care early (Moses,1994). On the contrary, in another study in China, contact with sex trade had led to delays in care seeking by preferential choice for other sources of treatment providers than public STI clinics Reasons for delayed health seeking might include: social stigmatization against sexual promiscuity, fear of public exposure and embarrassment (Tucker et al, 2010). In 2012, a study was conducted in Myanmar and it was observed that only 44.2% of 77 MSM, with a history of occurrence of STD symptoms within 6 months, had a treatment seeking interval less than or equal to 7 days. The treatment taken was either self-medication or through consultation with a medical doctor. That study also stated that their treatment seeking behaviours also included wait-and-see, treatment by their friends, quacks and traditional medical practitioners (Kyaw,2012).

Unless there is a consultation with medical doctors or appropriate healthcare providers, the individuals with STD may face complications such as complication of STD itself, side effects of misused treatment provided by quacks, traditional medical

practitioners and self- medication. Unnecessary delay in seeking effective treatment will also result in STD complications. The utilization of appropriate healthcare providers for the treatment of STD in individuals affected by the disease is critical for the national programme to measure the impact of government-directed prevention, care and treatment programmes targeted to key affected populations such as MSM and female sex workers.

2.4 Review on the previous Study

The previous study was done for MSM named "Factors Contributing to Social Inequity on Men Who Have Sex with Men and Transgender in Yangon". The study explored the social consequences of stigma and discrimination affected by MSM populations in Yangon. With the main aim to eradicate discrimination on the marginalized population, this study explores the contributing factors and its extents of social inequity on education, health and employment opportunities. It determines the magnitude of stigma and discrimination in the family and community, and of knowledge and opinion towards discriminatory law such as Penal Code 377. A rapid appraisal approach of survey methodology using qualitative method is applied with the triangulation of information from other sources. A total of 74 MSM participants and 7 key informants are interviewed by semi-structured questionnaires. This study finds that they were subjected to discrimination at school, at workplace and health services. Majority of them had suffered family violence, physical and sexual assault in the community.

CHAPTER III
BACKGROUND INFORMATION

3.1 Sexually Transmitted Infections (STIs)

Sexually transmitted infections (STIs) have long been recognized as a major public health problem globally because of their high incidence and contribution to morbidity and mortality. The true incidence of STIs will never be known not only because of inadequate reporting but because of the secrecy that surrounds them. Most of them are not even modifiable. All available data, however, indicate a very high prevalence of STIs in the vulnerable population groups (Park, 2015)

Although most STIs are relatively easy to cure, delay in seeking appropriate care can result in increased severity and complications. Historically, knowledge about STIs has been very low even in communities where there is high prevalence of STIs. An understanding of STIs treatment seeking behaviour and barriers for treatment is therefore crucially important for the effectiveness of the STI control programmes. (CDC, 2009)

Sexually transmitted infections are also important prioritized health problems, not only for their complications but also for their link with HIV infection. Research indicates an interaction between STIs and Human immunodeficiency virus infections (HIV) transmission and in turn enhances transmission among high-risk groups, such as: injecting drug users (IDU), men who have sex with men (MSM), commercial sex workers (CSW) and their clients, and from infected mothers to their children.(UNAIDS,1998)

The sexually transmitted infections (STIs) formerly known as venereal diseases (VDs) are one of the commonest groups of infectious diseases in Myanmar and other developing countries. The sexually transmitted diseases are a group of communicable diseases that are transmitted predominantly by sexual contact and caused by a wide range of bacterial, viral, protozoa and fugal agents. Over 40 infections have been found to be spread through sexual contacts. STI can be classified into (a) major or minor depending on severity or occurrence (b) bacterial, viral, protozoa, or fungal depending

on etiological agent(c) curable or non-curable depending on the treatment available and (d) genital ulcerative or genital discharge diseases depending on syndrome. Some important STIs include syphilis, gonorrhoea, chancroid, lymphogranuloma venereum, granuloma inguinale, non-gonorrhoea urethritis mainly due to chlamydia infection, AIDS, genital herpes, hepatitis B, trichomoniasis, genital warts, ophthalmia neonatorum and genital scabies. (Davidson, 2010)

The association between HIV infection and other STIs has led to the hypothesis that STIs enhance HIV transmission, which is termed as "STI/HIV cofactor hypothesis". In general, people who are infected with an STI are at an increased risk of HIV infection and vice versa (UNAIDS, 2000).

New research suggests an especially potent interaction between very early HIV infection and other STIs. This interaction could account for 40% or more of HIV transmissions. Despite this evidence, efforts to control the spread of STIs have lost momentum in the past five years as the focus has shifted to HIV therapies. Over the years, numerous epidemiological and biological studies have provided evidence that other STIs, if present in a person, acted as cofactors for HIV acquisition or transmission, which led to the common statement "STIs facilitate the transmission of HIV" (WHO, 2007).

HIV is clearly a major cause of premature death, and most cases are the result of sexual transmission. Most of the people in the community lack knowledge about the signs and symptoms of STIs and their devastating consequences resulting from delay in seeking treatment (Aral SO, 1990). STIs and HIV/AIDS spread through similar high-risk behaviours and both diseases contribute to the same epidemiological risk factors. Therefore, people exposed to other STIs are also a group at high risk of HIV infection. The control of STIs is therefore an important step in slowing the spread of global HIV epidemic. (UNAIDS, 1998)

Persons with sexually transmitted infections are potential source of disease transmission to their sexual partners even though they may have no symptoms or signs of infection. The public health importance of STIs has taken on an even greater dimension with the advent of HIV infection leading to the acquired immunodeficiency syndrome (AID Many problems in management of sexually transmitted diseases such as inadequate diagnosis increase of social stigma, early case detection, patterns of treatment sources and identifying and treating the sources of infections. (UNAIDS, 1998)

AIDS control programmes will be more effective if they are based on local assessments of (a) the availability and accessibility of health care services; (b) the socio-demographic characteristics of STIs patients in the population; (c) the factors associated with delay in treatment seeking among the STIs patients in the health care facilities. A better understanding of the factors that lead individuals to seek or not to seek treatment is critical for developing health education initiatives and public health programmes to control STIs and, in turn, HIV.(UNAIDS,2000)

3.2 Burden of STI in Community

Sexually transmitted infections (STIs) are common and serious problems worldwide. STIs have caused significant morbidity and mortality among millions of men, women and infants for decades. Many of these are curable with effective treatment, but they continue to be a major public health concern in both developed and developing countries. Due to the stigma attached to sexuality, STIs remain a hidden epidemic. As a consequence there have been unremitting STIs epidemics with increased incidence of HIV/AIDS. (UNAIDS, 1998)

An STI has psychological and emotional consequences for those infected, including depression and social stigmatization. STIs have been estimated to be in the top five disease categories causing Disability Adjusted Life Years lost (DALYs) in the developing world (Jayabaskar, 2003).

Globally, it was estimated that about 685,000 people were infected with STIs everyday. Estimated new cases of curable STIs among youth in 2007 were about 360 millions in the world and out of whom 159 millions were in South East Asia region shown as in table below according to the WHO and UNAIDS estimation.

Table (3.1) Global and South East Asia Situation of STIs

Sr.	STIs	Global situation (millions)	South East Asia situation (millions)
1	Syphilis	23	7
2	Gonorrhoea	37	29
3	Chlamydia	87	41
4	Trichomoniasis	213	82
5	Total	360	159

Source: WHO, 2017

STIs have continued to be a public health problem in both industrialised and developing countries. The STIs rates in the developing countries are on the rise and constitute for several decades among the top five diseases. (WHO, 2007)

Men who have sex with men (MSM) have been extensively studied in industrialized countries, where MSM remain the most common mode of HIV transmission. In the West, the HIV prevalence among MSM is much higher than among heterosexuals (ranging from 7.2% in younger MSM to 18.1% in inner city cohorts). (AIDS Research, 2006) Over time, and recent evidence indicates that HIV infection is re-emerging in new cohorts of MSM in developed countries and is an emerging epidemic in MSM in developing countries. This situation calls for an assessment of current trends in HIV infection in MSM and of the status of effective and promising interventions for these populations. (CDC, 2009)

Male-to-male sex still comprises the major route of HIV transmission in other parts of the developed world. Slight to significant increases in the number of HIV diagnoses in MSM have been observed in European countries. (AIDS Research, 2006). From the global data that are available, estimates indicate that HIV prevalence in MSM varies widely by country and region from zero percent in the Middle East to 36.5% in Latin America. The rising rates of infection in MSM in developed and developing countries can be attributed to a complex set of biological, behavioural, and socio-cultural factors that may place MSM at increased risk for acquiring and transmitting HIV. Difficulties in collecting accurate data on HIV infection in MSM, particularly in developing countries, confusion about the definition of MSM, and ongoing stigma and discrimination against gay, bisexual, and transgendered people remain significant barriers to implementing effective interventions on a global level. In order to make less intense the HIV epidemic in MSM, both domestically and globally, adequate resources must be dedicated to improving accurate data collection, addressing the socio-cultural factors that contribute to MSM risk behaviour, and implementing evidence-based behavioural, biomedical, and social interventions that address growing rates of HIV infection in multiple settings.(AIDS Research, 2006)

Myanmar is one of the countries hardest hit by the HIV epidemic in Asia. In 2004, a workshop organized by the National AIDS Programme (NAP), with support from World Health Organization (WHO) and Joint United Nations Programme on

HIV/AIDS (UNAIDS), estimated that 338 911 adults between 15 and 49 years of age were living with HIV.

In Myanmar, latest modelling estimated the HIV prevalence in the adult population (15-49) at 0.61% in 2009.HIV prevalence was 5.1% among male STI patients, 11.4% among female sex worker, 28.1% among injecting drug users, 11%among men sex with men, 0.9% among pregnant women, 1% among new military recruits, 10.4% among TB patients and 0.35% among blood donors. According to Progress report, 2010,National Strategic Plan for HIV/AIDS in Myanmar, estimated number of MSM is 240,000 and 11% of MSM are infected with HIV and 1% of MSM are infected with Syphilis.

3.3 STI Situation of Major Cities in Myanmar

Myanmar, as a country in South-East Asia, has a disproportionately high burden of HIV/AIDS and STD among the MSM (National AIDS Programme, 2016b). In a recent unpublished study conducted among 828 MSM in Myanmar, 26.2% of them reported of ever having had an STI while 11.8% had STI-related symptoms within the past three months (WHO, SEARO, 2010). It is reported that the country's HIV prevalence among MSM was 11.6% in 2016, which has been in a declining trend in epidemic (National AIDS Programme, 2018a).Myanmar has a population estimate of some 250,000 MSM across the country, with half of that population is estimated to be 'undisclosed' MSMs, who are at risk of having difficulty accessing to health care providers for HIV/AIDS and STD prevention, care and treatment services. Yangon Region hosts 15% of the nation's general population while it is estimated to be home to nearly 20% of the MSM population. The number of new HIV infection is still higher in MSM populations, driving Yangon Region's HIV epidemic in a co-driver seat together with the new infection acquired in the population of sex workers and their clients (National AIDS Programme, 2018a). Therefore, there is a need for a research study on health seeking behaviour of MSM in Yangon in relation to sexually transmitted diseases, including HIV/AIDS.

A survey was conducted in five cities in Myanmar in 2015 and revealed that 7%, 5% and 9% of MSM in the study reported to have urethral discharge, rectal discharge and genital ulcer within past 12 months respectively. Among those, the STD service utilization was found to be 98% in Mandalay City, which was higher compared to 65-72% reported by participants in Monywa, Pathein and Pyay cities

(National AIDS Programme, 2016a). The report does not include the data for service utilization for Yangon City.

Myanmar's National AIDS Programme has planned to implement various activities to reach the MSM population with prevention activities, for HIV/AIDS as well as STD (National AIDS Programme, 2016b). However, in the roll-out of health education campaigns, AIDS control programmes will be more effective if they encourage conducting local research and considering local assessments regarding (a) the availability and accessibility of health care services; (b) the socio-demographic characteristics of STIs patients in the population; (c) the factors associated with delay in treatment seeking among the STIs patients in the health care facilities. By better understanding of the factors that promote or deter the individuals from seeking treatment, controlling STD and, in turn, HIV/AIDS is highly possible through development of critical health education initiatives and important public health programmes (Joint United Nations Programme on HIV/AIDS, 2000). Myanmar has also included using social media and mobile applications as well as other innovative models in her strategic direction and priority interventions for HIV/AIDS prevention, care and treatment to ensure the reach to intended key populations (National AIDS Programme, 2016b).

3.4 Importance of Treatment Seeking Behavior and Treatment of STI

Sexually transmitted infections are a major health problem globally, and their prevention has been a priority since HIV/AIDS emerged as a life-threatening disease. In Myanmar, the STIs are 14th position and HIV/AIDS is first priority in National Health Plan (2006-2011). Research studies indicate that there is a synergy between STIs and HIV transmission and in turn enhances transmission among high risk groups such as MSM, female sex workers and people who inject drugs. Rate of new HIV infection among MSM is 44 times higher than that of other men and 40 times higher than that of women. STIs and the behaviour associated with acquiring them increase the acquiring and transmitting HIV infection. The presence of STI increases two to eight time's risk of acquiring HIV infection. MSM who are in heterosexual marriages may be a bridge group of transmitting HIV to their hetero sexual partners. The high prevalence of STI among MSM may be a serious and important driver of AIDS epidemic over the next period of time. (WHO/SEARO, 2010)

Giving proper treatment to STI will decrease the incidence of HIV. Exploration of treatment seeking behaviour can help communities and programmers come up with initiative carefully focused on breaking the links in the chain of transmission. Late diagnosis and delayed treatment, social stigmatization and discrimination and other factors such as changes in lifestyles, immigration, urbanization, industrialization and globalization lead STI to public health problem. Late diagnosis and delayed treatment, social stigmatization and discrimination and other factors such as changes in lifestyles, immigration, urbanization, industrialization and globalization lead STI to public health problem.

In Myanmar, proportion of MSM who seek for STIs treatment seems to be low or unknown due to poor knowledge and barriers to get treatment. This study aims to determine the treatment seeking behaviour for STIs among MSM and to explore their barriers to STIs treatment.

The early recognition of symptoms, presentation to health facilities and compliance with effective treatment should reduce the spread of treatable STIs. Thus, by reducing the time between onset of infection and the cure, through improved accessibility of services and/or education about symptom recognition, could play an important role in STIs control.

Behavioural change is the most effective approach in controlling infections. A better understanding of the factors that lead individuals to seek or not seek treatment is critical for effective STI control. Understanding these factors could assist in developing health education initiatives and public health programmes to control STIs and, in turn, HIV.

There have been some studies about the health seeking practice on STIs patients in Myanmar focusing high risk groups such as female commercial sex workers, taxi and truck drivers, male STI patients, injecting drug users and pregnant women (Pa Pa Soe, 2003 and Aung Lin Aye, 2007). And also there was treatment seeking behaviour on STIs patients on general population (Htun Nyunt Oo, 2010 and Hein Zaya, 2011). And there was a similar study regarding treatment seeking behaviour among MSM. (Tun Myint, 2005-2006)

Yangon, Mandalay and Pyay are the big cities of Myanmar, more MSM are assumed to be found in there. The HIV sentinel sero-surveillance (HSS) has been carrying out only in two sentinel sites, Yangon and Mandalay, among MSM.

According to the report of HSS (June, 2011), trends of HIV prevalence among MSM by sentinel sites (2007- 2010) is shown in Table

Table (3.2) HIV Prevalence among MSM (HSS 2007- 2010)

HIV Prevalance among MSM (HSS 2007-2011) in Yangon and Mandalay

	2007	**2008**	**2009**	**2010**	**2011**
Yangon	35%	33%	32%	14%	9%
Mandalay	23%	24%	13%	8%	8%

Source: HSS 2007-2010, MOHS

This study aims to assess the STIs treatment seeking behaviour and barriers for treatment. The information will contribute towards the development of appropriate health education programmes to help reduce the spread of STIs and HIV/AIDS in MSM and the result of the study will be useful for further strengthening of specific action plan for HIV/AIDS prevention.

CHAPTER IV
SURVEY ANALYSIS AND RESULTS

4.1 Survey Profile

The MSM population is not culturally sensitized in the communities in Yangon and tends to be hidden. For those hard-to-find populations, the snowball sampling has also advanced as a technique (Lewis-Beck and Bryman, 2007). This study applied snowball sampling techniques as the study dealt with the hard-to-find population, the men who have sex with men. The previous study conducted in 3 cities in Myanmar used peer volunteers for the sampling process. It was mentioned in that study that there was less utilization of public sector health services, which might be attributed to the selection bias because of peer volunteers more familiar with the NGO side (Kyaw, 2012). In this study, the peer volunteers were not used for sampling. Instead, the researcher himself conducted the sampling procedure by himself to avoid the selection bias observed in the previous study. The researcher went on outreach visits to approach the potential participants and ask the survey questionnaire so that the more insights into the possible complex nature of the stigma and discrimination regarding the MSM and STD with respect to their health seeking behaviour for STD.

The snowball sampling was initiated from the MSM mass gathering activities and venues. Beauty salons and seasonal festivals/ spirit worshipping ceremonies in the city were starting point for sampling 'Apwint'. 'Apwint' were then asked to refer to other 'Apwint' for further sampling. At the same time, if 'Apwint' MSM working in the beauty salon or met at the spirit worshipping ceremonies had a partner/ partners, the researcher asked the 'Apwint' for further sample of 'Tha-nge' type of MSM.

The initial sampling point of 'Apone' was a bit different as they were still in the closet and were limited to be easily found. The sampling was initiated in the men spas, which were secretly opened in the city and where the 'Apone' MSM were working and coming for massage and sexual encounters. The researcher himself introduced the spa owners by himself and asked his permission first for surveying with questionnaires to his workers in his spa. The 'Apone' and 'Tha-nge' types of MSM were surveyed in the spas and asked them to refer to other 'Apone' friends. The survey was going on to all three types of MSM until the sample size was saturated – 66 for 'Apwint' and 67 for 'Apone' and 'Tha-nge' to get an equal sample size for all three important types of MSM.

Data Collection took place from 1 July 2019 to 12 August 2019. The inclusion criteria for the study was MSM of 18 years of age and above, residing in one of 33 townships in Yangon Administrative Area, who gave consent to participate in the study. MSM were defined operationally for this study as "men who have had manual, oral, or anal sex with another man in the past six months" (Amon, 2000). This study also attempted to cover all three types of MSM – 'Apone', 'Apwint' and 'Tha-nge' – were included in the study. There were 11 townships in Yangon Region, which are not in Yangon Administrative Areas, though; MSM residing in those townships were excluded from this study.

Sample Size Determination

$n = Z^2_{1-\frac{\alpha}{2}}\ p.(1-p) / d^2$

n = sample size

$Z^2_{1-\frac{\alpha}{2}}$ = 1.96 at 95% CI

p = proportion of MSM seeking care for STI treatment, which is 0.77. (UNESCO Bangkok, 2012)

d = precision/ marginal error = 0.05

The calculated sample size was 172.14 and the minimum required sample was 173. And 200 respondents were interviewed in the study.

4.2 Survey Design

The data collection was conducted by surveying the study participants using a validated questionnaire from the previous similar study done by (Kyaw T. A., 2012) and another pre-existing questionnaire (Amon, 2000). Questionnaire was developed first in English and then translated into Myanmar language and the translated questionnaire was consistently used during the survey in this study. See annex 1 and 2 for English and Burmese versions respectively. Translation was meticulously done and the translated questionnaire was tested with three MSM before the actual survey. The translation was then finely polished based on the level of understanding of those three MSM and inputs from them. The questionnaire includes socio-demographic characteristics, the sources of information for health seeking behaviour for STD, assessment of knowledge, attitude and practice on STD, and the barriers to accessing services for STD,

The whole process of taking consent and conducting interview took about thirty minutes. All the participants willingly joined the survey after explanation about

the study through the consent form. Although the participants were informed that they could withdraw from the study at any point during the interview, no one did so. Interviews was carried out under the condition of full privacy.

However, the time constraints of the study participants did not allow the participants to fully express what they wanted to do so while being asked with the questionnaire. Some participants were distracted by the work yet undone as they were in the work place, such as beauty salon or men spa.

For the loss of working time because of the survey interview, a small amount of incentive (MMK 1000 - approximately 50 pennies-worth of telephone top-up card) was gratefully given to each study participant.

4.3 Survey Analysis

4.3.1 Data Coding and Result

The data obtained through the data collection tool were then coded and scored on the questionnaire in the assigned area so that the data entry could be properly done. In the knowledge section, scores were counted for the right response for each of the question in the knowledge section except the query for the source of information of STD knowledge. The highest possible score for knowledge section was 41. In the attitude section, each question had five responses – totally agreed, agreed, disagreed, totally disagreed and don't know. There were positive and negative questions regarding the attitude of the respondents towards the STD and its treatment. For the positive questions, 'totally agreed' and 'agreed' were scored as '5' and '4' and 'disagreed' and 'totally disagreed' were scored as '2' and '1'. The reverse was true for the negative questions. "Don't know" response was scored '3' for all the attitude questions. The highest possible score for the attitude section was 55. The score was not counted for the query about the respondent's attitude towards the role of information and communication technologies in seeking an appropriate treatment provider for STD. The awareness score was the combined score of knowledge and attitude scores, and thus, the highest possible awareness score was 96.

4.3.2 Data Entry, Cleaning and Analysis

After appropriate coding and scoring of the variables, the data entry was conducted in IBM SPSS Statistics Version 23. Data entry was meticulously done to capture every response the study participants expressed during the survey interview. After the data entry, data cleaning was done by filling up the missing data and correcting the wrong data entry. After cleaning the data, data analysis was conducted and some variables were recoded to fulfil the need for data analysis. Data cleaning and analysis were also conducted in IBM SPSS Statistics Version 23.

The level of awareness score was graded between 59 and 86 among the respondents in this study. Based on the range of the awareness scores, the respondents were divided into three groups with equal intervals – low awareness category (scores from 59 to 67), medium awareness category (scores 68-77) and high awareness category (scores 78-86). Similarly, treatment-seeking interval was categorised as timely and late depending on the time lapse after recognition of STD symptoms by the respondents - <7 days and ± 7 days respectively (Malek *et al.,* 2013).

The respondents who had a history of having STD within the past 6 months were asked where they consulted for their STD symptoms. The remaining respondents were given a case scenario in which the respondents could imagine of themselves contracting gonorrhoea after an unprotected sexual intercourse. The intention was to ask for their preference of seeking initial STD treatment. Regarding the actual treatment seeking practice, questions were asked only to 59 respondents who had a history of STD within the past six months. During the analysis, frequency distribution was conducted for descriptive analysis. The parametric inferential analysis was conducted with cross-tabulation and one-way ANOVA test, as appropriate, to examine whether there were possible associations between one variable and another.

4.4 Survey Result

This chapter describes the findings of the study based on the survey questionnaires conducted on 200 men who have sex with men residing in Yangon city in Myanmar. The results were analysed in descriptive and analytical manners, attempting to clearly present the relevant finding and information in tables and charts. The following findings tried to have a closer insight into the health seeking behaviour in relation to STD among MSM in Yangon, Myanmar.

4.4.1 General Characteristics

(a) Demographic Characteristics

Table (4.1) Demographic Characteristics of the Study Participants

Variable	Number of respondents	Percentage (%)
Age (years)		
18-28	145	72.50
29-39	39	19.50
40-50	16	8.00
Religion		
Buddhist	185	92.5
Christian	6	3
Muslim	6	3
Hindu	3	1.50
Education		
Illiterate/ Read and Write	11	5.5
Primary/Middle	30	15
High School	99	49.5
University/Graduate	60	30
Current Occupation		
Dependent	1	0.50
Student	9	4.50
Beauty owner	39	19.50
Entertainment Worker	7	3.50
Nat Kadaw	6	3
Government Employee	6	3
Private Employee	121	60.50
Merchant/Seller/trader	3	1.50
Odd jobs	8	4
Monthly Income		
0-200,000	129	65
200,001-400,000	63	32
>400,000	8	4

Table (4.1) Socio-demographic Characteristics of the Study Participants

(Continued)

Variable	Number of respondents	Percentage (%)
Marital Status		
Married	13	7
Separated	1	1
Single	186	93
Current living with-		
Living alone	10	5
With Wife	13	7
With male sexual partner	4	2
With parents or relatives	81	41
With friends (no sexual partner)	92	46

Source: Survey Data, 2019

The age distribution of the respondents ranged from 18 to 50 years with the mean age. ± SD of 26.81± 6.96 years. Based on the range of the age distribution of the participants, they were grouped into three groups with 10 years interval – 18-28 years, 29-39 years and 40-50 years. The most common group was 18-28 years of age, representing 72.5% of the respondents. Over 40 years group was only 16, accounting for 8% of the respondents. Out of 300 respondents, 96 respondents (48%) were youths (18-24 years of age) while 104 (52%) were 25 years and above. Therefore, this study equally covers STD awareness and health seeking behaviour for STD in both youth and older MSM communities.

The religion of the respondents was predominantly Buddhist (185, 92.5%) while only 7.5% were Christian, Hindu and Muslim.

Eleven respondents (5.5%) were illiterate or read and write 30 (15%) had an educational level of primary/ middle. Majority of the respondents (99, 49.5%) had a high school level education. Nearly one-third of the respondents (60, 30%) were at university level education or had been graduated. Therefore, nearly 80% of the study participants were at or above high school level education.

Majority of the respondents (121) were private employees (working in companies, stores or man spa), which accounts for 60.5% of the respondents. 39 respondents (19.5%) were beauty adorner, working at beauty saloons as make-up

artists or hair-stylists. 30 respondents (15%) were entertainment workers, Nat-Kadaw, government employee, merchants or working odd jobs. Nat-Kadaw (direct translation is god's wife) is a shaman-like persons who are believed to be possessed by local spirits and provide important life advice. 10 respondents (5%) were dependent or students. Therefore, this study covers the population of MSM working in various jobs.

The monthly income of the respondents was shown in Myanmar Kyats (MMK) in this study. To be more visible, the current exchange rate is MMK 10,000 = $ 6.5 at the time of writing this dissertation. The mean income SD of the respondents was MMK 221,900 (median = MMK 200,000, IQR = MMK 150,000 – 250,000). The range of the monthly income of the respondents ranged from MMK 0 to MMK 600,000. Nearly two-third of the respondents (129, 64.5%) had a monthly income of MMK 200,000 and only 8 respondents (4%) got a monthly income of > MMK 400,000. 63 respondents (31.5%) had a monthly income between MMK 200,001 and 400,000.

The same-sex marriage is not legal in Myanmar and, thus, marital status of the respondents was taken for the legal marital status of the respondents. Among the 200 respondents, almost all of them (186, 93%) were single. Only one responded as separated and 13 respondents were married.

The married 13 respondents were living with wife. Majority of MSM respondents in this study were living with friends (no sexual partner) (92, 46%) or with their parents or relatives (81, 40.5%). Only a small proportion of the respondents were living alone (10, 5%) or with male sexual partner (4, 2%).

(b) MSM Category of the Respondents

Table (4.2) MSM Category of the Respondents

Variable	Number	Frequency
MSM Category		
Apwint	66	33%
Apone	67	33.50%
Tha-nge	67	33.50%

Source: Study Data, 2019

Because of the sampling method, the three categories of MSM were equally distributed in this study, accounting one third of the study population by each MSM category.

(c) Source of Information for STD

Table (4.3) Source of Information for STD among the Study Participants

Source of Information for STD	Frequency
Health Personals	162
Social Network	155
Mobile app	70
Friends/Parents/Relatives	62
Website	42
Printed Media	9
TV	6
Call center	3
Film/Video	3
Radio	3
Billboard	3

Source: Survey Data, 2019

More than 75% of the respondents responded that they received information about STD from health personals (162, 81%) and social network (155, 77.5%). Nearly a quarter of respondents acquired STD information from mobile applications (70, 35%), friends/parents/relatives (62, 31%) and websites (42, 21%). Printing media, TV, call centre, film/video, radio and billboard were responded to be least informative of STD for the MSM in this study and only less than 5% of the respondents got STD information through each of these sources.

(d) STD Awareness Scores among Three MSM Categories

Table (4.4) STD Awareness Scores among Three MSM Categories

MSM Category	STD Awareness Score		
	Mean ± SD	**Minimum**	**Maximum**
Apwint	73.7 ± 3.7	63	84
Apone	73.5 ± 3.6	63	86
Tha-nge	71.7 ± 5.2	59	85
Total	**73 ± 4.3**	**59**	**86**

Source: Study Data, 2019

The set questionnaire used during the interview with the respondents contained assessment of STD knowledge and the respondents' attitudes towards the STD and treatment seeking behaviour. The knowledge and attitude scores were then summed up to get awareness score of the respondents. The range of the scores was observed from 59 to 86. The mean awareness score was the highest in 'Apwint' MSM category, with the mean awareness score of 73.7, followed by 'Apone', with the mean awareness score of 73.5. The lowest awareness score was found in 'Tha-nge' category, having mean awareness score of 71.7. The highest scorer is from 'Apone' category and the lowest scorer was from 'Tha-nge' category.

(e) Association between STD Awareness and MSM Categories

A one-way ANOVA test was calculated to compare the respondents being in the different MSM categories on the STD awareness scores. According to the analysis, there is a statistically significant difference between STD awareness and MSM category, in which the respondents fell (F = 4.629, p = 0.011). The result of the post-hoc statistics using Tukey HSD test was as follow:

Table (4.5) Association between STD Awareness and MSM Categories

MSM Category		Mean difference	Standard error	*p* value
Apwint	Apone	0.204	0.729	0.958
	Tha-nge	2.010	0.729	0.017*
Apone	Apwint	-0.204	0.729	0.958
	Tha-nge	1.806	0.726	0.036*
Tha-nge	Apwint	-2.010	0.729	0.017*
	Apone	-1.806	0.726	0.036*

Source: Study Data, 2019

*Statistically significant

According to the analysis, there were statistically significant differences of STD awareness between 'Tha-nge' group and 'Apone' or 'Apwint' groups.

(f). Relationship between level of STD awareness and occurrence of STD within past 6 months

Table (4.6) Relationship between Level of Awareness and Occurrence of STD within Past 6 Months

Category of total awareness scores	Any STD within 6 months		Total
	Yes	No	
Low (59-67)	9	14	23
Medium (68-77)	40	118	158
High (78-86)	10	9	19
Total	59	141	200

Source: Study Data, 2019

$$\chi^2 = 7.244, p \text{ value} = 0.027$$

The respondents were asked whether they had any of the STD symptoms within the past six months, and based on the responses, the relationship between category of total awareness scores and any STD within 6 months were sought. According to the analysis, there is a statistically significant relationship between the level of awareness of the respondents on STD and occurrence of STD within the past six months.

(g) Association between STD awareness and treatment-seeking interval after recognition of STD symptoms

A one-way ANOVA was conducted to look for a correlation between the STD awareness scores of the respondents and treatment-seeking interval after recognition of any STD symptoms. Treatment-seeking interval was categorized as timely and late as described in the methodology section. According to the analysis, statistically significant association was not found between the two variables (F = 3.009, p = 0.088).

4.4.2 Barriers and Challenges of MSMs Affecting their STD Treatment-Seeking Behaviours

(a). Frequency distribution of barriers and challenges of MSMs affecting STD treatment- seeking

Table (4.7) Frequency Distribution of Barriers and Challenges of MSMs Affecting STD Treatment Seeking

	Respondents	Percentage
Feeling shy to go to the clinic for STD consultation	54	27
Perceived discrimination at treatment places for STD consultation	19	9.5
Presence of financial difficulties to seek STD treatment	114	57
Having not enough time to go to the clinic for STD consultation	32	16
Not knowing where to go for STD consultation	4	2
Long distance between the clinic and the respondent's residence	52	26
Transportation difficulty to go to the clinic for STD consultation	37	18.5
Long travel time between the clinic and respondent's residence	55	27.5
Long waiting time at the health facility	41	20.5
Healthcare providers not being friendly with MSM during consultation	19	9.5

Source: Study Data, 2019

A range of questions was asked during the interviews with the respondents of this study to explore whether they have any barrier or challenge to seek STD care and treatment if they recognize any symptom of STD by themselves. More than half of the respondents (114, 57%) replied that they have a financial difficulty in seeking STD care and treatment. Although it was not shown in this session, there was no statistically significant association between the income level and perceived financial difficulty for seeking STD treatment (p=0.376). Around a quarter of the respondents showed their barriers and challenges to seek STD treatment as long travel time between the clinic and the respondent's residence (55, 27.5%); feeling shy to go to the clinic (54, 27%); long distance between the clinic and the respondent's residence (52, 26%). Nearly one-fifth of the respondents have difficulty having transportation to go to the clinic for STD consultation (37, 18.5%) and then waiting for a long time at the health facility (41, 20.5%). 32 (16%) of the respondents had a time constraint in seeking treatment for STD. Less than one tenth of the respondents had a perceived discrimination from the healthcare workers at the treatment places for STD and they also felt that the healthcare workers were not friendly to them during provision of STD care and treatment. 4 respondents (2%) responded that they did not get any information where to go for STD consultation.

4.4.3 Mean Interval for Seeking STD Treatment in Respondents having a History of STD during Past Six Months and Identifying to have at Least one Barrier or Challenge to Seek Treatment

Table (4.8) Mean Interval for Seeking STD Treatment in Respondents having a History of STD during Past Six Months and Identifying to have at Least one Barrier or Challenge to Seek Treatment

Interval for seeking STD treatment	Mean ± SD (days)	Maximum (days)	Minimum (days)
Feeling shy to go to the clinic for STD consultation (n=17)	8.7 ± 3.7	3	15
Perceived discrimination at treatment places for STD consultation (n=12)	11.8 ± 5.8	3	21
Presence of financial difficulties to seek STD treatment (n=31)	12.6 ± 6.6	1	30
Having not enough time to go to the clinic for STD consultation (n=50)	12.3 ± 6.3	1	30
Long distance between the clinic and the respondent's residence (n=38)	11.9 ± 6.4	1	30
Transportation difficulty to go to the clinic for STD consultation (n=10)	7.7 ± 4.3	1	15
Long travel time between the clinic and respondent's residence (n=22)	13 ± 7	1	30
Long waiting time at the health facility (n=13)	10.3 ± 5	3	21
Healthcare providers not being friendly with MSM during consultation (n=49)	12.9 ± 6.8	1	30

Source: Study Data, 2019

For the 59 respondents who said to have any STD symptom within the past six months, the mean interval for seeking STD treatment was calculated against their response to have any barrier or challenge for STD treatment. It was found that the respondents went to the facility where STD treatment was available, the shortest being 1-3 days and the longest, 15-30 days.

The mean intervals for each of the identified barriers for treatment seeking was found to be within 7-13 days. The longest mean intervals were observed to be accountable to long travel time between the residence and the clinic (13 days), healthcare workers not being friendly to the MSM (12.9 days), presence of financial difficulties (12.6 days) and having not enough time for STD consultation (12.3 days).

All the 59 respondents knew the information where to go for STD consultation, so they were not included in this analysis for that specific barrier.

4.4.4 Interval between STD Symptom Appearance and STD Treatment Seeking among Three MSM Categories

Table (4.9) Interval between STD Symptom Appearance and STD Treatment Seeking among Three MSM Categories

MSM Category	Mean Interval(Days)	Number of respondents	SD (days)	Minimum (days)	Maximum (days)
Apwint	13.28	18	7.36	1	30
Apone	13.58	24	6.96	1	30
Tha-nge	9.76	17	4.6	2	15
Total	12.39	59	6.62	1	30

Source: Study Data, 2019

The mean interval between STD symptom appearance and STD treatment seeking was asked to 59 participants, who responded to have any STD symptom within previous 6 months. The mean interval was found to be higher in ‘Apwint’ (13.28 days) and ‘Apone’ (13.58 days) compared to ‘Tha-nge’ (9.76 days), with around 4 days in difference. The ‘Apwint’ and ‘Apone’ MSM were also found to take longer time to seek STD treatment than the sample mean of 12.39 days. The maximum number of days for seeking treatment was also found to be 30 days in both ‘Apwint’ and ‘Apone’ while it is found to be 15 days in ‘Tha-nge’.

4.4.5 Choice of Seeking Initial STD Treatment

Table (4.10) Choice of Seeking Initial STD Treatment among Respondents

Initial STD Treatment	No. of Respondents
Treatment with Health Care Provider	101
Consultation through sending message to health page and social network/ mobile app	67
Asking Friends	28
Calling 7887	4

Source: Study Data, 2019

Half of the respondents (101, 50.5%) expressed their preference to getting treatment from healthcare provider while one third of them (67, 33.5%) to consultation through sending message to health page and social network/ mobile applications. There are some respondents who chose to ask friends (28, 14%) and calling 7887 (4, 2%) for their initial STD treatment.

4.4.6 Reasons for Choice of Initial STD Treatment

Table (4.11) Reasons for Choice of Initial STD Treatment among Study Participants

Reasons for choice of initial STD treatment

	Treatment with health care workers (%)	**Consultation through sending message to health page and social network/mobile app(%)**	**Asking Friends(%)**	**Calling 7887(%)**
No need for personal presentation	**37.5**	6.0	10.0	4.0
Easy Access	6.0	29.0	28.0	29.0
Don't know where to go	3.0	5.0	5.0	9.0
Family Problem	**36.5**	20.0	19.0	5.0
Financial Problem	3.0	4.0	4.0	5.0
Lack of social stigma	5.0	30.0	26.0	9.0
Not enough time	3.0	3.0	4.0	29.0
Symptoms seem subsided without treatment	3.0	2.0	2.0	5.0
Symptoms seem not important	3.0	1.0	2.0	5.0

Source: Study Data, 2019

The respondents were then asked about the reasons for choice of initial STD treatment. There might be more than one reasons for the initial STD treatment of choice. This stacked table was based on the percentage accountable to the reasons for each choice of initial STD treatment.

Among the respondents who chose to be treated with healthcare worker, 36 of them (37.5%) had a preference to treatment with healthcare worker because they did not know where to go for STD treatment. 35 of them (36.5%) gave the reason of having family problem (not to let the family know of them being gay or having STD or because of tending to have more time with the family).

Easy access and lack of social stigma was one of the strongest reasons for choosing health page, social network, mobile applications, asking friends and calling

7887 hotline. Financial problem and limited availability of time were also among the reasons why respondents used those services.

4.4.7 Choice of Taking Final STD Treatment during Last Episode of STD

Table (4.12) Choice of Taking Final STD Treatment during Last Episode of STD

Choice of taking final STD treatment during last episode of STD

Doctors from NGOs	44
Venerologist(AIDS/STD Team)	6
Government Doctors	4
General Practitioner	4
Basic Health Worker	1

Source: Study Data, 2019

Fifty-nine respondents, having a history of STD within the past 6 months, were asked where they took the final STD treatment during their last episode. Three-fourth (44, 74%) of the respondents took treatment from doctor from the clinic run by non-governmental organization (NGO). The reasons of the choice were mostly because of easy access to the clinic, and the respondents' financial problems, some for no idea where to go elsewhere for STD consultation, family problem, fear of social stigma and no enough time available to go to other clinics. One-tenth (6, 10%) of the respondents took the treatment from venereologists from AIDS/STD team run by National AIDS Programme, Ministry of Health and Sports, the reason being easy access, fear of social stigma and no idea to go elsewhere for STD consultation. Four respondents each (7%) received treatment from general practitioners or doctors from government hospitals. The reason for choosing government doctor is mostly due to easy access and, for general practitioner, no idea to go somewhere else for STD consultation. Only one respondent (2%) took his STD treatment from basic health worker such as nurse or health assistant, because of easy access.

Although it was not shown in this paper, the analysis results showed that all 59 respondents received medication from the healthcare provider they went. All took the treatment until the completion of the course, except one respondent who lost the pill packet.

4.4.8 Taking STD Test within the past Six Months

Table (4.13) Taking STD Test within Past Six Months and STD Testing Facilities

Taking STD test within 6 Months

	Yes	**No**
	94% (188)	
NGO/INGO clinics	70.7%(133)	
Government Hospital	24.6%(46)	6%(12)
Private Clinics/Hospital	3.7%(7)	
Private Lab	1%(2)	

Source: Study Data, 2019

When asked whether they took STD testing within the past six months, 188 (94%) respondents replied 'Yes' and 12 (6%) respondents did not take STD test within past six months. STD testing was conducted mostly at NGO/INGO clinics (133, 70.7%) followed by government clinic or hospital (46, 24.6%), private clinic/hospital (7, 3.7%) and private lab (2, 1%).

There were more than one reasons from the respondents for each of their choice of facilities for STD testing. For the choice of NGO/INGO clinics, most chose it for the reason of easy access (98, 73.7%), financial problem (75, 56.4%) and perceived social stigma at other healthcare providers (58, 43.6%). On the other hand, among the respondents who chose government clinic/ hospital had the reason of easy access (37, 80%), and perceived social stigma at other healthcare providers (10, 21.7%). There were some other respondents who went to private lab, clinic or hospital for other reasons.

4.4.9 Taking HIV Test within the Past Six Months

Table (4.14) Taking HIV Test within Past Six Months and HIV Testing Facilities

	Taking HIV test within 6 Months	
	Yes	**No**
	93% (187)	7%(13)
NGO/INGO clinics	72.3%(135)	
Government Hospital	23.5%(44)	
Private Clinics/Hospital	3.7%(7)	
Private Lab	0.5%(1)	

Source: Study Data

When asked whether they took HIV testing within the past six months, one less respondent of STD testing, i.e., 187 (93%) respondents, replied 'Yes' and 13 (7%) respondents did not take HIV test within past six months. HIV testing was conducted mostly at NGO/INGO clinics (135, 72.3%) followed by government clinic or hospital (44, 23.5%), private clinic/hospital (7, 3.7%) and private lab (1, 0.5%).

The reason for the choice of facility utilized for HIV testing was almost the same as the analysis conducted for the choice of STD testing facilities.

CHAPTER V
CONCLUSIONS

5.1 Findings

Myanmar is one of the countries in South-east Asia in which the HIV/AIDS burden is disproportionately high in key affected population including MSM. In 2016, it was estimated that the HIV prevalence in the MSM population in Myanmar was high and estimated to be 11.6% in 2016. Myanmar has a population estimate of some 250,000 MSM across the country with half of the population is estimated to be 'undisclosed' MSMs, who are at risk of having difficulty accessing to health care providers for HIV/AIDS and STD prevention, care and treatment services. Nearly 20% of this estimated MSM population are residing in Yangon Region. Moreover, the number of new HIV infection is still higher in MSM populations, driving Yangon Region's HIV epidemic in a co-driver seat together with the new infection acquired in the population of sex workers and their clients. In the integrated biological and behavioural survey of MSM in five cities in Myanmar conducted in 2015, 7%, 5% and 9% of MSM in the study reported to have urethral discharge, rectal discharge and genital ulcer within past 12 months respectively. As prevalence of STD is a driving force for the transmission of HIV/AIDS in MSM, it was critical to know the STD treatment seeking behaviour among MSM in Yangon and barriers and challenges for it. As the ICT technologies has been evolved and it has become popular among the global MSM populations, this study aimed to explore the role of ICT in MSM's treatment seeking for STD.

Currently available literatures illustrate that there is a need to explore the level of STD awareness among the MSM community and the effectiveness of information channels through which information for STD is acquired. Discrimination by the health care providers, financial difficulties and the use of other options rather than the healthcare providers for STD treatment were found to be the factors delaying STD treatment seeking. Delay in STD treatment seeking may give rise to complications

and the literatures indicated that the barriers and challenges for STD treatment seeking should be explored among the MSM in Yangon.

In addition, 40% of Myanmar's population aged 15-65 years has owned a mobile phone as of March 2015. Utilization of innovative and new information and communication technology has altered HIV-related behaviour and service uptake among MSM, which supports broad application of these approaches in STD and HIV/AIDS prevention, care and treatment programmes. Studies that employed information and communication technologies have demonstrated that use of social media and other online resources resulted in an increase in service uptake of between 66% and 99%. These literatures pointed out that study should include the role of ICT for STD treatment seeking.

The study was designed as primary quantitative study conducted with the questionnaire, adopted from the similar studies conducted in three cities in Myanmar in 2012 and another preexisting questionnaire from Behavioural Surveillance Survey. Approval was applied to the Ethical Review Committee, DSMRC, and Ethical Committee, IHR, University of Bedfordshire. Snowball sampling was used and the initial sampling took place at MSM hot spots such as traditional festivals, beauty salons and men spas in 33 townships in Yangon Administrative Area. The sampling was continued until the sample size was saturated – 66 for 'Apwint' and 67 for 'Apone' and 'Tha-nge' to get equal sample size for all three important types of MSM. The survey interview was conducted only after obtaining written informed consent and with meticulous care to keep strict confidentiality of the respondents.

Data entry, cleaning and analysis were conducted in IBM SPSS Version 23. The findings suggested that the respondents were aged between 18-50 years, predominantly Buddhist, mostly educated and working at a monthly income level of <MMK 400,000. More than 75% of the respondents acquired the STD information from health personnals and social networks, which might be helpful for designing the health education programmes for STD. STD awareness scores ranged from 59 to 86 while the highest possible score was 96, and the score was the lowest among 'Tha-nge' category, who are found to be targeted to have a higher coverage of health education. The financial constraint was identified by many study participants to be their barrier for STD treatment seeking. Some participants expressed their challenges such as being shy to go to the clinic, long waiting time at the clinic and perceived discrimination at the treatment facilities. This study would like to urge the

programme and organizations working for MSM to consider these client-related and service factors for successful implementation. Preference for initial and final STD treatment was found to be the healthcare workers, among which doctors from NGO were the most frequent response for the choice of final STD treatment and 6-monthly STD and HIV testing, with the reason mostly being easy access and financial problem. Thus, this study demonstrated that the health facilities, including public ones, should ensure an easy access by the targeted group they are intending to work.

Ninety-four percent of the respondents were found to possess a mobile phone and 92.5% owned a touch-screen type mobile phone. More than 75% of the respondents received STD knowledge and information about the treatment facilities from the social network, among which Facebook was the most popular. It was said by 82% of the study participants that social network was used to seek early and appropriate STD treatment. Some respondents also gave the impression that the Facebook pages were informative for STD knowledge and treatment seeking for MSM in Yangon. They also shared their various impressions about the ICT technologies for STD treatment seeking – the top responses being ensuring open, frank and private discussion; quick access; swift reply and informative of STD treatment facilities. This study recommended to invest more on the social network pages to be more informative and penetrate more into the targeted MSM community.

Since 59 study participants out of 200 (29.5%) responded that they had an episode of STD symptoms within the past 6 months, the occurrence of STD among the study participants was high. The study also provided the much-needed information regarding the health seeking behaviour in relation to STD among MSM in Yangon. However, there were some issues which is worth to have further investigations and research. Because of the time and financial constraints, the sample size was limited to 200. However, the nature of three categories of MSM is different and it would be better to have a separate study assessing the awareness of STD among each of the MSM categories.

Moreover, the subset of study participants who had a history of STD within the previous 6 months was small (only 59 respondents). This small subset limited this study to find the association between the delayed treatment seeking interval and the other variables such as monthly income, education level and perceived barriers and challenges. A separate study should be conducted on the MSM who had an STD within past few months to better understand those associations.

It was recommended in this study that the preferred source of STD information were health personals and social network. However, further research is still needed to explore how to use these information channels to impart STD information and how to design the STD health education.

The current study also considered to conduct a qualitative research to compliment the findings from the quantitative study and to better understand the barriers and challenges of MSM in Yangon in relation to seeking STD knowledge and treatment. However, due to the time constraints, it was impossible to do a qualitative research. The future research should also consider conducting a qualitative study to complement the quantitative findings from this study.

5.2 Recommendations

Mean awareness score of the study participants was 73 ± 4.3 out of 96. The score was found to be fairly high, implying that the MSM population in Yangon has a good knowledge of STD and attitude towards the treatment for STD. However, there were some barriers for them, especially financial constraints, which led them to delay in treatment seeking. However, it was found that all the 59 respondents who had a history of STD within 6 months went to the one of the healthcare providers listed in the questionnaire as their final treatment. Therefore, it was found in this study that the MSM respondents relied on the healthcare workers as the source of STD information and preferred treatment provider for STD. The healthcare providers working in both public and private sectors should be more sensitized to the MSM and their behaviour for provision of high-quality service and getting more reliability from them.

While writing this dissertation, it was found that the local data for STD in MSM population was limited while there was relatively wider availability for the regional and global data. I feel this study would be supportive for the future implementation of projects working for STD prevention, care and treatment for MSM community in Yangon.

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Annex (1) Questionnaire (Myanmar)

မြန်မာနိုင်ငံ၊ ရန်ကုန်မြို့တွင်နေထိုင်သော အမျိုးသားချင်း လိင်တူဆက်ဆံသူများကြားတွင် ကာလသားရောဂါ ဖြစ်ပွားခဲ့လျှင် ကုသမှုခံယူသည့် အလေ့အကျင့်အခြေအနေကို လေ့လာခြင်းအတွက် မေးခွန်းလွှာ

ကုတ်နံပါတ်: __ __ / __ __ __

နေ့စွဲ: __ __ / __ / __ __

အပိုင်း(၁) လူမှုရေးနှင့် လူဦးရေအပိုင်းအခြားဆိုင်ရာ ဂိသေသများ

စဉ်	မေးခွန်းများ	အဖြေများ	ကုဒ်	ကျော်ရန်	အမှတ်များ
၁.၁	ပြည့်ခဲ့ပြီးသောအသက်	__ __ နှစ်	☐☐		
၁.၂	လူမျိုး/လူမျိုး	၁။ မြန်မာ ၂။ အခြား_____	၁ ၂		
၁.၃	ကိုးကွယ်သည့်ဘာသာ	၁။ ဗုဒ္ဓ ၂။ ခရစ်ယာန် ၃။ ဟိန္ဒူ ၄။ အစ္စလာမ် ၅။ အခြား_____	၁ ၂ ၃ ၄ ၅		
၁.၄	အတန်းပညာ	၁။ စာမတတ် ၂။ ရေးတတ်ဖတ်တတ် ၃။ မူလတန်း ၄။ အလယ်တန်း ၅။ အထက်တန်း ၆။ တက္ကသိုလ် ၇။ ဘွဲ့ရ	၁ ၂ ၃ ၄ ၅ ၆ ၇		
၁.၅	လက်ရှိ အလုပ်အကိုင်	၁။ မီခိုရိ ၂။ ကျောင်းသား ၃။ အလှဖန်တီးရှင် ၄။ ဖျော်ဖြေရေးလုပ်ငန်း များတွင် လုပ်ကိုင်သူ ၅။ နတ်ကတော် ၆။ ပြည်တွင်းဆာ ၇။ အစိုးရဝန်ထမ်း ၈။ အပြင်စီးပွားရေး လုပ်ငန်းများတွင် လုပ်ကိုင်သူ ၉။ ကုန်သည် ၊ ဝယ်ရောင်း ၁၀။ ကျပန်း ၁၁။ အခြား _____	၁ ၂ ၃ ၄ ၅ ၆ ၇ ၈ ၉ ၁၀ ၁၁		
၁.၆	လစဉ်ဝင်ငွေ	_____,,, ကျပ်	☐☐☐		
၁.၇	အိမ်ထောင် ရှိ / မရှိ (တရားဝင်ဖြစ်သော အိမ်ထောင် ရှိ / မရှိ အခြေအနေကိုသာယူရန်)	၁။ အိမ်ထောင်ရှိ ၂။ အိမ်ထောင်နှင့်ခွဲနေ ၃။ ကွာရှင်းပြီး ၄။ မုဆိုးဖို ၅။ အိမ်ထောင်မရှိ	၁ ၂ ၃ ၄ ၅		
၁.၈	လက်ရှိမည်သူနှင့် အတူ နေ နေပါသလဲ။ (အသင့်လျော်ဆုံးတစ်ခု ကိုသာရွေးရန်)	၁။ တစ်ယောက်တည်းနေ ၂။ ဇနီးနှင့် ၃။ အမျိုးသားအဖော်နှင့် ၄။ မိဘများ/အမျိုးများနှင့် ၅။ သူငယ်ချင်းများနှင့် (လိင်ဆက်ဆံဖော် မဟုတ်ရပါ။) ၆။ အခြား _____	၁ ၂ ၃ ၄ ၅ ၆		

စဉ်	မေးခွန်းများ	အဖြေများ	ကုဒ်	ကျော်ရန်	အမှတ်များ
၁.၉	သင်မည်သည့် လိင်တူချစ်သူ အမျိုးအစားထဲ ဝင်ပါသလဲ။	၁။ အပွင့် ၂။ အပုန်း ၃။ သူငယ်	☐		
၁.၁၀	သင့်တွင် လက်ကိုင်ဖုန်း ရှိပါသလား။	၁။ ရှိပါတယ် ၂။ မရှိပါဘူး → ၂.၁	☐		
၁.၁၁	မည်သည့် လက်ကိုင်ဖုန်း အမျိုးအစားကို ပိုင်ဆိုင်ထားတာလဲ။	၁။ ထိတွေ့မျက်နှာပြင် ပါသောဖုန်း (အန်းဒရွိုက်၊ အိုင်ဖုန်း) ၂။ ဂဏန်းခုံသာ ပါသော ဖုန်း	☐		

အပိုင်း (၂) ကာလသားရောဂါဆိုင်ရာ ဗဟုသုတ

စဉ်	မေးခွန်းများ	အဖြေများ		ကုဒ်	ကျော်ရန်	အမှတ်များ
၂.၁	သင်သိသော ကာလသားရောဂါ အမည်များကို ပြောပြပေးပါ။ (ရောဂါနာမည်များ ကို တစ်ခုချင်းရွတ် မပြပါနှင့်။ ဖြေသော အဖြေများကို ပိုင်း ထားပါ။)	၁။ ဂနို(ဆီးပူညောင်းကျ)ရောဂါ ၂။ ခလာမစ်ဒီယား (ဂနိုမဟုတ်သော ညောင်းကျရောဂါ) ၃။ ဆစ်ဖလစ် (ရှန်ကာ) ၄။ ရှန်းခရွိုက် ၅။ ဘင် ၆။ အိတ်ချ်အိုင်ဗီ/ အေအိုင်ဒီအက်စ် ၇။ လိင်အင်္ဂါ ရေယုန် ၈။ လိင်အင်္ဂါကြွက်နို့ ၉။ လိင်အင်္ဂါ သန်းတွယ်ခြင်း ၁၀။ အခြား _____		☐ ☐		☐ ☐
၂.၂	အထက်ပါ ကာလသားရောဂါ များ အကြောင်းကို ဘယ်ကနေ သိရှိပါ သလဲ။ (တစ်ခုချင်း ရွတ်ပြ ပေးပါ။ဖြေဆိုသော အဖြေများ အားလုံး ကို ပိုင်းပါ။)	၁။ ပုံနှိပ်မီဒီယာ (စာအုပ်၊ မဂ္ဂဇင်း၊ ဂျာနယ်) ၂။ ရုပ်ရှင်/ ဗွီဒီယို ၃။ တီဗွီ ၄။ ရေဒီယို ၅။ လူမှုကွန်ရက်များ (ဖေ့စ်ဘွတ်၊ တွစ်တာ စသဖြင့်) (သို့) လိင်တူ ချစ်သူချင်းတွေ ရန် သုံးသော အက်ပလီ ကေးရှင်းများ (ဂရိုင်ဒါ၊ ဘလူး စသဖြင့်) ၆။ ဝက်ဘ်ဆိုက်ဒ် ၇။ ဖုန်း အက်ပလီကေး ရှင်းများ (မိတ်၊ ဖော်စမတ်ယုသ် သဖြင့်) ၈။ ဖုန်းခေါ်ဆိုမေးမြန်း ဝန်ဆောင်မှု နံပါတ် ၉။ လမ်းဘေးဆိုင်းဘုတ် များ ၁၀။ ကျန်းမာရေးဝန်ထမ်း ၁၁။ သူငယ်ချင်း၊ မိဘ၊ အမျိုးအဆွေ ၁၂။ အခြား _____	၁။ ရပါ သည်။ ၂။ မရပါ။	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐		
၂.၃	ကာလသား/ အိတ်ချ်အိုင်ဗွီ၏ အရေးကြီးသော ကူးစက်မှု	၁။ တစ်ကိုယ်ရည်ကျန်းမာရေးညံ့ခြင်း ၂။ လိင်ကွဲဆက်ဆံခြင်း ၃။ လိင်တူဆက်ဆံခြင်း		☐		☐

စဉ်	မေးခွန်းများ	အဖြေများ	ကုဒ်	ကျော်ရန်	အမှတ်များ
	လမ်းကြောင်းများ ကို သင်သိပါသလား။ ပြောပြပေးပါ။ (အဖြေမှန် အဖြေမှား ရေ ၁ထားသည်။ တစ်ခုချင်းရွတ်ပြပြီး ရွေးချယ်သောအဖြေများ ကို ဝိုင်းထားပါ။)	၄။ ပိုးသတ်သန့်စင်မထားသော အပ်ကို သုံးမိခြင်း ၅။ မသန့်စင်သော သွေးသွင်းမိခြင်း ၆။ ခြင်ကိုက်ခံရခြင်း ၇။ ရောဂါပိုးပါသောသွေး ခန္ဓာကိုယ်ထဲ တစ်နည်းနည်းဖြင့် ဝင်ရောက်ခြင်း ၈။ ကိုယ်ဝန်ဆောင်အမေမှ ကလေးသို့ ၉။ ရောဂါရှိသူနှင့် အရှုအနာမရှိသော အရေပြားချင်း ထိကပ်မိခြင်း ၁၀။ အခြား _____			
၂.၄	လိင်တူဆက်ဆံခြင်း နှင့် လိင်ကွဲဆက်ဆံ ခြင်း နှစ်မျိုးတွင် မည်သည်က အိတ်ရ်အိုင်ဗီ ကူးစက်မှုနှုန်း ပိုများ စေပါသလဲ။	၁။ အတူတူဖြစ်သည် ၂။ လိင်တူ ဆက်ဆံခြင်း ၃။ လိင်ကွဲဆက်ဆံခြင်း ၄။ မသိပါ	☐		☐
၂.၅	ကာလသားရောဂါက အမျိုးသားများတွင် မည်သို့လက္ခဏာပြလေ့ရှိ ပါသလဲ။ (အဖြေများကို တစ်ခုချင်း ဖတ်မပြပါ နှင့်။ ဖြေဆိုသည်ကို ဝိုင်းထားပါ။ မည်သည့် လက္ခဏာကိုမှ မဖြေလျှင် သုည ပေးပါ။)	၁။ ဆီးကျင်ခြင်း ၂။ ကျင်ချောင်း/စအိုဝမှ ပြည်ကျခြင်း ၃။ လိင်တံ/စအိုဝတွင် အနာဖြစ်ခြင်း ၄။ လိင်အင်္ဂါတွင် အရည်ကြည်ဖု များ ပေါက်ခြင်း ၅။ လိင်အင်္ဂါတွင် ကြွက်နို့ပေါက်ခြင်း ၆။ လိင်အင်္ဂါ/ပေါင်ခြံတွင် အဖုထွက်ခြင်း ၇။ စအိုဝ/လိင်အင်္ဂါယားယံခြင်း ၈။ အခြား _____	☐		☐
၂.၆	ကာလသားရောဂါ အတော်များများက ရောဂါလက္ခဏာ မပြတတ်ဘူးလို့ထင်ပါသလား။	၁။ ထင်ပါသည် ၂။ မထင်ပါ ၃။ မသိပါ	☐		☐
၂.၇	ကာလသားရောဂါက ကာကွယ်လို့ရတယ် လို့ထင်ပါသလား။	၁။ ထင်ပါသည် ၂။ မထင်ပါ ၃။ မသိပါ	☐		☐
၂.၈	ဘယ်လိုကာကွယ်လို့ ရပါသလဲ။ (အဖြေမှန် နှင့် အဖြေမှားများကို ရောထွေးထား ပါသည်။ တစ်ခုချင်း ရွတ်ပြပေးပါ။ ဖြေဆို သည်ကို ဝိုင်းပါ။)	၁။ လိင်ကွဲဆက်ဆံခြင်းမှ ရှောင် ကြဉ်ခြင်း ၂။ လိင်တူဆက်ဆံခြင်းကို ပြုလုပ်ခြင်း ၃။ မပွေ့မရှုပ်ခြင်း ၄။ ပါးစပ်နှင့်သာ လိင်ဆက်ဆံခြင်း ၅။ လိင်မဆက်ဆံမီ ဆေးဂါးများ မှီဝဲထားခြင်း ၆။ ကွန်ဒုံးသုံးခြင်း ၇။ လိင်ဆက်ဆံပြီးနောက် ပင်နယ်ဆလင်ကဲ့သို့သော ပိုးသတ်ဆေးများ သောက်သုံးခြင်း ၈။ တစ်ခါသုံး ဆေးထိုးအပ်များသုံးခြင်း ၉။ သွေးမသွင်းမီ သွေးကို သေချာ စစ်ဆေးခြင်း ၁၀။ အခြား _____	☐		☐ ☐

စဉ်	မေးခွန်းများ	အဖြေများ	ကုဒ်	ကျော်ရန်	အမှတ်များ
၂.၉	ကာလသားရောဂါအများ စုဟာ ကုသပျောက်ကင်း တယ်လို့ ထင်ပါသ လား။	၁။ ထင်ပါတယ် ၂။ မထင်ပါ ၃။ မသိပါ	☐		☐
၂.၁၀	လိင်အင်္ဂါကြွက်နို့ တွေက ကုသ လို့ ပျောက်ကင်း တယ်လို့ ထင်ပါ သလား။	၁။ ထင်ပါတယ် ၂။ မထင်ပါ ၃။ မသိပါ	☐		☐
၂.၁၁	ဂနို ရောဂါဟာ ကုသလို့ပျောက် ကင်းတယ်လို့ ထင် ပါသလား။	၁။ ထင်ပါတယ် ၂။ မထင်ပါ ၃။ မသိပါ	☐		☐
၂.၁၂	အိတ်ချ်အိုင်ဗွီ ဟာ ကုသလို့ပျောက် ကင်းတယ်လို့ ထင် ပါသလား။	၁။ ထင်ပါတယ် ၂။ မထင်ပါ ၃။ မသိပါ	☐		☐

အပိုင်း (၃) ကာလသားရောဂါများအပေါ် တွင် ထားရှိသော သဘောထား

စဉ်	မေးခွန်းများ	လုံးဝသဘောတူပါသည်	သဘောတူပါသည်	သဘောမတူပါ	လုံးဝသဘောမတူပါ	မသိပါ	အမှတ်များ
၃.၁	ကာလသားရောဂါ ဖြစ်လျှင် ဆေးသောက်စရာမလို၊ အလိုလို ပျောက်မည်။	☐	☐	☐	☐	☐	☐
	ကာလသားရောဂါလက္ခဏာတစ်ခုခု ရှိသည်ဟု သတိပြုမိလျှင်						
၃.၂	ကာလသားရောဂါရှိသည့် အတွက် သင့်ကိုယ်သင်သာ အပြစ်တင်စရာဖြစ်သည်။	☐	☐	☐	☐	☐	☐
၃.၃	ကာလသားရောဂါရှိကြောင်း သူများကို ပြောပြလျှင် ခွဲခြား ဆက်ဆံခံရမည်စိုးရ၍ ပြောရန် ရှက်ရွံ့နေရမည်။	☐	☐	☐	☐	☐	☐
၃.၄	သင့်လျော်သောဆေးကုသသူ ထံမှ ဆေးကုသမှုကို ချက်ချင်း ရယူသင့်သည်။	☐	☐	☐	☐	☐	☐
	ကာလသားရောဂါလက္ခဏာတစ်ခုခု ရှိသည်ဟု သတိပြုမိလျှင် ကနဦးကုသမှုကို မည်သူ့ထံမှ (သို့) မည်ကဲ့သို့ ရယူပါသနည်း။						
၃.၅	ကုသမှုမခံယူဘဲ စောင့်ကြည့် မည်/ ကိုယ့်ဘာသာ ကုမည်။	☐	☐	☐	☐	☐	☐
၃.၆	သူငယ်ချင်းထံမှ ကုသမှုယူမည်။	☐	☐	☐	☐	☐	☐
၃.၇	စပ်ဆေးဆိုင်/ရမ်းကုထံမှ ကုသမှုယူမည်။	☐	☐	☐	☐	☐	☐
၃.၈	တိုင်းရင်းဆေးဆရာထံမှ ကုသမှု ယူမည်။	☐	☐	☐	☐	☐	☐

စဉ်	မေးခွန်းများ	လုံးဝသဘောတူပါသည်	သဘောတူပါသည်	သဘောမတူပါ	လုံးဝသဘောမတူပါ	မသိပါ	အမှတ်များ
၃.၉	ဆေးကုသရေးဂန်ထမ်းထံမှ ကုသမှု ယူမည်။	☐	☐	☐	☐	☐	☐
၃.၁၀	သင့်လိင်ဆက်ဆံဖော်တွင် ကာလသားရောဂါ လက္ခဏာ တစ်ခုခု သတိပြုမိပါက ၄င်းကိုချက်ချင်း ဆေးကုသမှု ခံယူရန် အကြံပေးသင့်သည်။	☐	☐	☐	☐	☐	☐
၃.၁၁	ပေါ်ပေါက်သော လက္ခဏာများ ပေါ်မူတည်ပြီး ကာလသားရောဂါများကို ကာလအပိုင်းအခြားတစ်ခု ရောက်တိုင်း စစ်ဆေးသင့်သည်ဟု ထင်ပါသလား။	☐	☐	☐	☐	☐	☐
၃.၁၂	လူမှုကွန်ရက်/ ဖုန်းအက်ပလီ ကေးရှင်း/ ဖုန်းခေါ်ဆိုမေးမြန်း ဂန်ဆောင်မှုများက ကာလသား ရောဂါများအတွက် သင့်လျော်သော ကုသမှုပေးသူကို ရှာဖွေရန် ကူညီပေးပါသလား။	☐	☐	☐	☐	☐	

အပိုင်း (၄) ကုသမှုခံယူသည့် အလေ့အထ

စဉ်	မေးခွန်းများ	အဖြေများ	ကုဒ်	ကျော်ရန်
၄.၁	အောက်ဖော်ပြပါ ကာလသား ရောဂါတစ်ခုခု လွန်ခဲ့သော ၆ လ အတွင်း ဖြစ်ဖူးပါသလား။ အောက်ပါတို့ကို ရွတ်ပြပါ- ၁။ ဆီးကျင်ခြင်း ၂။ ကျင်ရောင်း/စအိုဝမှ ပြည်ကျခြင်း ၃။ လိင်တံ/စအိုဝတွင် အနာဖြစ်ခြင်း ၄။ လိင်အင်္ဂါတွင် အရည်ကြည်ဖု များ ပေါက်ခြင်း ၅။ လိင်အင်္ဂါတွင် ကြွက်နို့ပေါက်ခြင်း ၆။ လိင်အင်္ဂါ/ပေါင်ခြံတွင် အဖုထွက်ခြင်း ၇။ စအိုဝ/လိင်အင်္ဂါ ယားယံခြင်း	၁။ ဖြစ်ဖူးသည်။ → ၄.၃ ၂။ မဖြစ်ဖူးပါ။ မဖြစ်ဖူးလျှင် မေးခွန်း ၄.၂ မှ ၄.၄ အထိ မေးရန်၊ ထို့နောက် ၄.၅ မှ ၄.၁၁ ကို ကျော်ပြီး ၄.၁၂ မှ ၄.၁၇ ကို မေးရန်။ ဖြစ်ဖူးသည်ဟု ဖြေလျှင် မေးခွန်း ၄.၂ ကို ကျော်ပြီး ၄.၃ မှစကာ ကျန်မေးခွန်းများကို ဆက်မေးပါ။	☐	
၄.၂	လွန်ခဲ့သော ငါးရက်ခန့်က ကွန်ဒုံးမပါဘဲ လိင်ဆက်ဆံ ခဲ့မိပြီး လိင်အင်္ဂါမှ ပြည်ကျနေ သည်ကို ယနေ့တွေ့ရှိရသည်ဆိုပါစို့။ ထိုအခါ ကနဦးကုသမှုအတွက် မည်သည်ကိုရွေးချယ်မည် နည်း။	၁။ ကုသမှုမယူဘဲ စောင့်ကြည့်မည်။ ၂။ ကိုယ့်ဘာသာ ဆေးမြီးတိုဖြင့် ကုမည်။ ၃။ သူငယ်ချင်းများကို မေးမည်။ ၄။ စပ်ဆေးဆိုင်မှ ဆေးဝယ်သောက် မည် ၅။ ရမ်းကုဖြင့်ကုမည် ၆။ မြန်မာဆေးဆရာဖြင့် ကုမည်။	☐	၄.၄

စဉ်	မေးခွန်းများ	အဖြေများ	ကုဒ်	ကျော်ရန်
		၇။ လူမှုကွန်ရက်/ ဖုန်း အက်ပလီကေး ရှင်းတွင် စာတိုပို့ပြီး မေးမြန်းမည် ၈။ ဖုန်းခေါ်ဆိုမေးမြန်းပန်ဆောင်မှုကို ဖုန်းခေါ်မေးမြန်းမည် ၉။ ဆေးပညာရှင် တစ်ဦးဦးနှင့် ကုသမည် ၁၀။ အခြား _____		
၄.၃	ကနဦး ကုသမှုကို မည်သူ့ထံမှ ရယူရန် ရွေးချယ် မလဲ။ (အဖြေတစ်ခုတည်းကိုသာ ရွေးရန်)	၁။ ကုသမှုမယူဘဲ စောင့်ကြည့်မည်။ ၂။ ကိုယ့်ဘာသာ ဆေးမြီးတိုဖြင့် ကုမည်။ ၃။ သူငယ်ချင်းများကို မေးမည်။ ၄။ စပ်ဆေးဆိုင်မှ ဆေးဝယ်သောက် မည် ၅။ ရမ်းကုဖြင့်ကုမည် ၆။ မြန်မာဆေးဆရာဖြင့် ကုမည်။ ၇။ လူမှုကွန်ရက်/ ဖုန်း အက်ပလီကေး ရှင်းတွင် စာတိုပို့ပြီး မေးမြန်းမည် ၈။ ဖုန်းခေါ်ဆိုမေးမြန်းပန်ဆောင်မှုကို ဖုန်းခေါ်မေးမြန်းမည် ၉။ ဆေးပညာရှင် တစ်ဦးဦးနှင့် ကုသမည် ၁၀။ အခြား _____	☐	
၄.၄	၄.၂ နှင့် ၄.၃ တွင်ဖြေဆိုခဲ့သော အဖြေသည် မည်သည့်အတွက် ကြောင့် သင့်၏ ကာလသားရောဂါ လက္ခဏာအတွက် သင့်လျော်သည် ဟု ထင်ပါသလဲ။ (အဖြေတစ်ခုထက် ပိုနိုင်ပါသည်။)	၁။ ရောဂါလက္ခဏာက အရေးမကြီးဟု ထင်သည့်အတွက် ၂။ ကုသရန်မလိုဘဲ ပျောက်ကင်းမည် ဟုထင်သည့်အတွက် ၃။ အချိန်မရှိသည့်အတွက် ၄။ လူမှုဆက်ဆံရေးတွင် အဆိုးမြင်ခံရမည် စိုးသည့်အတွက် ၅။ ဌေးရေးကြေးရေးပြဿနာ ရှိသည့်အတွက် ၆။ မိသားစုပြဿနာရှိသည့်အတွက် ၇။ ဘယ်သွားရမည် မသိသည့်အတွက် ၈။ အလွယ်တကူလက်လှမ်းမီ နိုင်သည့်အတွက် ၉။ လူကိုယ်တိုင် သွားရောက်ရန် မလိုသည့်အတွက် ၁၀။ အခြား _____	၁ ၂ ၃ ၄ ၅ ၆ ၇ ၈ ၉ ၁၀	
၄.၅	နောက်ဆုံးကုသမှုကို မည်သူ့ထံမှ ခံယူခဲ့ပါသနည်း။	၁။ စပ်ဆေးဆိုင် ၂။ ရမ်းကု ၃။ တိုင်းရင်းဆေးဆရာ ၄။ ကျန်းမာရေးပန်ထမ်း ၅။ အခြား _____	☐	→ ၄.၇ → ၄.၇
၄.၆	ကျန်းမာရေးပန်ထမ်းနှင့် ပြသခဲ့ပါ က မည်သူ့ထံတွင်ပြသခဲ့သည်ကို ရွေးချယ်ပေးပါ။	၁။ အခြေခံကျန်းမာရေးပန်ထမ်း ၂။ အထွေထွေကုဆေးခန်း ၃။ အစိုးရပန်ထမ်းဆရာဝန် ၄။ ကာလသားရောဂါအထူးကု (ခုခံကျ/ကာလသားစီမံချက်) ၅။ NGO မှ ဆရာဝန် ၆။ အခြား _____	☐	
၄.၇	ယခင်ပြောခဲ့သော ဆေးကုသမှုရယူခဲ့သူထံမှ မည်သည့်အတွက်ကြောင့် ဆေး ကုသမှု ခံယူခဲ့ပါသလဲ။	၁။ ရောဂါလက္ခဏာက အရေးမကြီးဟု ထင်သည့်အတွက် ၂။ အချိန်မရှိသည့်အတွက် ၃။ လူမှုဆက်ဆံရေးတွင် အဆိုးမြင်ခံရမည် စိုးသည့်အတွက်	၁ ၂ ၃	

စဉ်	မေးခွန်းများ	အဖြေများ	ကုဒ်	ကျော်ရန်
		၄။ ငွေရေးကြေးရေးပြဿနာ ရှိသည့်အတွက် ၅။ မိသားစုပြဿနာရှိသည့်အတွက် ၆။ ဘယ်သွားရမည် မသိသည့်အတွက် ၇။ အလွယ်တကူလက်လှမ်းမီ နိုင်သည့်အတွက် ၈။ လူကိုယ်တိုင် သွားရောက်ရန် မလိုသည့်အတွက် ၉။ အခြား _____	၄ ၅ ၆ ၇ ၈ ၉	
၄.၈	ရောဂါလက္ခဏာပေါ်သည့်အချိန်မှ ကျန်းမာရေးဝန်ထမ်းထံမှ ဆေးကုသမှု ခံယူသည့်အချိန်ကြား ရက်မည်မျှ ကြာပါသလဲ။	☐ ရက်	☐	
၄.၉	သင် သွားပြခဲ့သော ကျန်းမာရေး ဝန်ထမ်းထံမှ ဆေးရရှိခဲ့ပါသလား။	၁။ ရခဲ့ပါသည် ၂။ မရခဲ့ပါ → ၄.၁၂ ၃။ မမှတ်မိပါ → ၄.၁၂		
၄.၁၀	ရရှိခဲ့သော ဆေးအားလုံးကို သောက်သုံးခဲ့ပါသလား။	၁။ သောက်သည် ၂။ မသောက်ပါ → ၄.၁၂ ၃။ မမှတ်မိပါ → ၄.၁၂		
၄.၁၁	မသောက်ခဲ့ပါက မည်သည့်အတွက်ကြောင့် မသောက်ခဲ့ပါသလဲ။ (အဖြေတစ်ခုထက် ပိုနိုင်ပါသည်။)	၁။ သောက်ဖို့မေ့သွားလို့ ၂။ ခဏခဏ သောက်ရလို့ ၃။ ပျောက်သွားပြီထင်လို့ ၄။ ဆေးလုံးကြီးလို့/အရသာဆိုးလို့ ၅။ ဘေးထွက်ဆိုးကျိုးကြောင့် ၆။ ပျောက်သွားလို့ ၇။ ဘာလို့လဲ မမှတ်မိတော့ ၈။ မဖြေ ၉။ အခြား _____	၁ ၂ ၃ ၄ ၅ ၆ ၇ ၈ ၉	
၄.၁၂	လွန်ခဲ့သော ၆ လ အတွင်း ကာလသားရောဂါ စစ်ဆေးဖူး သလား။	၁။ စစ်ဖူးတယ် ၂။ မစစ်ဖူးပါ → ၄.၁၅	☐	
၄.၁၃	ဘယ်နေရာမှာ စစ်ဆေးခံခဲ့ပါ သလဲ။ (အဖြေတစ်ခုသာ ယူရန်)	၁။ ပုဂ္ဂလိကပိုင် ဆေးခန်း/ဆေးရုံ ၂။ အစိုးရ ဆေးခန်း/ဆေးရုံ ၃။ NGO/INGO ဆေးခန်း ၄။ ပုဂ္ဂလိကပိုင် ဓာတ်ခွဲခန်း ၅။ အခြား _____	☐	
၄.၁၄	မည်သည့်အတွက်ကြောင့် ထိုနေရာတွင် ကာလသားရောဂါ စစ်ဆေးရပါသလဲ။	၁။ အချိန်မရှိသည့်အတွက် ၂။ လူမှုဆက်ဆံရေးတွင် အဆိုးမြင်ခံရမည် စိုးသည့်အတွက် ၃။ ငွေရေးကြေးရေးပြဿနာ ရှိသည့်အတွက် ၄။ မိသားစုပြဿနာရှိသည့်အတွက် ၅။ ဘယ်သွားရမည် မသိသည့်အတွက် ၆။ အလွယ်တကူလက်လှမ်းမီ နိုင်သည့်အတွက် ၇။ အခြား _____	၁ ၂ ၃ ၄ ၅ ၆ ၇	
၄.၁၅	လွန်ခဲ့သော ၆ လ အတွင်း HIV/AIDS ရှိမရှိ စစ်ဆေးခဲ့ပါသလား။	၁။ စစ်ဆေးခဲ့သည်။ ၂။ မစစ်ဆေးခဲ့ပါ။ → အပိုင်း ၅	☐	
၄.၁၆	ဘယ်နေရာမှာ စစ်ဆေးခံခဲ့ပါ သလဲ။ (အဖြေတစ်ခုသာယူရန်)	၁။ ပုဂ္ဂလိကပိုင် ဆေးခန်း/ဆေးရုံ ၂။ အစိုးရ ဆေးခန်း/ဆေးရုံ ၃။ NGO/INGO ဆေးခန်း ၄။ ပုဂ္ဂလိကပိုင် ဓာတ်ခွဲခန်း ၅။ အခြား _____	☐	

စဉ်	မေးခွန်းများ	အဖြေများ	ကုဒ်	ကျော်ရန်
၄.၁၇	မည်သည့်အတွက်ကြောင့် ထိုနေရာတွင် ကာလသားရောဂါ စစ်ဆေးရပါသလဲ။	၁။ အချိန်မရှိသည့်အတွက် ၂။ လူမှုဆက်ဆံရေးတွင် အဆိုးမြင်ခံရမည် စိုးသည့်အတွက် ၃။ ငွေရေးကြေးရေးပြဿနာ ရှိသည့်အတွက် ၄။ မိသားစုပြဿနာရှိသည့်အတွက် ၅။ ဘယ်သွားရမည် မသိသည့်အတွက် ၆။ အလွယ်တကူလက်လှမ်းမီ နိုင်သည့်အတွက် ၇။ အခြား _____	၁ ၂ ၃ ၄ ၅ ၆ ၇	

အပိုင်း (၅) ကာလသားရောဂါ ဖြစ်ပွားခဲ့လျှင် ကုသမှုခံယူရန် ခက်ခဲစေသော အချက်များ

စဉ်	မေးခွန်းများ	အဖြေများ	ကုဒ်	ကျော်ရန်
၅.၁	ဆေးခန်းသို့သွားပြရန် ရှက်နေတာမျိုး ရှိသလား။ (ကာလသားရောဂါ ကြောင့်ဖြစ်သော လူမှုပတ်ဝန်းကျင် အဆိုး မြင်ခြင်းကို မေးမြန်းရန်)	၁။ ရှိပါတယ် ၂။ မရှိပါ	☐	
၅.၂	ကာလသားရောဂါအတွက် ကုသမှုကို ဆောလျင်စွာ ရရှိ နိုင်ရန် မည်သည့် သတင်း အချက်အလက်နည်းပညာ အကူအညီကို ယူပါသေးလဲ။	၁။ လူမှုကွန်ရက် (ဖေ့စ်ဘွတ်၊ တွစ်တာ စသည်) ၂။ လိင်တူချစ်သူချင်း တွေ့ရန်သုံးသော အက်ပလီကေးရှင်း (ဂရိုင်ဒါ၊ ဘလူး စသည်) ၃။ ဖုန်း အက်ပလီကေးရှင်း (ဖော်စမတ်ယုသ်၊ မိတ် စသည်) ၄။ ဖုန်းခေါ်ဆိုမေးမြန်းဝန်ဆောင်မှု	☐ ☐ ☐ ☐	
၅.၃	အဆိုပါ သတင်းအချက် အလက် နည်းပညာများက သင့် ကာလသားရောဂါ ကုသမှုရရှိရန် ကူညီရာတွင် မည်သို့ သိသိသာသာ ထူးခြား ပါသလဲ။	_____ _____ _____ _____ _____ _____ _____ _____		
၅.၄	ကာလသားရောဂါကုဆေးခန်း၊ ဆေးရုံများတွင် ခွဲခြားနိမ်ချ ဆက်ဆံခြင်းများ ရှိသည်ဟု ထင်ပါသလား။	၁။ ထင်ပါသည် ၂။ မထင်ပါ → ၅.၇ ၃။ မသိပါ → ၅.၇	☐	
၅.၅	မည်သည့်နေရာများတွင် ထိုကဲ့ သို့ ခွဲခြားနိမ်ချဆက်ဆံခြင်း များ ကို တွေ့ရှိနိုင်ပါသလဲ။ (အဖြေတစ်ခုထက် ပိုနိုင်ပါသည်)	၁။ တိုင်းရင်းဆေး ဆေးခန်း ၂။ အထွေထွေရောဂါကုဆေးခန်း ၃။ အစိုးရဆေးခန်း/ ဆေးရုံ ၄။ NGO ဆေးခန်း ၅။ ခုခံကျ/ကာလသား အဖွဲ့ဆေးခန်း ၆။ အခြား _____	၁ ၂ ၃ ၄ ၅ ၆	
၅.၆	အဆိုပါ နေရာများတွင် မည်ကဲ့ သို့သော ခွဲခြားနိမ်ချဆက် ဆံ ခြင်းမျိုး ရှိနေသည် ဟု ထင်ပါသလဲ။	၁။ ကာလသားရောဂါနှင့်ဆက်စပ်ပြီး ၂။ လိင်တူချစ်သူနှင့် ဆက်စပ်ပြီး	☐	

စဉ်	မေးခွန်းများ	အဖြေများ	ကုဒ်	ကျော်ရန်
၅.၇	သင့်တွင် ကာလသားရောဂါဖြစ် ခဲ့ပါက ကျန်းမာရေးဝန်ထမ်း ထံသို့ သွားရောက်ရန် ငွေရေး ကြေးရေးခက်ခဲမှုရှိသည်ဟု ထင်ပါသလား။	၁။ ထင်ပါသည် ၂။ မထင်ပါ ၃။ မသိပါ	☐	
၅.၈	ကာလသားရောဂါပြသရန် ဆေးရုံ ဆေးခန်းသို့ သွားပြရန် အချိန်ရှိ သည်ဟု ထင်ပါသလား။	၁။ ထင်ပါသည် ၂။ မထင်ပါ ၃။ မသိပါ	☐	
၅.၉	ကာလသားရောဂါ မည်သည့်နေရာတွင် ပြသရမည်ကို သိပါသလား။	၁။ သိပါသည် ၂။ မသိပါ	☐	
၅.၁၀	သင့်နေအိမ်နှင့် ကာလသား ရောဂါအတွက် တိုင်ပင်ပြသ ရမည့် ဆေးခန်းနှင့် အကွာအဝေး မည်သို့ရှိပါသလဲ။	၁။ နီးသည် ၂။ သိပ်မဝေးပါ ၃။ ဝေးသည် ၄။ အလွန်ဝေးသည်။	☐	
၅.၁၁	ကာလသားရောဂါအတွက် တိုင်ပင်ပြသရမည့် ဆေးခန်းသို့ သွားရောက်ရန် သယ်ယူပို့ ဆောင်ရေးအခက်အခဲရှိပါ သလား	၁။ ရှိသည် ၂။ မရှိပါ	☐	
၅.၁၂	ဆေးခန်းနှင့် သင်နေထိုင်ရာ အကြား သွားရောက်ရာတွင် မည်မျှကြာပါသလဲ။	၁။ သိပ်မကြာပါ ၂။ ရောက်ဖို့ကြာသည် ၃။ ရောက်ဖို့အရမ်းကြာသည်	☐	
၅.၁၃	ဆေးခန်းတွင် စောင့်ရသည့် အချိန် မည်မျှကြာပါသလဲ။	၁။ သိပ်မကြာပါ ၂။ ကြာသည် ၃။ အရမ်းအကြာကြီး စောင့်ရသည်	☐	
၅.၁၄	ကာလသားရောဂါတိုင်ပင်ပြသ နေစဉ် ကျန်းမာရေးဝန်ထမ်းများ က ရင်းရင်းနှီးနှီး ခင်ခင်မင်မင် ပြောဆို ဆက်ဆံပါသလား။	၁။ ဆက်ဆံပါသည် ၂။ မဆက်ဆံပါ	☐	
၅.၁၅	သင့်အနီးအနားတွင်ရှိသော အမျိုးသားချင်း လိင်ဆက်ဆံသူတစ်ဦးဦးတွင် ကာလသားရောဂါရှိပါက မည်သည့်နည်း/မည်သူ့ထံတွင် ဆေးကုသမှုခံယူပါသနည်း။	၁။ ကုသမှုမယူဘဲ စောင့်ကြည့်မည်။ ၂။ ကိုယ့်ဘာသာ ဆေးမြီးတိုဖြင့် ကုမည်။ ၃။ သူငယ်ချင်းများကို မေးမည်။ ၄။ စပ်ဆေးဆိုင်မှ ဆေးဝယ်သောက် မည် ၅။ ရမ်းကုဖြင့်ကုမည် ၆။ မြန်မာဆေးဆရာဖြင့် ကုမည်။ ၇။ လူမှုကွန်ရက်/ ဖုန်း အက်ပလီကေး ရှင်းတွင် စာတိုပို့ပြီး မေးမြန်းမည် ၈။ ဖုန်းခေါ်ဆိုမေးမြန်းဝန်ဆောင်မှုကို ဖုန်းခေါ်မေးမြန်းမည် ၉။ ဆေးပညာရှင် တစ်ဦးဦးနှင့် ကုသမည် ၁၀။ အခြား _____	၁ ၂ ၃ ၄ ၅ ၆ ၇ ၈ ၉ ၁၀	

Annex (2) Questionnaire (English)

Questionnaire for Health Seeking Behaviour in relation to Sexually Transmitted Diseases among Men who Have Sex with Men in Yangon, Myanmar

Section (1) Socio-demographic Characteristics

No	Questions	Answers	Code	Skip	Marks
1.1	Age in completed years	__ __ years			
1.2	Race/ethnicity	1. Bamar 2. Other ----------	1 2		
1.3	Religion	1. Buddhist 2. Christian 3. Hindu 4. Islam 5. Other ----------	1 2 3 4 5		
1.4	Educational status	1. Illiterate 2. Read and write 3. Primary 4. Middle 5. High School 6. University 7. Graduate	1 2 3 4 5 6 7		

No	Questions	Answers	Code	Skip	Marks
1.5	Current occupation	1. Dependent	1		
		2. Student 3. Beautician 4. Entertainment worker 5. Nat-kadaw 6. Prostitute/offer 7. Government employee 8. Private employee 9. Merchant/ seller/ trader 10. Odd jobs 11. Others	2 3 4 5 6 7 8 9 10 11		
1.6	Monthly individual income	_____0,000 MMK			
1.7	Marital status (take the legal marital status.)	1. Married 2. Separated 3. Divorced 4. Widowed 5. Single	1 2 3 4 5		
1.8	Currently living with (choose the	1. Living alone 2. With wife 3. With male sexual partner 4. With parents/ relatives	1 2 3 4		

No	Questions	Answers	Code	Skip	Marks
		5. With friends (no sexual partner) 6. other	5 6		
1.9	Which category of MSM do you think you are in?	1. Apwint 2. Apone 3. Tha-nge	☐		
1.10	Do you have a mobile phone?	1. Yes 2. No	☐	▶2.1	
1.11	Which type of mobile phone do you have?	1. Touch screen type (Android/Apple) 2. Key-pad phone	☐		

Section (2) Knowledge about STD

No	Questions	Answers	Code	Skip	Marks
2.1	Please state the names of STD you might know. (Probing is not allowed; multiple response; **circle the response items**)	1. Gonorrhoea 2. Chlamydial infection (NGU) 3. Syphilis (chancre) 4. Chancroid 5. Lymphogranuloma venereum (Bin) 6. HIV/AIDS 7. Genital herpes 8. Genital warts			

No	Questions	Answers		Code	Skip	Marks
		9. Public lice 10. Others				
2.2	What is the source of information for your knowledge on these STD you know? **(Applies to all valid responses; Probe the items; circle the items that respondent says "yes".)**	1. Printed media (books, magazines or journals) 2. Film/ video 3. Television 4. Radio 5. Social network sites (Facebook, Twitter, etc.) or gay dating sites (Grindr, Blued, etc.) 6. Websites 7. Mobile applications (Mate, 4smartyouth, OnDoctor, etc.) 8. 7887 Call Centre, Doctor On Call 9. Seeing billboard 10. Health Staff 11. Friends/ parents/ relatives 12. other _____	1. Yes 2. No			
2.3	Please state the important modes	1. Lack of personal hygiene				
No	Questions	Answers		**Code**	Skip	**Marks**
	of transmission of STD/HIV? (The correct and incorrect items are randomized in the list; **probe the**	2. Heterosexual intercourse 3. Homosexual intercourse 4. Unsafe (unsterile) use of needles or injections 5. Transfusion of unsafe blood 6. Mosquito bite				

	items; circle the items; the respondents say "yes")	7. Infected blood into other people in some way 8. From pregnant mother to her baby 9. Intact skin to skin contact with infected person 10. Other			
2.4	Which sexual encounter, homosexual or heterosexual, has more risk for HIV transmission?	1. The same 2. Homosexual 3. Heterosexual 4. Don't know	☐		☐
2.5	Can you describe any symptoms of STDs in men? **(Don't probe; circle the items the respondent mentions)**	1. Burning pain on urination 2. Urethral/ anal discharge 3. Genital/ anal ulceration/sore 4. Genital blisters 5. Genital warts/ growth 6. Genital/ inguinal swelling	☐		☐

No	Questions	Answers	Code	Skip	Marks
	(providing the zero scoring for the respondents not mentioning any symptom.)	7. anal or penile itchiness 8. Other			
2.6	Do you think that many STD may be asymptomatic?	1. Yes 2. No 3. Don't know			
2.7	Do you think that STD is preventable?	1. Yes 2. No 3. Don't know			
2.8	What are the ways to prevent STD? (The correct and incorrect items are randomized in the list; **probe the items; circle the items the respondent says "yes"**)	1. Abstinence from heterosexual act 2. Practicing homosexual act 3. zero grazing 4. Only oral sex 5. Remedies before sex 6. Using condom 7. Taking penicillin/ antibiotics after sex 8. Using disposable 9. Blood screening before and after blood transfusion 10. other			