HANOI MEDICAL UNIVERSITY, VIET NAM
VIET NAM INTERNATIONAL TECHNOLOGY TRANSFER CENTER

TRAINING NEEDS ASSESSMENT

Substance Use Disorder Prevention and Care in Vietnam

Vietnam, 2022

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LIST OF ABBREVIATIONS

ATS	Amphetamine type stimulant
CDC	Center for Disease Control and Prevention
DOLISA	Department of Labor, Invalids, and Social Affair
ITTC	International Technology Transfer Center
MMT	Methadone maintenance treatment
MOLISA	Ministry of Labor, Invalids and Social Affairs
SAMHSA	Substance Abuse and Mental Health Services Administration
SUDs	Substance use disorders
UNODC	United Nations Office on Drugs and Crime

SUMMARY

The Vietnam International Technology Transfer Center (V-ITTC) works closely with university partners, and domestic and international experts to implement evidence-based addiction treatment and prevention, recovery-oriented practices and services, and improving the capacity of health care professionals in the field of addiction treatment. Our commitment toward a better community and society is to improve the physical and mental health of people with substance use disorders (SUDs).

With the aim of providing background information about the drug scene and training needs of staff working in the addiction treatment field, a study has been conducted with three components: desk review, training needs assessment and survey of national trainers in 2021 in Vietnam. Below are the main findings of this study.

Drug use situation in Vietnam

- The use of opioid has decreased recently, now opioid use is mainly concentrated in a few groups of patients receiving opioid substitution treatment and drug users with a history of opiate use.
- The situation of synthetic drug use and abuse, especially amphetamine-type stimulants use, tends to increase in high-risk groups such as homosexual groups and people retaining in opioid substitution treatment.

Training needs in addiction treatment

- There are differences in characteristics and training needs of staff from different treatment systems
- Staff working in the private establishments has significantly higher level of training needs than those working in the organizations under CDC and DOLISA management.
- There are 3 training contents that are most interested by all agencies, namely addiction and addiction treatment, addiction counseling and

prevention, and administrative management of addiction treatment programs.

- For addiction and addiction treatment training topics, the synthetic drugs (81.3%) and the treatment method for ATS use disorders (77.3%) are of interest , followed by opioid addiction treatment, and overviews of substance and substance addiction.
- In terms of the topics in addiction treatment counseling and prevention, staff prefer them to focus on knowledge and skills related to basic counseling, motivational interviewing, rehabilitation and community reintegration, and craving coping skills.
- Regarding the administration and program management topics, the training contents that staff are interested in are those focusing on addiction treatment program management and ethical issues in addiction treatment.

Training forms and methods:

- All staff prefer to participate in the training courses hosted at their workplace or in online training workshops.
- Preferred training methods are topic-intensive courses, evidence-based courses, and hands-on courses.

Challenges in training participation

- The budget does not allow most staff to attend training courses when necessary (65%)
- Work overload negatively affects the motivation to participate in training courses (63.3%)
- Too little reward to change the current established treatment or procedure (52.0%)
- Recent training topics are too limited (49.5%)

Based on the characteristics of the substance use situation and training needs, training courses with certifications and lectures should continuously be provided to staff working in the field of substance addiction, especially those working in private rehabilitation centers. Training topics on evidence-based treatment of amphetamine-type stimulants use disorders should be prioritized in the context of increasing use of this group of substances and given the current capacity of the Vietnamese addiction treatment system that focuses mainly on opioids. At the same time, financial support is needed to ensure that the training activity can meet the training needs of staff working in the substance abuse intervention.

I. INTRODUCTION

With a long history of poppy cultivation, as well as its proximity to the Golden Triangle area, Vietnam cannot avoid being affected by drugs - opium and opioids are the most widely used and long-lasting addictive substances. Heroin appeared in Vietnam in the mid-1990s and became the mainstream type of drug. In addition to the outbreak of heroin use and injection, which led to the HIV/AIDS epidemic in the early 2000s, there is an increase in the use of synthetic drugs, and this raises an urgent need to have effective interventions to reduce the harmful effects of injecting drug use and HIV infection.

In response to the syndemic of heroin use and HIV infection, many harm reduction programs on needle exchange, HIV treatment, and opioid addiction treatment have been implemented in Vietnam. The methadone substitution treatment program has been piloted in Hai Phong and Ho Chi Minh City since 2008. Currently, the program has been launched in 335 treatment facilities in 63 provinces and cities in Vietnam that provide treatment for 52,200 methadone patients and 578 buprenorphine patients[1]. The number of patients adhering to treatment reached 65% as set out by the Government under Decision No. 1008/QD-Ttg (2014). Opium addiction treatment and intervention programs have been proven to be effective in reducing crime rates, improving jobs, reducing substance use rates among high-risk groups, and lowering the new HIV infection rate among drug injecting users from 71% in 1998 to 32% in 2010[2]. Substance addiction treatment and intervention programs in Vietnam currently focus mainly on opioid addiction treatment models such as methadone or buprenorphine substitution treatment. The treatment facilities include specialized opioid substitution treatment facilities and drug-dispensing facilities under the primary health care systems such as health stations of the commune or district.

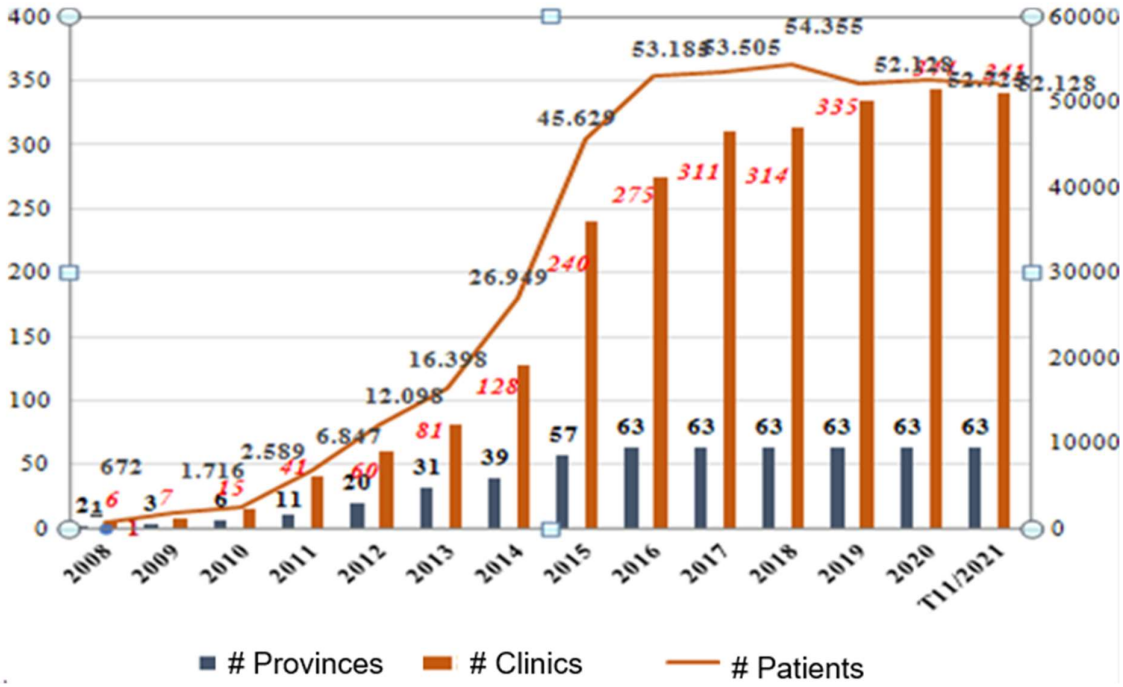

Figure 1. The development of national MMT program as of 11/2021

(Source: Vietnam Authority of AIDS Control)

In the context of the outbreak of synthetic drug use, the Ministry of Health issued the "Guidelines for the diagnosis and treatment of common mental disorders caused by the use of Amphetamine-type stimulants (ATS)" (Decision No. 3556/QD-BYT, 2014), and the "Amphetamine-type Stimulants Abuse Intervention Guidelines" (Decision No. 786/QD-BYT, 2019), to provide detailed guidance on ATS abuse interventions for employees and staffs who worked in the addiction treatment field. However, most health facilities that provide drug use interventions lack the capacity to provide treatments of psychotic disorders due to the use of amphetamine-type substances.

Adapting to the requirement of expanding substance addiction treatment services and maximizing the national coverage of these services, Vietnam has been active in providing training in substance addiction treatment for medical staff addiction treatment. There has been hundreds of training sessions provided by the Technology Transfer Center for Substance Abuse Treatment at Hanoi

Medical University since the establishment of this center in 2011 with the support of the U.S. Substance Abuse and Mental Health Services Administration (SAMHSA).

The objective of this report is to assess the training needs of staff working in the field of addiction treatment and to identify training challenges in planning and designing appropriate training programs in Vietnam.

II. METHODS

2.1 Study design, data sources and participants

This report has three components:

1) Desk review of substance use epidemic
2) Survey the training needs of staff working in the field of addiction treatment in 7 provinces and cities in Vietnam.
3) Survey the training needs of a group of national trainers

Desk review of substance use epidemic

The data used in this part are mostly from peer-reviewed journal articles and reports provided by the Vietnam Administration of HIV/AIDS Control. We extracted the articles from two main research engines - PubMed and Google Scholar. The total 27 articles were extracted from the databases. We only choose the articles published from 2015 to present for inclusion in this report.

Survey of training needs of staff working at substance addiction treatment facilities

A cross-sectional survey on the training needs of staff working in the field of substance addiction treatment was conducted from December 2021 to January 2022 in 7 provinces and cities in Vietnam including Dien Bien, Hanoi, Nghe An, Khanh Hoa, Ho Chi Minh, Long An, and Can Tho. These are the provinces with highest drug use and HIV prevalence in Vietnam.

The survey was conducted among all staff working at the methadone treatment facilities under the management of the Center for Disease Control and Prevention, and staff working at the drug addiction treatment centers under the management of the Department for Social Vices Prevention of the 7 provinces. In addition, a number of staff working in the field of drug addiction treatment from private and religious rehabilitation centers were also invited to complete the survey. The total number of staff that answered the survey is 841.

Survey of training needs of national trainers

An online survey was conducted of a group of national trainers to assess their academic background and training, and their priority training topics using UTC models.

2.2 Measures

The survey questionnaire, adapted from the survey questionnaires on training needs of Ukraine and some other countries, has two parts: personal information and training needs.

Part 1 collects socio-demographic characteristics and training processes related to substance addiction.

Part 2 collects information on training needs, including information on the level of use of certain knowledge and skills at work, training needs of staff by job position, organizational type, and the motivations and challenges for participation in training.

Regarding the information on knowledge and skills commonly used in addiction treatment and problems related to drug addiction/addiction treatment, the survey questionnaire provides 20 items to assess how often the respondent applies their knowledge and skills in practice on a 5-point scale: 0 - Never, 1 - Rarely, 2 - Sometimes, 3 - Often, and 4 - Very often. The average score of the

scale ranges from 0 to 4 and is calculated by adding up the total scores of 20 questions and then dividing by the average. The Cronbach's alpha coefficient of the scale is 0.96.

We divided the part on training needs into 4 main training topics including: (1) Topic on addiction and addiction treatment; (2) Topic on addiction counseling and prevention; (3) Topic on comorbid diseases and (4) Topic on administrative management and addiction program. Each topic will include many different contents; topic 1 includes 12 contents, topic 2 includes 20 content, topic 3 includes 12 contents and topic 4 includes 6 contents. We built a 5-point scale based on the contents of these topics: 0 – Never, 1 – Rarely, 2 – Sometimes, 3 – Often, and 4 – Very often. The average score of the scale ranges from 0 to 4 and is calculated by adding up the total scores of all statements and then dividing by the average. The Cronbach's alpha coefficient of 4 components of 4 topics ranged from 0.93 to 0.98.

2.3 Data analysis

The dataset of training needs assessment survey was downloaded from the KoboToolbox server in an excel file and then was imported to STATA 14.0 to manage and analyze. Univariate summary statistics, such as the means, rates, proportions, and standard errors will be reported as appropriate for all variables. Chi-square, ANOVA tests will be used to assess bivariate associations between the outcome and predictive variables. Significance for all analyses will be evaluated at p=0.05.

III. RESULTS FROM DESK REVIEW

3.1 Country profile

Vietnam is a country located in Southeast Asia, with an area of 331,212 km² and a population of around 97 340 000 people (2020). The socio-economic reforms since 1986 along with favorable economic cooperation conditions have helped Vietnam become a middle-income country in the world.

Social economic condition (up to 2015)

Total population (thousands)	97 340 (2020)
Population aged 15-49 (thousands)	65 592 (2019)
Life expectancy at birth (years)	75 (2020)
Under-5 mortality rate (per 1,000 live births)	21 (2020)
Human development index (HDI) - Rank/Value	0,693 (2019)
GDP per capita (PPP, current international $)	$2 800 (2020)
Per capita total expenditure on health (PPP int. $)	391 (2014)

(Source: Worldbank, 2021)

3.2 Substance use trends and patterns

3.2.1 Opioid use

Opioid drugs, particularly heroin, are the most common and widely used drugs in Vietnam. Heroin first appeared in Vietnam in the mid-1990s and at some periods, it was estimated that the number of people using heroin accounts for 85% of all drug users[1]. From 2008 until now, Vietnam has strongly implemented the opioid substitution treatment by using methadone and buprenorphine in 63 provinces and cities nationwide, which has contributed to reducing heroin use. To date, studies on heroin use and opium focused mainly on the group of drug users who enroll in the methadone maintenance treatment (MMT). However, a very small number of studies focus on the group of young people or the group of men who have sex with men (MSM).

A study of 584 adolescents aged 16-24 years old in Hanoi, Hai Phong and Ho Chi Minh City in 2018 found that 17.3% had used heroin within the past 3 months, of which 14,2% have ever injected heroin.[3] The prevalence rate of heroin use of adolescents in these three cities is lower than that of methadone patients. Studies in patients enrolling in MMT from 2015 onward showed that the rate of heroin use after 12 months of treatment ranged from 13,6% to 60%.[4,5] Regarding the group of patients enrolling in buprenorphine maintenance treatment, the rate of heroin use after 12 months of treatment shows a significant higher than that of methadone patients, ranged from 39,6%[6] to 58%.[5]

Table 1. Prevalence of opioid use across studies

Authors	Publication year	Sample size	Setting	Drug use prevalence
Tran et al[4]	2017	241 MMT patients	2 MMT clinics at Tuyen Quang	13, 6%

Authors	Publication year	Sample size	Setting	Drug use prevalence
Tran et al[7]	2019	300 MMT patients	6 MMT clinics at Dien Bien, Lai Chau and Yen Bai	16,5 % at 12 months in treatment
Korthuis et al[5]	2020	281 BUP/NAL and MMT patients	6 HIV clinics at Ha Noi, Thanh Hoa and Bac Giang	58% at 12 months in BUP/NAL treatment 60% at 12 months in MMT treatment
Michel et al[3]	2020	584 young people	Hai Phong, Ha Noi and Ho Chi Minh	17,3%
Giang el at[6]	2020	63 BUP patients	Điện Bien, Lai Chau and Sơn La	39,6% at 12 months in treatment
Giang et al[8]	2021	428 MMT patients	5 MMT clinics at Ha Noi	26,7% in the past 3 months

Due to the declining trend in opioid-type drug use in recent years, most research currently focuses on the group of patients who are undergoing opioid replacement therapy, and a little body of research focuses on the group of people who inject drugs in the community and young adolescents. Therefore, the average age of this group is often in the range between 30 and 50 years of age.[7,5] A similar study conducted by Feelemyer et al (2019) in Hai Phong in 2019 on 1336 injecting drug users showed that the average age of them was 39 years of age (SD = 9).[9] Little is known about opioid use among adolescents.

The drug users in the 30 - 50 age range have the average number of years of using the common opioid-type drugs of 5 years or more. Most of them inject heroin and live in urban areas and big cities and have an average duration of drug use ranging from 5 to 10 years.[11] Furthermore, among the group of methadone patients in the Northern mountainous areas, the average duration of drug use was shorter, ranging from 3 to 5 years.[10]

In summary, concurrent opioid use in Vietnam is common among patients/clients undergoing opioid substitution treatment with the prevalence rate ranging from 13.6% to 60%. The prevalence rate is higher among those living in urban areas than among those living in the Northern mountainous area. Nevertheless, there are no studies that focus on the trend of drug use among young adolescents and those who use drugs in the community.

3.2.2 Amphetamine type stimulants (ATS)

During a science conference on ATS in 2009, the Ministry of Labor, Invalids and Social Affairs (MOLISA) stated that ATS first appeared in Vietnam in the late 1990s, and by 2009 ATS was popular in all provinces and cities.[11] According to a report by the United Nations Office on Drugs and Crime (UNDOC) in 2012, methamphetamine tablet was the most commonly used ATS in Vietnam before 2008, but then crystal methamphetamine (ice) became more popular[11]. Ecstasy comes primarily as a tablet. Its main component is MDMA, and the size of an ecstasy tablet is slightly larger than that of a methamphetamine tablet. The ecstasy tablets are often mixed with caffeine and sometimes contain other substances such as ketamine and methamphetamine. The methamphetamine, ecstasy, and ketamine tablets are similar in shape, which means that it is difficult for substance users to know exactly which type of substance they are buying and using. Ecstasy is mainly distributed in big cities, especially Hanoi, Ho Chi Minh City, Hai Phong, and Quang Ninh.[11]

According to a report by the United Nations Office on Drugs and Crime (UNODC), methamphetamine and ecstasy have been the second and third most used substances in Vietnam since 2003, after heroin, with common slang terms include: ice, “thuoc lac”, queen pill, “ngoc dien”, yaba. The tendency to use these two substances also increased.[11]

In terms of age of first use: Based on the data on ATS use in the region, the average age to start using ATS is between 13 and 17 years of age. Although there

are cases who started using ATS under the age of 10 years, the majority of cases started using ATS in the early to late adolescence[11].

In terms of key populations: In Vietnam, data on ATS use is only available in a few specific groups, and there is no data to identify the status of ATS use in the general population. Specific vulnerable groups associated with ATS use include substance users (PWUDs), men who have sex with men (MSMs), sex workers (FSWs), drivers and workers, and bar people[11].

3.2.3 The use of ATS among substance users

The use of ATS among substance users tends to increase. In 1999, MOLISA reported that about 1% of substance users used ATS. In 2001, a survey conducted by MOLISA on substance users in Vietnam showed that 1.5% of the samples used ATS[11]. The prevalence rate of methamphetamine use among substance users has increased dramatically in recent years. Reports from 2017 until now show that this rate ranges between 3.3% and 51% (Table 1). In Vietnam, the increase of methamphetamine use is not only among young substance users in major cities, but also among those in industrialized areas, villages, and in the community[12] (UNODC 2017). However, the present studies are mainly conducted in the largest cities of Vietnam such as Hanoi, Ho Chi Minh City, Hai Phong, and Nam Dinh. In particular, the research in Hai Phong accounts for the majority because it is the largest port city in the north of Vietnam with a large number of people who inject substances (about 10,000 people) and a very high HIV infection rate among injecting substance users, which reached 68% in 2006[13].

Table 2. Prevalence of ATS use among substance users

Authors	Publication year	Sample size	Setting	Lifetime prevalence	Current prevalence
Feelemyer[14]	2018	1336	Hai Phong		51%
Michel[15]	2017	603	Hai Phong		24,4%*
Le[16]	2021	967	Ho Chi Minh city		25,4%*
Le[17]	2019	395	Nam Dinh	5,8%	
Riondel[18]	2020	1383	Hai Phong		48,8%

**Urine test*

Forms of use: Methamphetamine is used mainly by "sucking" through a cuvette or pipe (pipe)[19]. A small percentage of people reported having injecting methamphetamine at least once, ranging from 0.5 - 2%[14,15].

Studies have shown that methamphetamine use is associated with risky sexual behaviors among HIV-infected injecting substance users[14].

3.2.4 The use of ATS among groups of sexual minorities

People who identify themselves as lesbian, gay, bisexual, transgender, or queer (LGBTQ) often face social stigma, discrimination, and other challenges that those in other group in society. As a result of these stressors and many others, gender minorities are at increased risk for various behavioral health problems. Studies to date found that gender minorities have higher rates of substance abuse and substance use disorders (SUDs) than those who identify as heterosexuals.[20] Most of the studies were conducted in big cities such as Hanoi, Hai Phong, Ho Chi Minh City, and some Southern provinces in Vietnam.

The average age of the participants in the studies is 24.1 years of age[21], 22 years of age[22], and 21 years of age.[23]

Table 3. Prevalence of methamphetamine use among MSM

Authors	Publication year	Sample size	Setting	Lifetime prevalence	Current prevalence
Yu[24]	2015	710	Hanoi, Ho Chi Minh city, Nha Trang	32,7%	16,9%
Nguyen[22]	2016	2768	Southern Vietnam	6,6%	
Vu[21]	2017	622	Hanoi, Ho Chi Minh city	30,4%	20,3%
Michel[23]	2020	703	Hanoi, Hai Phong, Ho Chi Minh city	77%	
Hoang[25]	2021	1893	Hanoi	75,6%	
SVHATTC[26]	2021	1000	Ho Chi Minh city and its 3 neighboring provinces		50,5%

Frequency of use: Michel (2020) and Hoang (2021) found that the majority of MSM used methamphetamine infrequently (less than once per week)[23,25]. Moderate and high levels of ATS use were reported to be above 95%, according to a report in 2021.[26].

Table 4. Frequency of methamphetamine use in some studies

Frequency of use	Prevalence
Less than once a week	27,2 – 59,1
Once a week to several times a week	8,7 - 35,8
Everyday	16,8

In summary, amphetamine-type stimulants use in Vietnam is common among people who use drugs (24.4% to 51%), MSM population (16.9% to 50.5%). Most of the studies were conducted focus on young people living in big cities such as Hanoi, Hai Phong, Ho Chi Minh City, and some Southern provinces in Vietnam.

3.3 Conclusions

Research on substance use in Vietnam mostly focuses on the two classes of substances: opioid-type drugs and amphetamine-type substances (ATS).

Opioid use has mainly been reported in patients undergoing opioid substitution treatment. The prevalence rate of opioid use in this group ranges from 13.6% to 60%. Also, patients from the urban areas appear to have a higher prevalence rate of opioid use than those from the northern mountainous areas.

Studies on ATS use focus mainly on MSM and drug users. The prevalence rate of methamphetamine use among drug users varied significantly from 3.3% to 51% . This rate among the MSM group was also quite similar, ranging from 16.9% to 50.5%. Studies on the use of synthetic drugs (i.e methamphetamine) focus on groups living in urban areas or large cities.

IV. RESULTS FROM SURVEY OF TRAINING NEEDS ASSESSMENT

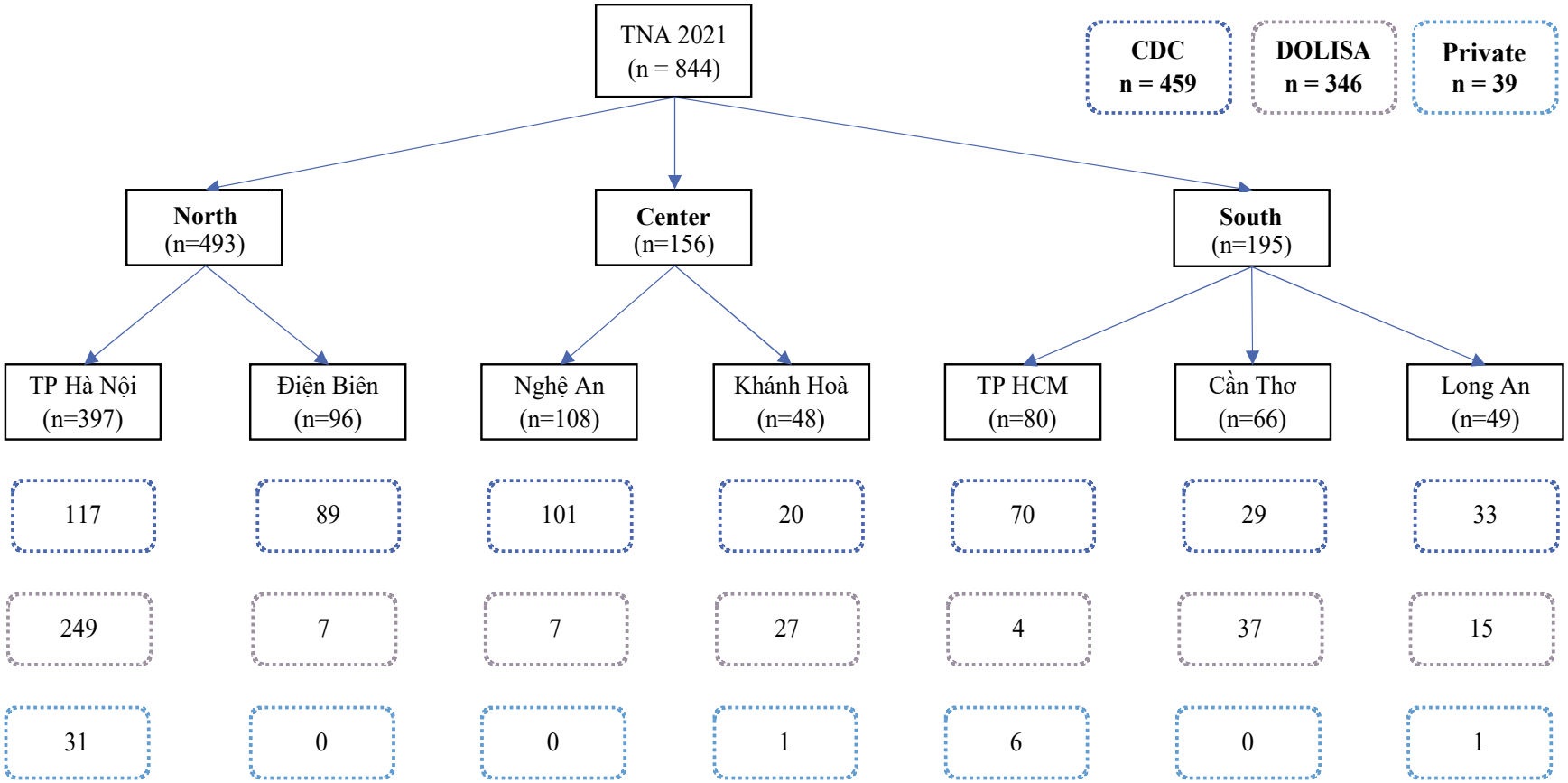

Figure 2. Sample size

The training needs assessment collected information on 844 staffs working in the field of substance addiction treatment and intervention in 7 cities and provinces. In which, the North has two provinces, Hanoi and Dien Bien, accounting for 58.4% of the sample size, the Central has two provinces, Khanh Hoa and Nghe An, accounting for 18.5% of the participants, and the South has 3 provinces, Ho Chi Minh city, Long An and Can Tho accounted for 23.1% of the total participants.

4.1 Demographic characteristics of respondents interviewed

Table 5. Demographic characteristics (N = 844)

	N (%)
# Participants devided by regions	
North	493 (58.4)
Central	156 (18.5)
South	195 (23.1)
# Participants devided by organizations	
Centre for Disease Control and Prevention	459 (54.4)
Department of Labor, Invalids and Social Affairs	346 (41.0)
Private (e.g. **Faith-based Association**s)	39 (4.6)
Gender[a]	
Male	463 (55.1)
Female	378 (44.9)
Age (Average)[c]	38.5 ± 7.3
< 30	73 (8.8)
30-40	489 (59.1)
> 40	266 (32.1)
Education and Formation[c]	
Under College	240 (28.6)
College	213 (25.4)
University	350 (41.7)
Postgraduate	36 (4.3)
Specialized training[c]	
Doctor	119 (14.5)
Medico	133 (16.2)
Pharmacy	147 (17.9)

	N (%)
Nurse	141 (17.2)
Public health	26 (3.2)
Psychology	12 (1.5)
Sociology	15 (1.8)
Social work	62 (7.6)
Finance	35 (4.3)
Law	47 (5.4)
Other(s)	129 (14.9)

a: Missing 1-3 values; b: Missing 4-5 values; c: Missing > 5 values

Of the 844 participants the survey, 54.4% are currently working in an addiction treatment facility managed by the Centers for Disease Control (CDC), and 41% are under the management of the Department of Labor, Invalids and Social Affairs (DOLISA) and 4.6% are private institutions such as churches and religious organizations. There are 44.9% are female, the average age is 38, mostly people in the 30-40 age group. About 45% have a university education or higher. Popular training majors are Doctor, Pharmacist, Nursing, and Social Work.

Taking a closer look at the characteristics of survey participants from different regulatory agencies, the results show that the CDC staff is 64.5% female. Meanwhile, in DOLISA and private agencies, the proportion of women accounts for 22.7% and 10.3%, respectively (Figure 3).

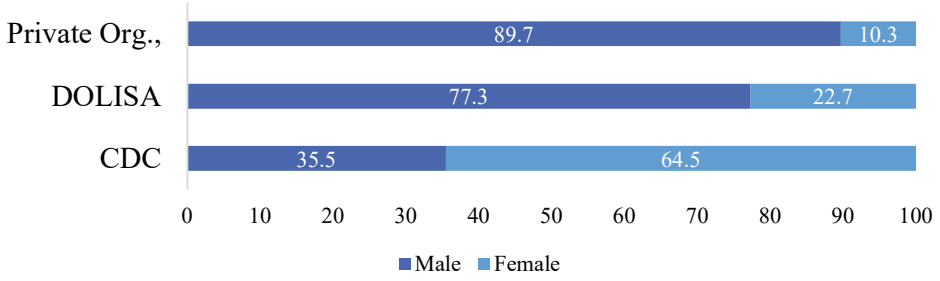

Figure 3. Gender proportion by organizations

The average age of survey respondents belonging to an agency managed by CDC is 37.2 years old, the staff is younger than that of DOLISA or privately managed agencies with an average age of 40 years (Figure. 4).

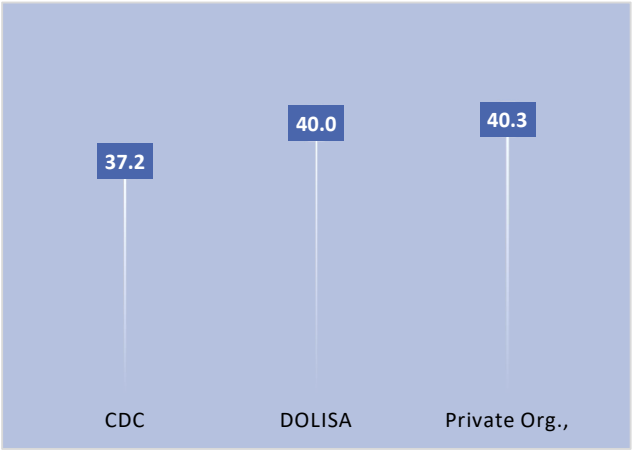

Figure 4. Average age by organizations

The distribution of the highest education level among the three regulatory agencies also showed a statistically significant difference ($p<0.001$). In general, CDC has staffs with relatively high education level, about 80% having college degree or higher, none of them have lower than intermediate level. At DOLISA, the percentage of college degree or higher accounts for about 60%, only a small percentage of less than 3% are below Intermediate level. At private organizations, the percentage of people with below-intermediate level of education accounts for nearly 50% (Figure 4).

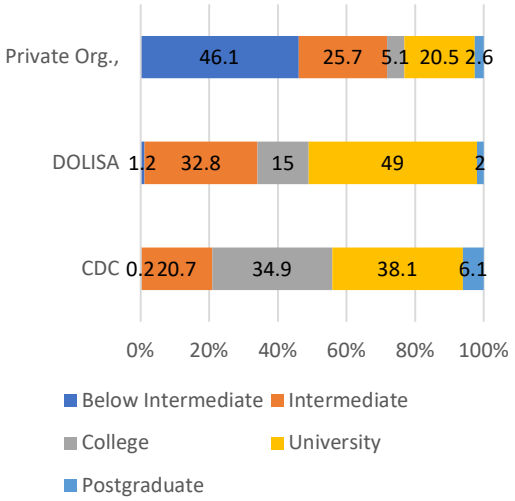

Figure 5. Distribution of the highest level of education according to the organisation

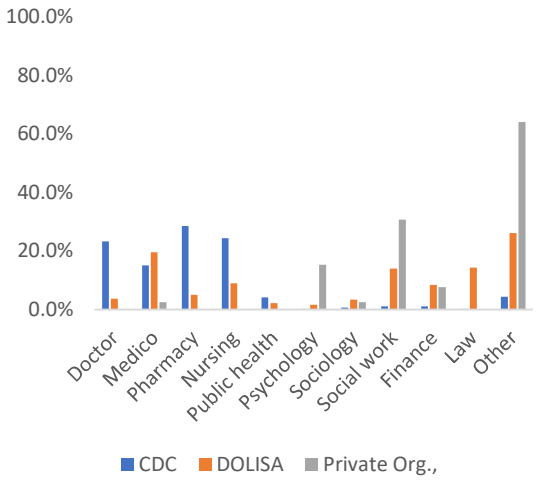

Figure 6. Distribution of the specialist according to the organisation

As for the distribution of the specialist, while DOLISA's staffs are quite diverse in training specialties, CDC is mainly Physicians, Pharmacy, Nursing and Public Health, private organization specializing in psychology, social work, and and others. (Figure 6)

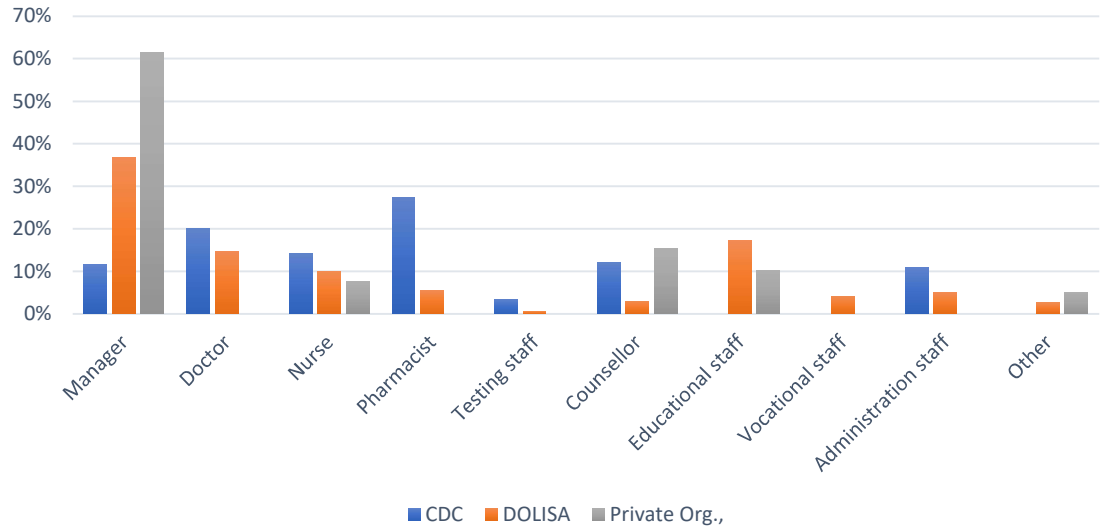

Figure 7. Distribution of the current working positions according to the organisation

Based on Figure 7 of the current working position, showing the staff structure of different management organization, CDC human resources include managers, doctors, Pharmacist/Drug-dispensing staffs/dispensers, nurses, testing staff, counselors, and administrative staffs. DOLISA has additional education and vocational staff, while the private agency has only administrators, nurses, counselors, and educational staff.

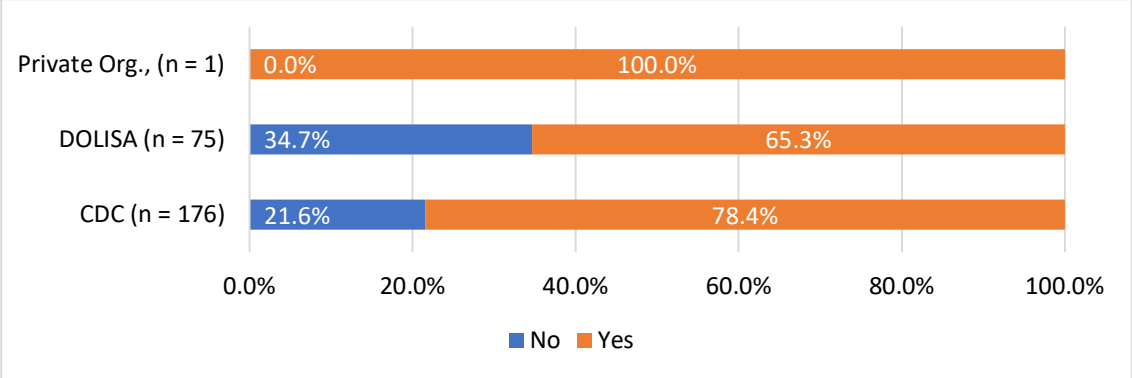

Figure 8. Proportion of doctors/physicians have practicing certificate

Among 176 physicians working in CDC sytem, 78.4% have a practicing certificate. This number is much higher compared to 65.3% among 75 doctors in DOLISA syterm.

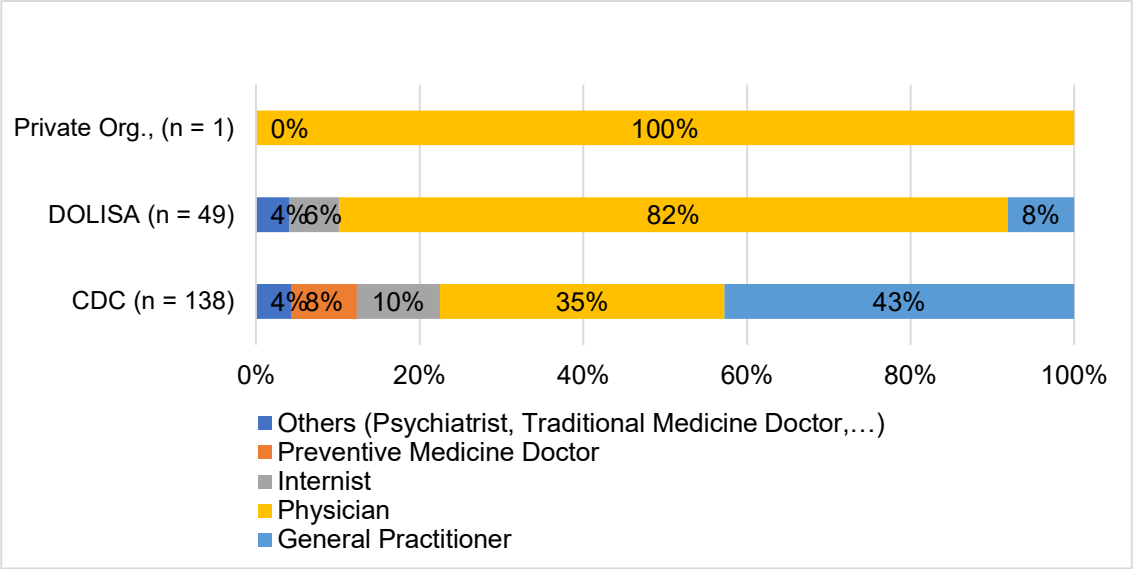

Figure 9. Scope of professional activities on practicing certificates

In terms of activity scopes, doctors of system have relatively diverse professional scopes while most of DOLISA doctors (82%) having certificates with physician type (i.e. lower level than general practitioner).

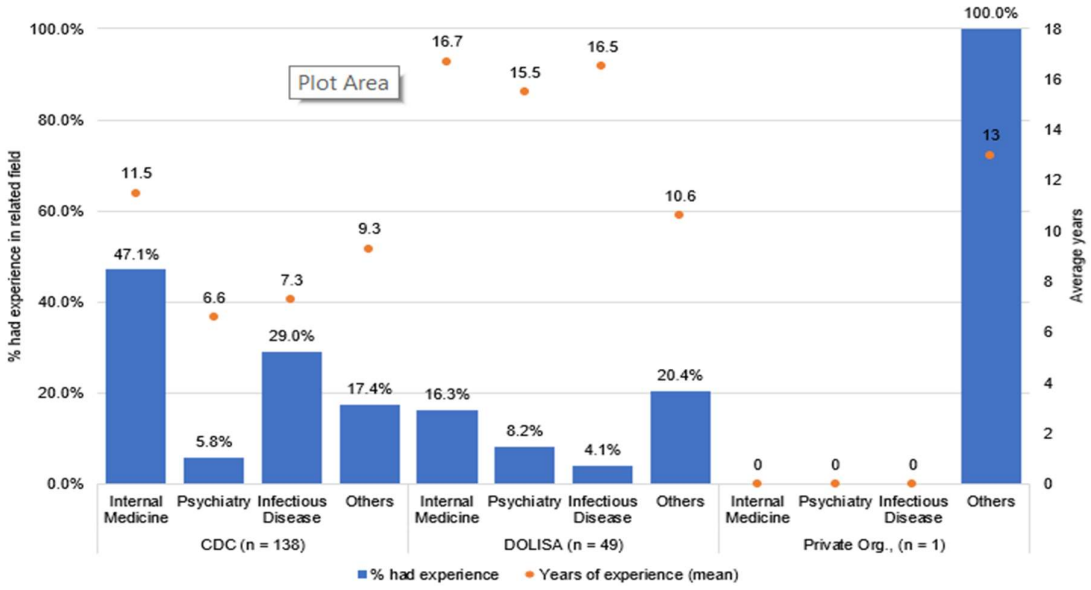

Figure 10. Experience of working in the related field

Regarding experiences of working in addiction-related fields (including internal medicine, psychiatry, infectious diseases and others), CDC staff having related

experiences are more common with 7 to 11 years of experiences. Fewer DOLISA staff have experience other than addiciton, however, with longer years of experiences (more than 15 years).

4.2 The situation of previous training and lectures

Table 6. Participation in certified training(s) in substance use treatment

	N (%)
Participation in certified training(s) in substance use treatment in the last 2 years	
No	454 (53.8)
Yes	390 (46.2)
Number of certified training(s) in substance use treatment in the last 2 years	**n = 311**
Mean	1.6 (1.2)
Type of the certified training course(s) participated	**n = 351**
Mandatory state professional improvement courses	148 (42.2)
Courses organized by your facility where you work	72 (20.5)
Private courses at your own expense	10 (2.8)
Participation in training projects of international organizations (paid or free)	39 (11.1)
Participation in training projects professional training centers/ universities (paid or free)	159 (45.3)
Other	12 (3.4)
Training courses on substance addiction treatment/intervention participated	**n = 388**
Methadone Maintenance Treatment – Basic Course	236 (60.8)
Methadone Maintenance Treatment – Advanced Course	107 (27.6)
Buprenorphine Maintenance Treatment	115 (11.2)
Diagnosis of Opioid-type drug addiction	125 (12.2)
Amphetamine-Type Stimulant Abuse Intervention (ATS)	121 (11.8)
Drug addiction treatment counseling	173 (16.9)
Co-morbidity mental disorders among substance abusers	54 (5.3)
Motivational Interviewing	78 (7.6)
Mindfulness Meditation	8 (0.8)
Other (specify)……	9 (0.9)

Among the respondents of the survey, 46.2% had received training in substance abuse certification within the last 2 years. In which, the number of certification training courses per participant in the last 2 years has been 1-2 courses (Table 6). By regulatory agency level, nearly 50% of staff at CDC and DOLISA have attended at least one certified substance abuse treatment training course in the last two years. Meanwhile, only about 7.7% of staff in the private sector have attended similar training courses (Figure 8).

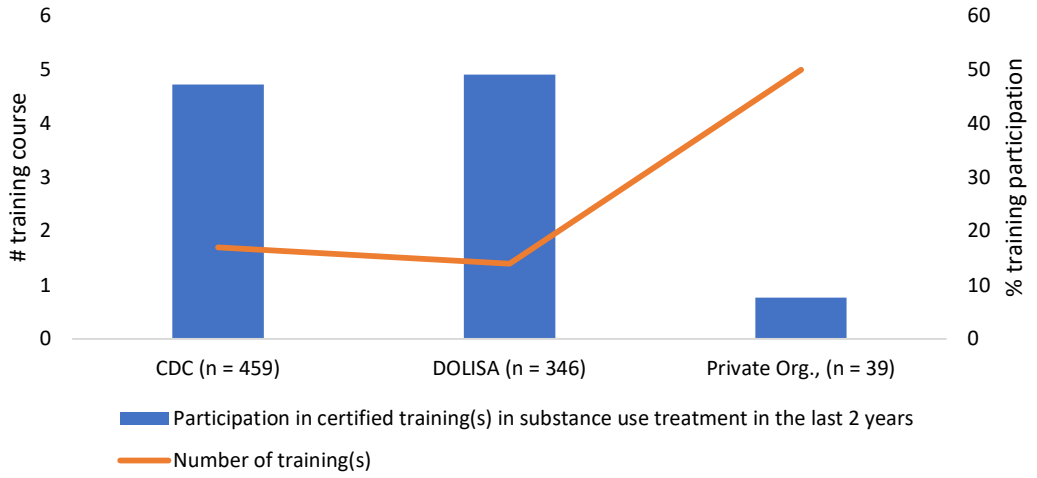

Figure 11. Participation in certified training(s) in substance use treatment by organization

Popular types of training courses:

(1) Participation in training projects professional training centers/ universities (paid or free) (45.3%);

(2) Mandatory state professional improvement courses (42.2%);

(3) Courses organized by your facility where you work (20.5%).

Popular training courses on substance addiction treatment/intervention:

(1) Methadone Maintenance Treatment – Basic Course (60.8%)

(2) Methadone Maintenance Treatment – Advanced Course (27.6%)

(3) Drug addiction treatment counseling (16.9%)

Besides training courses, lectures are also very important in the process of capacity building of staffs. Approximately 45% of survey respondents attended at least one lecture on substance abuse and addiction-related issues/addiction treatment within the last 2 years. Among them, on average, each person has attended about 6 lectures in the last 2 years.

Contrary to the rate of participation in certification training courses, CDC has the lowest attendance rate in lectures of the 3 regulatory agencies. The rate of participation in lectures at DOLISA and private agencies accounts for about 55-56% (Figure 9).

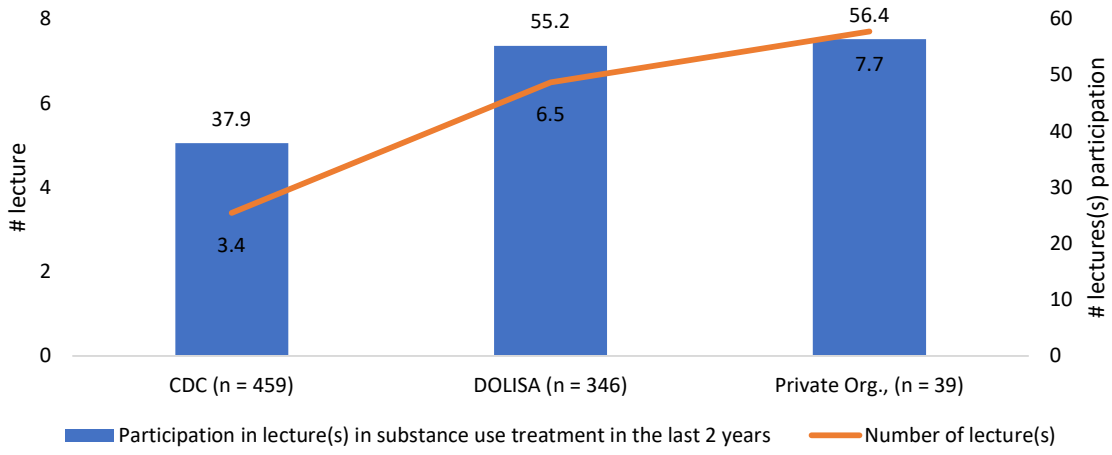

Figure 12. Participation in training courses on substance addiction treatment/intervention by organization

Popular lectures on substance addiction and addiction-related issues/treatment participated:

(1) Basic Knowledge on Amphetamine-type Stimulants (ATS) (60.5%)

(2) Mental Disorders among people who use ATS (33.9%)

(3) ASSIST Screening Test (31.8%)

(4) Cognitive-Behavioral Therapy for people who use methamphetamine (30.8%)

(5) Social Work on drug treatment (29.5%)

Table 7. Participation in lectures on substance addiction and addiction-related issues/treatment

	N (%)
Participation in lectures on substance addiction and addiction-related issues/treatment within the last 2 years	
No	457 (54.1)
Yes	387 (45.9)
Number of lectures on substance addiction and addiction-related issues/treatment within the last 2 years	**n = 292**
Mean	5.9 (12.6)
Lectures on substance addiction and addiction-related issues/treatment attended	**n = 380**
Basic Knowledge on Amphetamine-type Stimulants (ATS)	230 (60.5)
ASSIST Screening Test	121 (31.8)
Mental Disorders among people who use ATS	129 (33.9)
Cognitive-Behavioral Therapy for people who use methamphetamine	117 (30.8)
Social Work on drug treatment	112 (29.5)
Contingency Management (CM)	89 (23.4)
Introduction to the Matrix Model	88 (23.2)
HIV counseling and testing	84 (22.1)
Basic Knowledge about Hepatitis B and C	71 (18.7)
Harm reduction for people who use ATS	70 (18.4)
ARV counseling and treatment support	69 (18.2)
Adolescents with Substance Use Disorder	64 (16.8)
HIV Prevention with PrEP	53 (13.9)
First aid for drug overdose	52 (13.7)
Preventive Intervention of Tobacco Use for Adolescents	37 (9.7)
Other	31 (8.2)
Chemsex among men who have sex with men and trans-gender women	20 (5.3)

4.3 Frequently used knowledge and skills

The results of the analysis showed that the counselors and doctors applied the skills and knowledge of substance addiction to practical work the most with the average score of 2.7 (SD=0.7) and 2.7, respectively. 2.6 (SD=0.7). Other positions such as pharmacy/dispensing, nurse/nursing and testing have average scores ranging from 2.1 to 2.3 points.

Table 8. Knowledge and skills frequently applied by working positions

	Manager (n = 203)	Doctor (n = 142)	Nurse (n = 102)	Pharmacist/ Drug-dispensing staff (n = 145)	Laboratory technician (n = 18)	Counselor (n = 72)	Administrative staff (n = 67)	Other (n = 88)
Mean (SD)	1.8 (0.9)	2.6 (0.7)	2.2 (0.7)	2.3 (0.8)	2.1 (0.6)	2.7 (0.7)	2.4 (0.8)	1.9 (0.9)
Drug prevention regulation	62.1%	52.1%	40.2%	37.2%	16.7%	47.2%	49.2%	73.9%
Harm reduction (general knowledge)	46.8%	60.6%	51.0%	41.4%	38.9%	79.2%	53.7%	63.6%
Basic knowledge on HIV	53.2%	73.9%	64.7%	46.9%	55.6%	72.2%	50.7%	68.2%
Definition and mechanism of substance addiction	48.8%	67.6%	50.0%	45.5%	38.9%	75.0%	50.7%	61.4%
Diagnosis of addiction	41.9%	76.8%	52.9%	40.0%	44.4%	76.4%	47.8%	37.5%
Methods on drug addiction treatment	45.8%	75.4%	61.8%	44.8%	50.0%	76.4%	52.2%	56.8%
Emergency cases	27.1%	54.2%	35.3%	32.4%	11.1%	37.5%	31.3%	18.2%
Treatment addherence	44.8%	77.5%	69.6%	63.4%	66.7%	87.5%	68.7%	33.0%
Methadone Maintenance Treatment phases	22.7%	65.5%	52.0%	59.3%	50.0%	75.0%	65.7%	22.7%
Methadone Maintenance Treatment guidelines	25.6%	68.3%	52.0%	59.3%	55.6%	72.2%	67.2%	17.0%
Methadone pharmacology	18.7%	55.6%	30.4%	58.6%	27.8%	47.2%	35.8%	13.6%
Methadone side effects management	19.2%	59.9%	42.2%	63.4%	44.4%	70.8%	52.2%	15.9%

Methadone managing and dispensing technical procedure	20.2%	58.5%	35.3%	82.1%	38.9%	54.2%	44.8%	14.8%
Relapse prevention	44.8%	61.3%	45.1%	39.3%	33.3%	76.4%	50.7%	45.5%
Opioid withdrawal syndrome and intoxication syndrome	22.2%	62.7%	44.1%	42.1%	22.2%	59.7%	43.3%	18.2%
Opioid overdose prevetion	21.2%	55.6%	36.3%	42.8%	27.8%	63.9%	38.8%	18.2%
Multiple substances use management	24.1%	49.3%	33.3%	36.6%	22.2%	51.4%	34.3%	22.7%
Co-morbidity disorders	20.2%	54.9%	33.3%	31.7%	11.1%	54.2%	35.8%	25.0%
Counselling skills	65.0%	67.6%	50.0%	44.1%	44.4%	87.5%	56.7%	76.1%
Motivational interviewing	47.3%	54.2%	43.1%	36.6%	22.2%	84.7%	44.8%	53.4%

Counselors apply most of their knowledge and skills at work, with 12/20 of the content being answered by more than 70% of the counselors as necessary/necessary. The content and knowledge most applied by *doctors* include: (1) Treatment compliance (77.5%); (2) Diagnosis of addiction (76.8%); (3) Addiction treatments (75.4%) and (4) HIV knowledge basics (73.9%). These are also the 4 skills most applied by *nurse* and *laboratory staff*. For staff in *pharmacy/dispensing* positions, the content of technical procedures for dispensing and administering methadone and managing unwanted effects of methadone are the two most applied contents with high response rates. necessary/very necessary recovery was 82.1% and 63.4%, respectively.

4.4 Preferred training needs

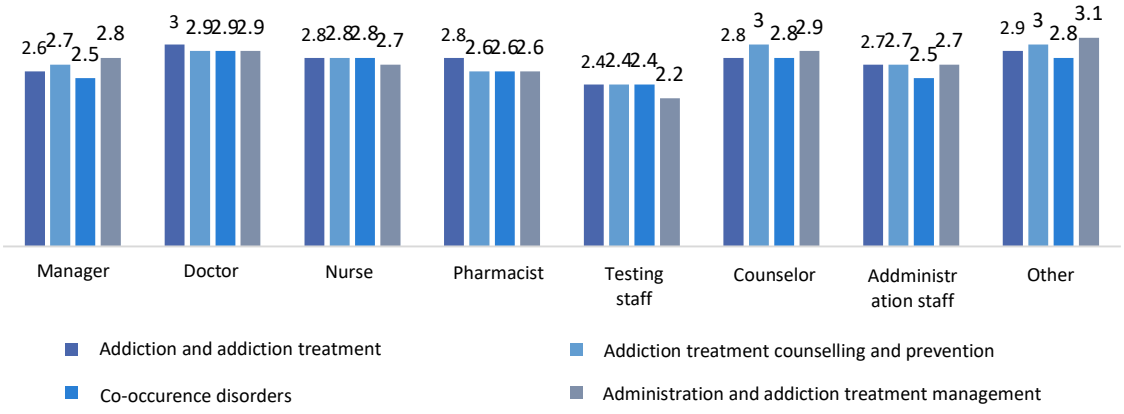

Figure 13. Training preferences on generalized topics among groups of specialists (Average score)

The results of the analysis show that the training needs are different at different positions (Figure 10), while doctors and Pharmacist/Drug-dispensing staffs/dispensers are more concerned with addiction and addiction treatment, the other staffs. Nurses and laboratory staff are equally interested in all 3 topics of addiction treatment, addiction treatment counseling and prevention, and co-occurring pathology. However, in general, the average score of training needs in all four topics is higher than that of doctors and counselors.

In terms of regulatory agencies, privately managed facilities have significantly higher training needs than CDC and DOLISA agencies. The topic of addiction treatment, addiction treatment counseling and prevention, and the topic related to the administration-management of addiction treatment programs are the 3 topics of most interest to all 3 management agencies. (Figure 11).

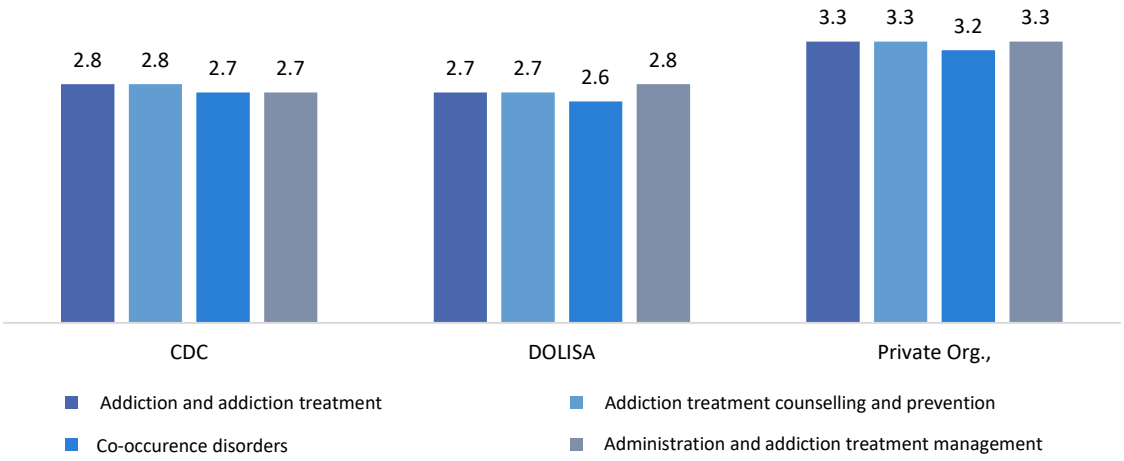

Figure 14. Training preferences on generalized topics among 3 types of organizations (Average score)

Some of the most interested topics:

1. Addiction and addiction treatment:
    - New amphetamine-type stimulants (81.3%)
    - Opioid addiction treatment (78.9%)
    - General knowledge of addiction: mechanism, diagnosis, substance abuse treatment (77.6%)
    - Treatment of substance use disorders related to amphetamine use (77.2%)
    - General knowledge of substances (75.9%)
2. Addiction treatment counselling and prevention
    - Basic counselling skills (77.7%)

- Motivational interviewing (73.9%)
- Rehabilitation and social reintegration (73.9%)
- Craving coping skills (73.9%)
- Harm reduction interventions (73.3%)

3. Co-occurring disorders

- Strategies to reduce SUD stigma and HIV/AIDS (70.4%)
- HIV testing counseling (67.4%)
- Mental health disorders intervention (66.9%)
- HIV screening (66.7%)
- Suicide management and prevention (66.3%)

4. Administration and addiction treatment prevention

- Management skills (74.5%)
- Ethics in addiction treatment (74.5%)

Table 9.Training needs topics on addiction and addiction treatment by work positions

	Manager (n = 203)	Doctor (n = 142)	Nurse (n = 102)	Pharmacist/Drug-dispensing staff (n = 145)	Laboratory technician (n = 18)	Counselor (n = 72)	Admin staff (n = 67)	Other (n = 88)
Addiction and addiction treatment								
Opioid addiction treatment	70.0%	85.9%	85.3%	77.9%	50.0%	86.1%	77.6%	85.2%
Treatment of substance use disorders related to amphetamine use	73.4%	85.9%	84.3%	71.7%	50.0%	80.6%	64.2%	87.5%
Alcohol addiction treatment	44.8%	68.3%	58.8%	54.5%	50.0%	66.7%	50.7%	47.7%
Smoking addiction treatment	42.9%	70.4%	54.9%	51.7%	44.4%	66.7%	47.8%	50.0%
Vaping addiction treatment	36.5%	63.4%	48.0%	53.8%	44.4%	63.9%	40.3%	48.9%
Marijuana addiction treatment	59.6%	76.8%	72.5%	60.7%	50.0%	68.1%	58.2%	81.8%
Addiction treatment in special population (pregnant women, adolescents, LGBT, …)	46.3%	73.2%	73.5%	64.1%	55.6%	68.1%	52.2%	79.5%
General knowledge of substances	71.9%	78.9%	81.4%	71.7%	55.6%	76.4%	73.1%	88.6%
New amphetamine-type stimulants	81.8%	83.8%	83.3%	75.2%	61.1%	84.7%	74.6%	88.6%
General knowledge of addiction: mechanism, diagnosis, substance abuse treatment	74.4%	82.4%	80.4%	75.2%	50.0%	80.6%	65.7%	92.0%
General knowledge of non-medication assisted therapy in addiction treatment	69.5%	81.0%	75.5%	73.1%	50.0%	81.9%	62.7%	86.4%
General knowledge of medication assisted therapy in addiction treatment	69.5%	81.7%	79.4%	77.2%	44.4%	75.0%	59.7%	85.2%

Table 10.Training needs topics on addiction treatment counselling and prevention by work positions

	Manager (n = 203)	Doctor (n = 142)	Nurse (n = 102)	Pharmacist/Drug-dispensing staff (n = 145)	Laboratory technician (n = 18)	Counselor (n = 72)	Admin staff (n = 67)	Other (n = 88)
Addiction treatment counselling and prevention								
Basic counselling skills	72.4%	78.2%	81.4%	69.7%	61.1%	88.9%	77.6%	92.0%
Motivational interviewing	71.4%	72.5%	76.5%	60.0%	50.0%	90.3%	70.1%	94.3%
Cognitive behavior therapy	68.5%	74.6%	73.5%	61.4%	50.0%	86.1%	61.2%	89.8%
Screening, Brief Intervention, and Referral to Treatment (SBIRT)	49.8%	73.2%	69.6%	58.6%	50.0%	76.4%	56.7%	75.0%
Training of social and working skills	71.9%	76.1%	71.6%	64.8%	61.1%	84.7%	64.2%	86.4%
Relapse prevention	71.9%	78.9%	74.5%	64.1%	50.0%	84.7%	64.2%	84.1%
Rehabilitation and social reintegration	73.4%	76.8%	71.6%	65.5%	55.6%	83.3%	62.7%	90.9%
Group therapy	65.5%	67.6%	66.7%	57.2%	44.4%	79.2%	59.7%	83.0%
Family therapy	62.6%	69.0%	63.7%	57.9%	38.9%	76.4%	56.7%	83.0%
Matrix model	52.2%	62.7%	64.7%	45.5%	38.9%	69.4%	52.2%	68.2%
12-step program	56.7%	69.7%	68.6%	53.1%	33.3%	73.6%	53.7%	71.6%
Substance use prevention in society, school and family	52.7%	74.6%	73.5%	59.3%	44.4%	77.8%	55.2%	71.6%
Community-based interventions	56.7%	74.6%	70.6%	57.9%	50.0%	77.8%	58.2%	72.7%
Craving coping skills	71.9%	77.5%	78.4%	62.8%	61.1%	86.1%	64.2%	87.5%
Harm reduction interventions	71.4%	76.8%	78.4%	62.1%	50.0%	84.7%	65.7%	86.4%
Contingency management	73.9%	73.2%	78.4%	59.3%	50.0%	81.9%	59.7%	77.3%
Faith-based rehabilitation	38.9%	68.3%	52.0%	45.5%	44.4%	66.7%	44.8%	50.0%
Working therapy	72.9%	74.6%	68.6%	52.4%	38.9%	72.2%	55.2%	86.4%
Case managent	64.0%	71.8%	69.6%	49.7%	38.9%	73.6%	52.2%	79.5%
Drug overdose prevention	54.7%	78.9%	75.5%	68.3%	55.6%	79.2%	65.7%	71.6%

Table 11.Training needs topics on co-occurring disorders by work positions

	Manager (n = 203)	Doctor (n = 142)	Nurse (n = 102)	Pharmacist/Drug-dispensing staff (n = 145)	Laboratory technician (n = 18)	Counselor (n = 72)	Admin staff (n = 67)	Other (n = 88)
Co-occurring disorders								
Mental health disorders screening	58.1%	80.3%	72.5%	57.9%	50.0%	75.0%	58.2%	69.3%
Mental health disorders intervention	60.6%	78.2%	73.5%	58.6%	44.4%	77.8%	56.7%	75.0%
Stress management	65.0%	75.4%	69.6%	57.9%	38.9%	73.6%	58.2%	67.0%
Suicide management and prevention	63.5%	73.9%	73.5%	57.9%	50.0%	76.4%	49.3%	75.0%
Strategies to reduce SUD stigma and HIV/AIDS	60.6%	75.4%	73.5%	67.6%	50.0%	83.3%	65.7%	80.7%
Negative childhood experiences	42.4%	63.4%	50.0%	45.5%	44.4%	65.3%	40.3%	59.1%
Adolescent brain development	47.8%	66.9%	63.7%	55.2%	50.0%	68.1%	49.3%	68.2%
HIV screening	53.2%	74.6%	75.5%	64.1%	72.2%	72.2%	61.2%	79.5%
HIV testing counseling	57.1%	76.1%	74.5%	61.4%	72.2%	75.0%	59.7%	79.5%
General knowledge of ART	55.2%	68.3%	66.7%	59.3%	44.4%	65.3%	52.2%	75.0%
Tuberculosis treatment	58.1%	72.5%	70.6%	59.3%	55.6%	69.4%	56.7%	64.8%
Hepatitis B, C treatment	58.6%	73.2%	71.6%	61.4%	61.1%	73.6%	59.7%	68.2%

Table 12. Training needs on the topics of addiction treament program administration and management by position

	Manager (n = 203)	Doctor (n= 142)	Nurse (n= 102)	Pharmacist/Drug-dispensing staff (n = 145)	Laboratory Technician (n = 18)	Counselor (n = 72)	Administrative staff (n = 67)	Other (n = 88)
Knowledge of addiction treament program administration and management								
Management skills	83.7%	76.8%	63.7%	64.1%	38.9%	80.6%	64.2%	88.6%
Executive skills	76.8%	76.1%	61.8%	60.0%	38.9%	77.8%	61.2%	85.2%
Ethics in addiction treatment	74.9%	78.9%	71.6%	67.6%	50.0%	80.6%	64.2%	88.6%
Drug use during COVID-19 pandemic	68.0%	77.5%	75.5%	68.3%	55.6%	86.1%	65.7%	86.4%
Science research	53.7%	71.1%	55.9%	46.9%	38.9%	68.1%	47.8%	69.3%
Statistical analysis	52.7%	66.2%	52.0%	48.3%	38.9%	69.4%	56.7%	72.7%

Table 13. Training needs on the topics of addiction treatment by management agency

	All participants (N = 844)	CDC (n = 459)	DOLISA (n = 346)	Private Org., (n = 39)
Knowledge of addiction and addiction treatment				
Opioid addiction treatment	78.9%	80.6%	75.7%	87.2%
Treatment of substance use disorders related to amphetamine use	77.2%	75.4%	77.8%	94.9%
Alcohol addiction treatment	54.7%	63.4%	39.6%	87.2%
Smoking addiction treatment	53.5%	61.7%	40.2%	76.9%
Vaping addiction treatment	49.5%	56.6%	36.7%	79.5%
Marijuana addiction treatment	66.9%	64.9%	67.0%	89.7%
Addiction treatment in special population (pregnant women, adolescents, LGBT,…)	62.9%	67.9%	55.2%	71.8%
General knowledge of substances	75.9%	74.7%	76.0%	89.7%
New amphetamine-type stimulants	81.3%	76.5%	85.8%	97.4%
General knowledge of addiction: mechanism, diagnosis, substance abuse treatment	77.6%	75.4%	79.5%	87.2%
General knowledge of non-medication assisted therapy in addiction treatment	74.5%	73.6%	73.7%	92.3%
General knowledge of medication assisted therapy in addiction treatment	74.8%	74.1%	75.7%	74.4%

Table 14. Training needs on the topics of addiction counseling and prevention by management agency

	All participants (N = 844)	CDC (n = 459)	DOLISA (n = 346)	Private Org., (n = 39)
Knowledge of addiction treatment counselling and prevention				
Basic counselling skills	77.7%	74.9%	80.1%	89.7%
Motivational interviewing	73.9%	71.2%	75.1%	94.9%
Cognitive behavioral therapy	71.9%	70.6%	72.0%	87.2%
Screening, Brief Intervention, and Referral to Treatment (SBIRT)	63.1%	67.3%	55.5%	82.0%
Training of social and working skills	73.3%	69.7%	76.0%	92.3%
Relapse prevention	73.2%	72.5%	72.2%	89.7%
Rehabilitation and social reintegration	73.9%	71.0%	75.1%	97.4%
Group therapy	66.8%	65.1%	66.8%	87.2%
Family therapy	65.3%	66.0%	61.6%	89.7%
Matrix model	57.2%	59.0%	55.2%	53.8%
12-steps program	62.0%	63.2%	58.4%	79.5%
Substance use prevention in society, school and family	64.2%	68.4%	56.1%	87.2%
Community-based interventions	65.0%	68.0%	59.5%	79.5%
Craving coping skills	73.9%	71.7%	74.6%	94.9%
Harm reduction interventions	73.3%	72.5%	72.2%	92.3%
Contingency management	71.4%	69.1%	72.5%	89.7%
Faith-based rehabilitation	50.8%	56.2%	39.0%	92.3%
Working therapy	69.6%	59.9%	78.6%	82.0%
Case managent	64.8%	60.1%	68.2%	89.7%
Drug overdose prevention	68.4%	73.6%	59.5%	84.6%

Table 15. Training needs on the topics of co-morbidity disorders by management agency

	All participants (N = 844)	CDC (n = 459)	DOLISA (n = 346)	Private Org., (n = 39)
Knowledge of co-morbidity disorders				
Mental health disorders screening	66.2%	66.7%	63.0%	89.7%
Mental health disorders intervention	66.9%	67.1%	63.6%	94.9%
Stress management	66.2%	64.0%	66.2%	92.3%
Suicide management and prevention	66.3%	63.0%	67.6%	94.9%
Strategies to reduce SUD stigma and HIV/AIDS	70.4%	70.8%	67.3%	92.3%
Negative childhood experiences	51.1%	55.8%	40.7%	87.2%
Adolescent brain development	58.3%	61.4%	51.4%	82.0%
HIV screening	66.7%	69.1%	61.8%	82.0%
HIV testing counseling	67.4%	68.4%	63.9%	87.2%
General knowledge of ART	61.7%	62.7%	59.2%	71.8%
Tuberculosis treatment	63.5%	65.1%	59.2%	82.1%
Hepatitis B, C treatment	65.3%	68.6%	59.0%	82.1%

Table 16. Training needs on the topics of addiction treament program administration and management by management agency

	All participants (N = 844)	CDC (n = 459)	DOLISA (n = 346)	Private Org., (n = 39)
Knowledge of addiction treament program administration and management				
Management skills	74.5%	67.8%	81.2%	94.9%
Executive skills	70.7%	65.4%	74.9%	97.4%
Ethics in addiction treatment	74.5%	71.2%	76.0%	100.0%
Drug use during COVID-19 pandemic	73.6%	72.3%	73.4%	89.7%
Science research	57.5%	56.2%	56.6%	79.5%
Statistical analysis	57.5%	59.0%	53.5%	74.4%

4.5 Preferred format and method of training

The survey on the needs and aspirations of staff at CDC, DOLISA and private agencies shows that about 70% of them want to receive training in their workplace (on-site) and online training.

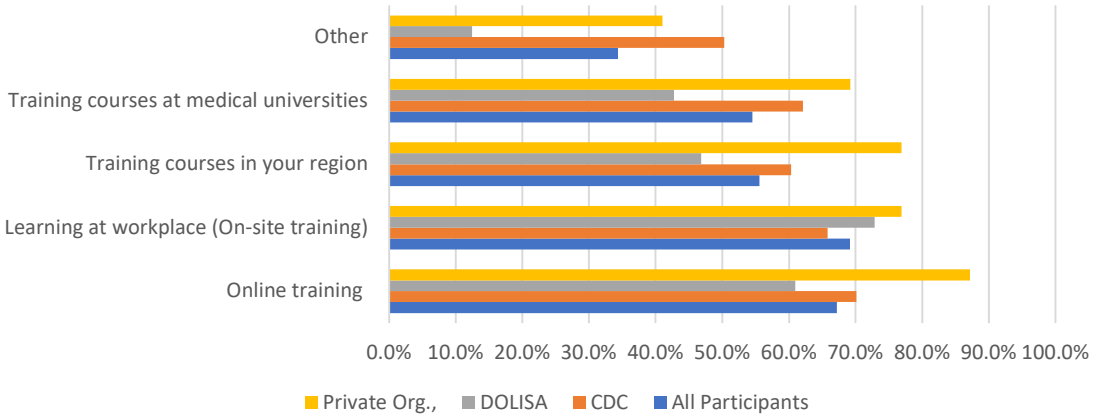

Figure 15. Formats of training by the management agency

As for the training method, 73.7% suggested that "A subject-specific intensive course is an effective course format", 73.3% suggested that "Training courses should be based on interventions based evidence", 72.7% suggested that "The training course should spend more time on practice".

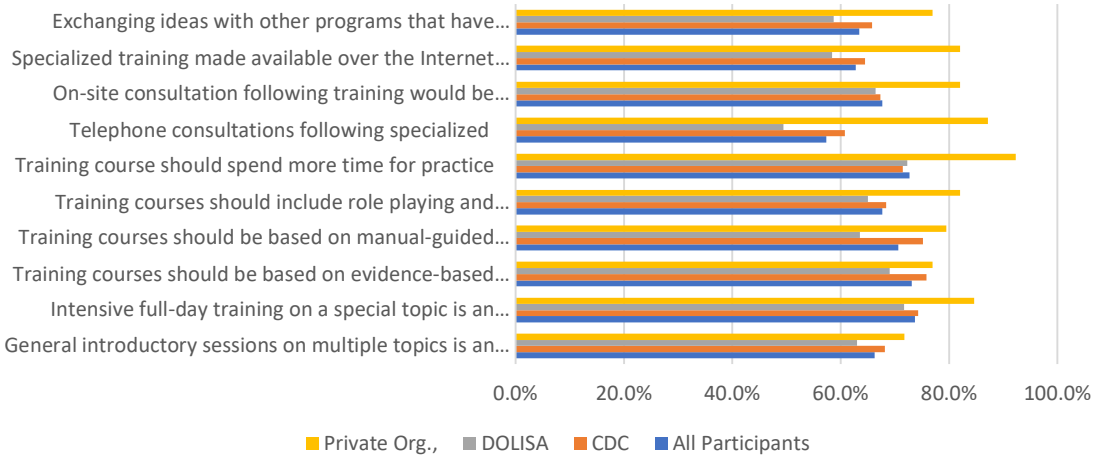

Figure 16. Training methods by management agency

4.6 Motivation and obstacles in training

The survey results show that 80.4% of staff currently working as nurses in addiction treatment facilities feel that continuing training programs (CME) are very useful for their current jobs. This figure fluctuates at 73.2-79.2% in the group of doctors, pharmacist/Drug-dispensing staffs/dispensers and consultants. For administrative and managerial staff, this rate is 62.7% and 67.0%, respectively. Only 44.4% of the lab technicians found the CME program useful in their current job. (Figure 14)

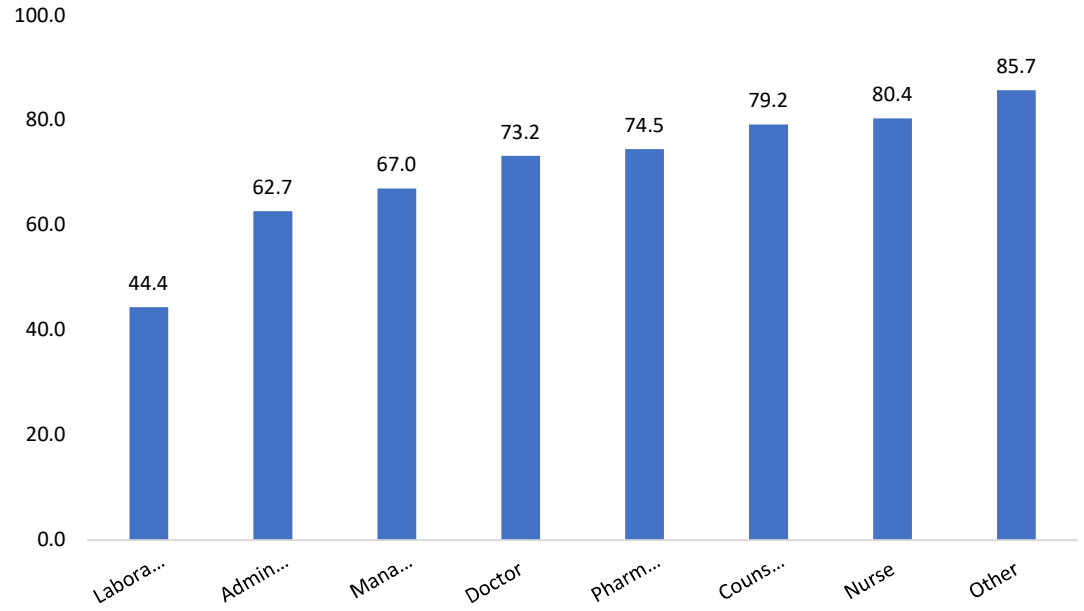

Figure 17. Percentage of survey participants who feel that the continuing education program (CME) is useful for work

Table 17 presents data on the main obstacles in training or implementing topics during training. The most mentioned obstacles include:

- The budget does not allow most staff to attend training courses when necessary (65%)

- Work overload negatively affects the motivation to participate in training courses (63.3%)

- Too little reward to change the current established treatment or procedure (52.0%)

- Recent training topics are too limited (49.5%)

Table 17.Obstacles in training participation or implementing topics during training

	N (%)
Work overload negatively affects the motivation to participate in training courses	534 (63.3)
The budget does not allow most staff to attend training courses when necessary	549 (65.0)
Recent training topics are too limited	418 (49.5)
The quality of lecturers of recent training courses is not good	208 (24.6)
Training activities take up too much time compared to the main job	255 (30.2)
Applying from training materials to actual work is too complicated	314 (37.2)
Limited resources (e.g. office space or budget) make it difficult to adopt new practices	377 (44.7)
Staff background limits the implementation of new practices	317 (37.6)
Too little reward to change the current established treatment or procedure	439 (52.0)

V. RESULTS FROM SURVEY OF A GROUP OF NATIONAL TRAINERS

5.1 Demographic characteristics of respondents interviewed

The group of national trainers working within substance addiction treatment in Vietnam is expected to include 29 lecturers/trainers from universities, social organizations, addiction treatment facilities, and provincial Centers for Disease Control (CDC). The survey was carried out in the form of online surveys due to the diverse conditions of residence/working areas of the national trainer all over the country. This activity was implemented in July 2021.

There were 13 in total number of national trainers who completed the data collection; in which, not only demographic information, general information such as qualifications, training majors,… was also collected. The data showed that most of the lecturers have university degrees or higher (Bachelor >20% and Postgraduate >60%).

Table 18. National trainers' major

Major(s)	Number of trainer(s)
Psychology	**5**
Social Work	**3**
Sociology	**2**
Science Policy	1
General Practitioner (GP)	1
Psychiatrist	1
Nurse	1
Public Health	1
Pharmaceutical Chemistry	1
Economy	1
Technician	1

According to the information gathered (Table 18), national trainers working within addiction field, come from different majors such as Psychology, Sociology, Social Work, Policy Science, General Practitioner, Psychiatrist,

Nursing, Public Health, Pharmaceutical Chemistry, Economy, Technician... in which, 5/13 lecturers are trained from 2 majors or higher and the number of lecturers trained in Psychology, Sociology. and Social Work take the majority of training majors in the field of substance addiction treatment in Vietnam.

In addition to general information, the activity also collected the information about the current occupation of the trainers in order to facilitate the connection and expansion of the network in the field of addiction treatment in Vietnam such as Researcher, Project Coordinator, Specialist, Lecturer, Doctor, Medical Officer, Human Resources social worker, nun…

5.2 Training needs

According to the survey of national trainers, who have had a certain number of years of experience working in the field of substance addiction treatment, of which the earliest was 2005 and the most recent was 2017. Besides, all trainers have attended at least 1 training course on addiction treatment organized by national and international units, specifically:

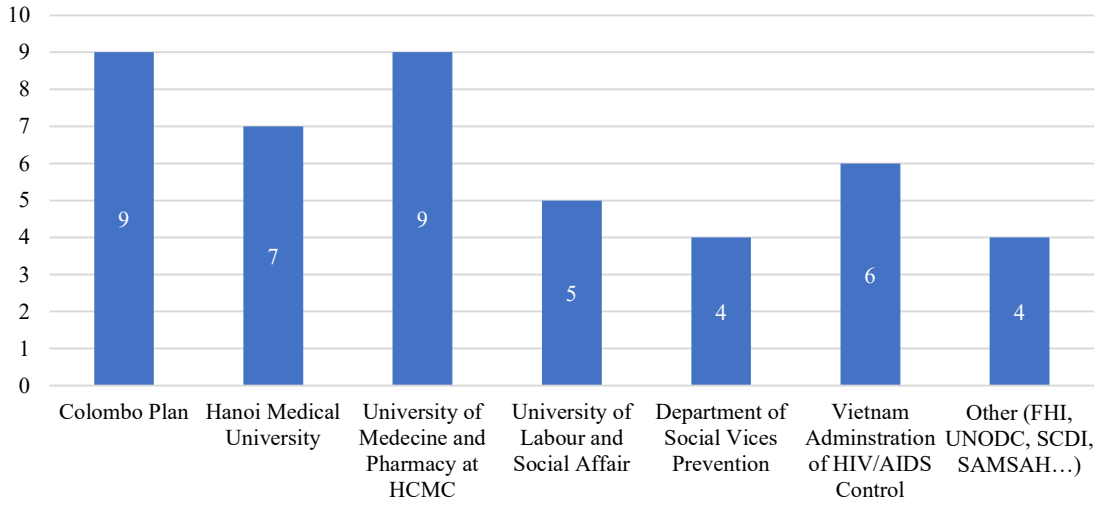

Figure 18. Number of trainer(s) participated in courses organized by different units

Within the framework of V-ITTC project, the survey also focused on finding information on UTC training courses (Universal Treatment Curriculum - Colombo Plan); in which, 12/13 national trainers had participated in UTC training courses, only 1 trainer had not taken part in any UTC training.

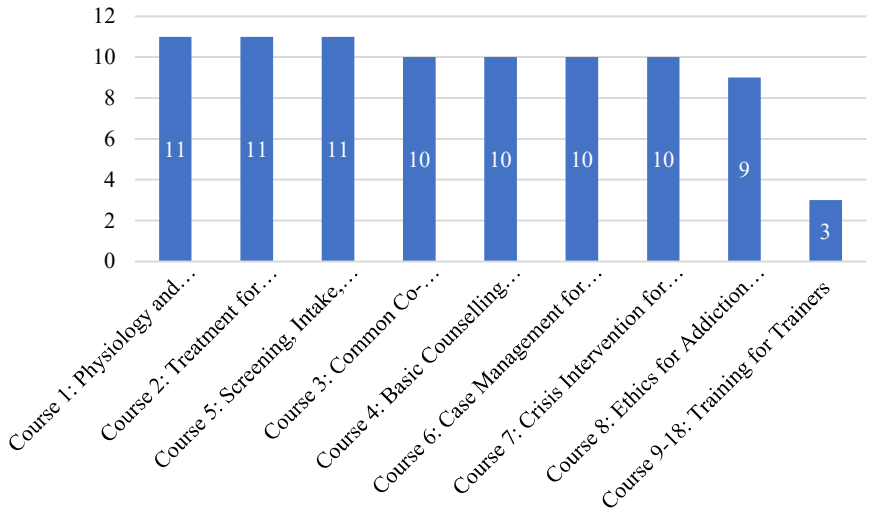

Figure 19. Number of national trainers participated in UTC courses

One of the main objectives of the survey of national trainers group, within the framework of the V-ITTC project, HMU team had collected and assessed the need for professional training in order to improve the quality of the national trainers network working in the field of addiction treatment in the near future. Specifically, training needs were assessed according to topics with levels ranging from *Absolutely unnecessary* to *Absolutely necessary*. The level of evaluation of preferred training topics among national trainers is presented below:

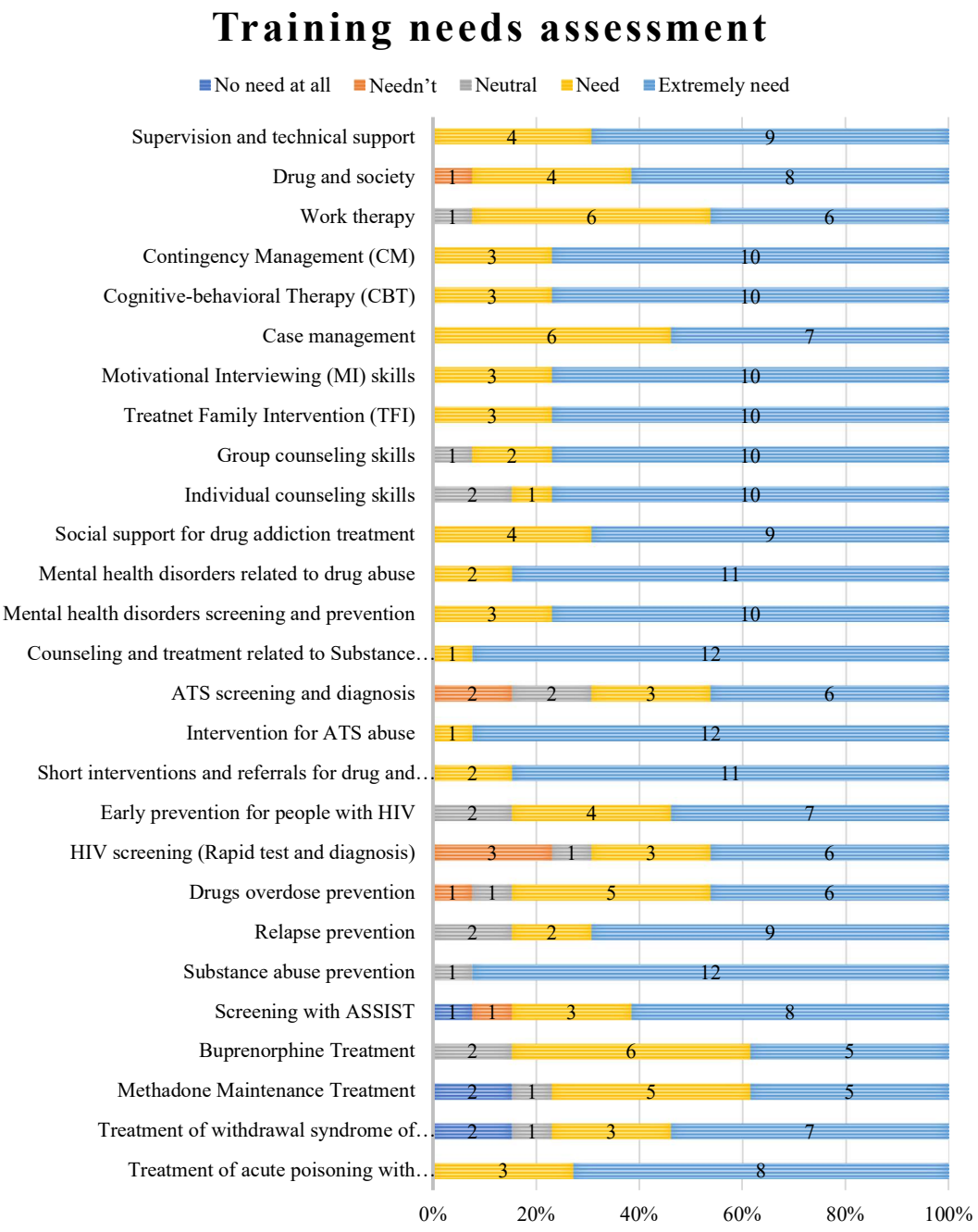

Figure 20. Training needs assessment

Table 19. Preferred training needs topics

Training needs topics	N=13
Topics related to addiction treatment	
Treatment of acute poisoning with Opiates/ATS/Alcohol/Other drugs	85%
Treatment of withdrawal syndrome of Opiates/ATS/Alcohol/Other Drugs	77%
Methadone Maintenance Treatment	77%
Buprenorphine Treatment	85%
Topics related to addiction prevention and counseling	
Screening with ASSIST	85%
Substance abuse prevention	92%
Relapse prevention	85%
Drugs overdose prevention	85%
HIV screening (Rapid test and diagnosis)	69%
Early prevention for people with HIV	85%
Short interventions and referrals for drug and alcohol users	100%
Intervention for ATS abuse	100%
ATS screening and diagnosis	69%
Counseling and treatment related to substance use disorders (SUD)	100%
Social support for drug addiction treatment	100%
Individual counseling skills	85%
Group counseling skills	92%
Treatnet Family Intervention (TFI)	100%
Motivational Interviewing (MI) skills	100%
Case management	100%
Cognitive-behavioral Therapy (CBT)	100%
Contingency Management (CM)	100%
Work therapy	92%
Drug and society	92%
Topics related to co-occurring disorders	
Mental health disorders screening and prevention	100%
Mental health disorders related to drug abuse	100%
Other topic	
Supervision and technical support	100%

Some of the topics of interest:

1. Addiction prevention and counseling:

- Substance abuse prevention
- Short interventions and referrals for drug and alcohol users
- Intervention for ATS abuse
- Counseling and treatment related to substance use disorders (SUD)

- Social support for drug addiction treatment
- Group counseling skills
- Treatnet Family Intervention (TFI)
- Motivational Interviewing (MI) skills
- Case management
- Cognitive-behavioral Therapy (CBT)
- Contingency Management (CM)
- Work therapy
- Drug and society

2. Co-occurring disorders

- Mental health disorders screening and prevention
- Mental health disorders related to drug abuse

3. Other

- Supervision and technical support

VI. LIMITATIONS

There is no data on substance use in the general population or in high-risk groups; the findings on substance-use trends in the current report may not be systematic.

The study uses a horizontal survey, so it can only describe the training characteristics and training needs of the staff without further analysis of the relationship related to the training needs of the staff at the treatment facility.

The research was conducted at treatment and service facilities of the health sector, the Department of Labor, Invalids, and Social Affairs (DOLISA), and a few private rehabilitation centers in the 7 key provinces of the North, Central, and South regions of the country. However, in the context of the Covid-19 epidemic, there are many challenges in expanding the research area. At the same time, many staff had to take on additional duties on the frontline to prevent and control the spread of COVID-19, so they could not answer the questionnaire. This sample size may not be representative and fully reflect the training needs of all staff working in the field of addiction treatment in Vietnam, especially the training needs of those working in the hospitals. Staff in provinces where the Covid-19 pandemic is spreading have not had the opportunity to participate in this survey.

Despite these possible limitations, the report provides some important findings on the current drug-use situation and training needs for the development of training programs for staff working in the addiction treatment field in Vietnam.

VII. CONCLUSIONS

Based on desk review results on substance use and training needs assessment survey, there are some issues and challenges towards the situation of substance use and addiction treatment sector in Vietnam as follows:

Research and investigations on substance use in Vietnam mostly focus on the two classes of substances: opioids and amphetamine-type stimulants (ATS).

Opioid use has mainly been reported by participants undergoing opioid substitution treatment. The prevalence rates this group ranges from 13.6% to 60%. Also, participants from the urban areas appear to have a higher prevalence rate of opioid use than those from other areas.

Studies on ATS use focus mainly on MSM and methadone patients. The prevalence rate of methamphetamine use among drug users varied significantly from 3.3% to 51% - this rate among the MSM group was also quite similar, ranging from 16.9% to 50.5%. Studies on the use of synthetic drugs (i.e methamphetamine) focus on groups living in urban areas or large cities. The trend of using ATS (methamphetamine) has increased in recent time.

Some characteristics of human resources providing substance abuse treatment services in Vietnam:

- The survey focused on staff at addiction treatment facilities operated by the health sector, the DOLISA sector, and the private sector, in which the staff participating in the survey are mainly from state agencies in the health sector and the DOLISA sector.
- Percentage of female staff working in the field of substance addiction, especially at treatment facilities managed by the health sector is important (64.5%).
- Staff working in health facilities are younger in age and have a higher level of education than those working in facilities managed by DOLISA and private organizations.
- The staff working in the facilities under the DOLISA have more diverse training background than those in the health care facilities and private facilities.
- Most CDC and DOLISA staff have attended at least one substance abuse treatment training course with certification, while staff in the

private sector have participated mainly in lecture courses within the last two years.

Training needs in addiction treatment

- In terms of management agencies, staff working in the private organizations have significantly higher training needs than those working in the organizations under CDC and DOLISA management.
- For the training contents, there are 3 training contents that are most interested by all management agencies, namely addiction and addiction treatment, addiction counseling and prevention, and administrative management of addiction treatment programs.
- For addiction and addiction treatment training topics, synthetic drugs (81.3%) and treatment for ATS-related disorders (77.3%) are the most interested topics. This is followed by topic on opioid addiction treatment, and overviews of substance and substance addiction.
- In terms of the topics of addiction treatment counseling and prevention, staff prefer them to focus on knowledge and skills related to basic counseling, motivational interviewing, rehabilitation and community reintegration, and craving coping skills.
- Regarding the administration and program management topics, the training contents that staff are interested in are those focusing on addiction treatment program management and ethical issues in addiction treatment.

Training formats and methods:

- All staff prefer to participate in the training courses hosted at their workplace or in online training workshops.
- Preferred training methods are topic-intensive courses, evidence-based courses, and hands-on courses.

Challenges in training participation

- The budget does not allow most staff to attend training courses when necessary (65%)
- Work overload negatively affects the motivation to participate in training courses (63.3%)
- Too little reward to change the current established treatment or procedure (52.0%)
- Recent training topics are too limited (49.5%)

Based on the characteristics of the substance-use situation and training needs, training courses with certifications and lectures should continuously be provided to staff working in the field of substance addiction, especially those working in private rehabilitation centers. Training topics on the intervention and treatment of amphetamine-type stimulants use disorders should be prioritized in the context of the increasing use of amphetamine-type stimulants and the current addiction treatment system focusing mainly on the treatment of opioid use disorders. At the same time, financial support is needed to ensure that the training activity can satisfy the training needs of staff working in the substance abuse treatment and intervention fields.

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APPENDIX 1: QUESTIONNAIRE FORM

TRAINING NEEDS ASSESSMENT

For staff working in the field of addiction treatment services

Introduction

Dear Colleagues,

The Vietnam-International Technology Transfer Center (V-ITTC) of Hanoi Medical University together with the Vietnam Administration for AIDS Control (VAAC), the Centers for Disease Control and Prevention và the Department of Labour, Invalids and Social Affairs from different provinces conduct a training needs assessment for staff working in the field of treatment of substance use disorders (SUD). The main purpose of this research is to assess the current human resources and identify the existing needs of specialists in additional education and training. Because of this purpose, we hope that you can share your thoughts on the questions down below.

Every information provided will only be used for research purposes and compiled as aggregate data. Also, all personal information you provide will be kept confidential according to the current regulations.

Thank you for your cooperation!

A. Personal information

No.	Question	Answer		Skip
1	Your organization name	…..……		
2	Which agency does your organization belong to? *(Choose one answer)*	Methadone treatment facility under the Healthcare sector	1	
		Methadone dispensing facility under the Healthcare sector	2	
		Methadone treatment facility under the Labor, War Invalids, and Social Affairs sector	3	
		Drug Rehabilitation Center under the Labor, War Invalids, and Social Affairs sector	4	
		Other (specify)…….	5	
3	What is your sex? *(Choose one answer)*	Male	1	
		Female	2	
		Other (specify)……	3	
4	When were you born?	Year: |__|__|__|__|		
5	The ***highest*** education you have completed? *(Choose one answer)*	Intermediate Degree	1	
		The Degree of Associate	2	
		Bachelor's Degree	3	
		Master's Degree	4	
		Doctor of Philosophy	5	
		First Degree Specialist	6	
		Second Degree Specialist	7	
		Other (specify)……	8	
6	Your current position *(Choose one answer)*	Manager	1	
		Doctor	2	
		Nurse	3	
		Pharmacist/drug-dispensing staff	4	
		Laboratory Technician	5	
		Counselor	6	
		Educational staff	7	
		Vocational staff	8	
		Administrative staff	9	
		Other (specify) ……	10	
7	What is your trained specialty? *(Choose one answer)*	Medical Doctor	1	
		Physician	2	
		Pharmacist	3	→ **#11**
		Nursing	4	→ **#11**
		Public Health	5	→ **#11**
		Psychology	6	→ **#11**
		Sociology	7	→ **#11**
		Social Work	8	→ **#11**
		Finance - Economics	9	→ **#11**
		Law	10	→ **#11**
		Technology	11	→ **#11**
		Other (specify) ……..……	12	→ **#11**

For medical doctors and physicians: Question 8 → 10				
8	Do you have a practicing certificate? *(Choose one answer)*	Yes No	1 2	**→#11**
9	What is the range of professional activities on your practicing certificate? *(Choose one answer)*	General Practitioner Internist Psychiatrist Infectious Disease Physician Preventive Medicine Doctor Traditional Medicine Doctor Other (specify)……	1 2 3 4 5 6 7 8	
10	How long have you been working within your field? (Year)	Internal Medicine Psychiatry Infectious Disease Other (specify).....	|__|__| |__|__| |__|__| |__|__|	
11	How long have you been working within the drug addiction treatment field?	Year:	|__|__|	
12	What is your job related to addiction treatment at the facility? *(Choose one answer)*	Full time (having only job related to addiction treatment) Part time (having other jobs) Other (specify)…….	1 2 3	
13	Have you received any training courses (with certificates) on substance addiction during the last 2 years? *(Choose one answer)*	Yes No	1 2	**→ #14**
13a	The number of training courses you participated in the last 2 years	The number of courses: |__|__|		
13b	What type were the training courses that you participated in the last 2 years? *(Choose multiple answers)*	Mandatory state professional improvement courses Courses organized by your facility where you work Private courses at your own expense Participation in training projects of international organizations (paid or free) Participation in training projects professional training centers/ universities (paid or free) Other (specify) ……	1 2 3 4 5 6	

13c	The training courses on substance addiction treatment/intervention you participated *(Choose multiple answers)*	Methadone Maintenance Treatment – Basic Course Methadone Maintenance Treatment – Advanced Course Buprenorphine Maintenance Treatment Diagnosis of Opioid-type drug addiction Amphetamine-Type Stimulant Abuse Intervention (ATS) Drug addiction treatment counseling Co-morbidity mental disorders among substance abusers Motivational Interviewing Mindfulness Meditation Other (specify)……	1 2 3 4 5 6 7 8 9 10	
14	Have you participated in any lectures on substance addiction and addiction-related issues/treatment within the last 2 years? *(Choose one answer)*	Yes No	1 2	→ **#B**
14a	The number of lectures on on substance addiction and addiction-related issues/treatment you participated within the last 2 years	The number of lectures: |__|__|		
14b	The lectures on on substance addiction and addiction-related issues/treatment you participated within the last 2 years *(Choose multiple answers)*	Contingency Management (CM) Introduction to the Matrix Model ASSIST Screening Test Cognitive-Behavioral Therapy for people who use methamphetamine Counseling Skills for working with Adolescents with Substance Use Disorder Preventive Intervention of Tobacco Use for Adolescents Basic Knowledge on Amphetamine-type Stimulants (ATS)	1 2 3 4 5 6 7	

		Mental Disorders among people who use ATS	8	
		Harm reduction for people who use ATS	9	
		First aid for drug overdose	10	
		Social Work on drug treatment	11	
		Chemsex among men who have sex with men and trans-women	12	
		HIV Prevention with PrEP	13	
		HIV counseling and testing	14	
		ARV counseling and treatment support	15	
		Basic Knowledge about Hepatitis B and C	16	
		Other (specify) ……	17	

B. Training Needs

1. **How often do you use the following knowledge and skills in your daily work?**

No.	Knowledge and skills	0 - Never / very rarely	1 - Rarely	2 - Some-times	3 - Often	4 - Very often
1	Drug prevention regulation	0	1	2	3	4
2	Harm reduction (general knowledge)	0	1	2	3	4
3	Basic knowledge on HIV	0	1	2	3	4
4	Definition and mechanism of substance addiction	0	1	2	3	4
5	Diagnosis of addiction	0	1	2	3	4
6	Methods on drug addiction treatment	0	1	2	3	4
7	Emergency cases	0	1	2	3	4
8	Treatment addherence	0	1	2	3	4
9	Methadone Maintenance Treatment phases	0	1	2	3	4
10	Methadone Maintenance Treatment guidelines	0	1	2	3	4
11	Methadone pharmacology	0	1	2	3	4
12	Methadone side effects management	0	1	2	3	4
13	Methadone managing and dispensing technical procedure	0	1	2	3	4
14	Relapse prevention	0	1	2	3	4

15	Opioid withdrawal syndrome and intoxication syndrome	0	1	2	3	4
16	Opioid overdose prevetion	0	1	2	3	4
17	Multiple substances use management	0	1	2	3	4
18	Co-morbidity disorders	0	1	2	3	4
19	Counselling skills	0	1	2	3	4
20	Motivational interviewing	0	1	2	3	4

2. Training needs in the field of treatment of substance use disorders (SUD):

No.	Knowledge and skills	0 – No need at all	1 – Needn't	2 – Neutral	3 – Need	4 – Extremely need
2.1. Knowledge of addiction and addiction treatment						
1	Opioid addiction treatment	0	1	2	3	4
2	Treatment of substance use disorders related to amphetamine use	0	1	2	3	4
3	Alcohol addiction treatment	0	1	2	3	4
4	Smoking addiction treatment	0	1	2	3	4
5	Vaping addiction treatment	0	1	2	3	4
6	Marijuana addiction treatment	0	1	2	3	4
7	Addiction treatment in special population (pregnant women, adolescents, LGBT,…)	0	1	2	3	4
8	General knowledge of substances	0	1	2	3	4
9	New amphetamine-type stimulants	0	1	2	3	4
10	General knowledge of addiction: machanism, diagnosis, substance abuse treatment	0	1	2	3	4
11	General knowledge of non-medication assisted therapy in addiction treatment	0	1	2	3	4
12	General knowledge of medication assisted therapy in addiction treatment	0	1	2	3	4
2.2. Knowledge of addiction treatment counselling and prevention						
1	Basic counselling skills	0	1	2	3	4
2	Motivational interviewing	0	1	2	3	4
3	Cognitive behavior therapy	0	1	2	3	4
4	Screening, Brief Intervention, and Referral to Treatment (SBIRT)	0	1	2	3	4

5	Training of social and working skills	0	1	2	3	4
6	Relapse prevention	0	1	2	3	4
7	Rehabilitation and social reintegration	0	1	2	3	4
8	Group therapy	0	1	2	3	4
9	Family therapy	0	1	2	3	4
10	Matrix model	0	1	2	3	4
11	12-step program	0	1	2	3	4
12	Substance use prevention in society, school and family	0	1	2	3	4
13	Community-based interventions	0	1	2	3	4
14	Craving coping skills	0	1	2	3	4
15	Harm reduction interventions	0	1	2	3	4
16	Contingency management	0	1	2	3	4
17	Faith-based rehabilitation	0	1	2	3	4
18	Working therapy	0	1	2	3	4
19	Case managent	0	1	2	3	4
20	Drug overdose prevention	0	1	2	3	4
2.3. Knowledge of co-morbidity disorders						
1	Mental health disorders screening	0	1	2	3	4
2	Mental health disorders intervention	0	1	2	3	4
3	Stress management	0	1	2	3	4
4	Suicide management and prevention	0	1	2	3	4
5	Strategies to reduce SUD stigma and HIV/AIDS	0	1	2	3	4
6	Negative childhood experiences	0	1	2	3	4
7	Adolescent brain development	0	1	2	3	4

8	HIV screening	0	1	2	3	4
9	HIV testing counseling	0	1	2	3	4
10	General knowledge of ART	0	1	2	3	4
11	Tuberculosis treatment	0	1	2	3	4
12	Hepatitis B, C treatment	0	1	2	3	4
2.4. Knowledge of addiction treament program administration and management						
1	Management skills	0	1	2	3	4
2	Executive skills	0	1	2	3	4
3	Ethics in addiction treatment	0	1	2	3	4
4	Drug use during COVID-19 pandemic	0	1	2	3	4
5	Science research	0	1	2	3	4
6	Statistical analysis	0	1	2	3	4

3. Assessment of training program for staffs working in addiction treatment field

No.	Training formats and methods	0 – Strongly disagree	1 – Disagree	2 – Unde-cided	3 – Agree	4 – Strongly agree
3.1. Training formats						
1	Online training	0	1	2	3	4
2	Learning at workplace (On-site training)	0	1	2	3	4
3	Training courses in your region	0	1	2	3	4
4	Training courses at medical universities	0	1	2	3	4
5	Other, please specify ……)	0	1	2	3	4
3.2. Training methods						
1	General introductory sessions on multiple topics is an effective course format	0	1	2	3	4
2	Intensive full-day training on a special topic is an effective course format	0	1	2	3	4
3	Training courses should be based on evidence-based interventions	0	1	2	3	4
4	Training courses should be based on manual-guided interventions	0	1	2	3	4
5	Training courses should include role playing and group activities	0	1	2	3	4
6	Training course should spend more time for practice	0	1	2	3	4
7	Telephone consultations following specialized training would be useful	0	1	2	3	4
8	On-site consultation following training would be helpful	0	1	2	3	4
9	Specialized training made available over the Internet would be useful	0	1	2	3	4
10	Exchanging ideas with other programs that have interests similar to yours would be helpful	0	1	2	3	4

4. **Assessment of barriers to training of specialists or implementing topics covered during training**

No.		0 – Strongly disagree	1 – Disagree	2 – Unde-cided	3 – Agree	4 – Strongly agree
1	Continuing medical education (CME) programs are very useful for my work	0	1	2	3	4
Barriers to training						
1	The work-overload negatively affect motivation for new training	0	1	2	3	4
2	The budget does not allow most program staff to attend trainings as often as needed	0	1	2	3	4
3	Topics presented at recent trainings have been too limited	0	1	2	3	4
4	The quality of trainers at recent workshops and conferences has been poor	0	1	2	3	4
5	Training activities take too much time away from the main work	0	1	2	3	4
6	It is too complicated to adapt teaching materials to practical work	0	1	2	3	4
7	Limited resources (e.g., office space or budget) make it difficult to adopt new treatment ideas	0	1	2	3	4
8	The background and training of program staff limits the kind of treatment changes possible here	0	1	2	3	4
9	There are too few rewards for trying to change treatment or other procedures here	0	1	2	3	4

5. **In case you are in need of receiving training information in the field of addiction treatment of the Vietnam International Technology Transfer Center (V-ITTC), please provide contact information (optional)**

   Email: ……..

   Telephone number: ……..