Pilot study based research protocol on factors determining HIV/AIDS related high risk behavior among Out of School Young People in Xinjiang, China

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CONTENTS

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Abbreviation

AIDS	Acquired Immunodeficiency Syndrome
BOH	Bureau of Health
FGD	Focus Group Discussion
HIV	Human Immunodeficiency Virus
IDU	Intravenous Injecting Drug User
IEC	Information, Education and Communication
MPS	Ministry of Public Security
NBS	National Bureau of Statistics
NCB	Narcotic Control Bureau
NGO	Non-governmental Organization
NPC	National People's Congress
NSCDA	National Surveillance Center of Drug Abuse
OSYP	Out of School Young People
SCAWCO	State Council AIDS Working Committee Office
UNTG	United Nations Theme Group
UNICEF	United Nations Children's Fund
UNGASS	United Nations General Assembly Special Session
WHO	World Health Organization
WIA	Workforce Investment Act
Xinjiang	Xinjiang Uygur Autonomous Region

Abstract

Background AIDS is a worldwide health problem and it is spreading with highly different rate in different areas and different sub-populations. Currently China's HIV/AIDS epidemic is driven by high risk behaviors within particular sub-population such as intravenous injecting drug users in some localities. Xinjiang is one of those areas with higher prevalence of drug abuse and high epidemic of HIV/AIDS among IDUs. Out of school young people (OSYP) in Xinjiang could be more vulnerable to HIV because of their less access to knowledge and services about HIV and expose to communities of higher drugs availability without sufficient life skills.

Main findings of pilot study A pilot study has been conducted in 2005 among OSYP (10-24 years old) in 5 cities (Urumqi, Changji, Yining, Kashi, Akesu) in Xinjiang, China. 553 effective quantitative data and 52 in-depth interview data were analyzed. 13.12% of OSYP reported they had used drugs. Older age ($p=0.001$), male gender ($p<0.0001$), being Uygur ethnicity vs. Han Chinese ethnicity ($p=0.0007$), lower education level ($p=0.011$), and Urban registered household type ($P=0.001$) are risk social demographic factors of drug using behaviors. Other significant characteristics of drug using OSYP include higher economic status ($p=0.046$), lower Han Chinese language literacy ($p=0.01$), dropping out from school by reason of "poor studying performance in school" vs. "poor economic status of family" ($p=0.002$), had family member or friend who uses drugs ($p<0.0001$), lower frequency of condom use ($p=0.007$), more

sexual partners ($p<0.0001$) and earlier sexual debut ($p=0.0008$). Qualitative data showed that social relationship and drug availability are factors for using drugs; Poor facilities and services of drug detoxification center and lack of social relation supports were the obstructive factors for drug using OSYP to change drug using behavior.

Objectives of new proposal This study proposal plans to identify the factors influencing the intravenous drug usage and sharing needles among OSYP in Xinjiang and their perception on risks of HIV/AIDS related practice.

Methods Based on experience and findings from the pilot study, new cross-sectional study is designed to do a survey in the same target population and same areas as the pilot study. Cluster sampling, snowball sampling and time-location sampling method will be used for data collection. Sample size of quantitative data is calculated by formula $N=(Z_{1-\alpha/2})^2 \bullet (1-p) / p\ d^2$ (p is prevalence of drug using gained from pilot study; $d=0.20$; $\alpha=0.05$) and multiplied by 2.0. Qualitative data will be collected by in-depth interview, focus group discussion and key informant interview.

Expected outcomes of new proposal Social demographic factors, factors of beginning and maintaining high risk drug using behavior will be analyzed and the gap between knowledge and practicing safer behaviors will also be discussed in the study with more accurate and specific methods.

Key words HIV/AIDS**,** risk factors, high risk drug using behavior, out of school young people

1. Introduction

Acquired Immunodeficiency Syndrome (AIDS) is a worldwide health problem and constitutes a large global burden to the society. HIV/AIDS has been spread all over the world during the last three decades since the first case was detected in 1981. After the continuous expansion of infections, the titanic peril of epidemic shows up to the world, since it is spreading with highly different rate in different areas and different sub-populations. Particularly vulnerable populations have been identified as youth, women, migrants, minorities and many others, especially those sub-populations who living in poor resource settings (UNTG China, 2002). To a large extent these vulnerable high risk populations of HIV/AIDS are linked with the general population. So the spreading of HIV/AIDS in sub-population groups is warning the high potential of an HIV/AIDS epidemic. Most determining factor of the vulnerability of those sub-populations in China is their high risk behaviors which include: sharing needles of intravenous injecting drug users, unprotected sexual activities and multi-sexual partners of young people, etc. Among vulnerable groups my study concern young people, because young people represent a large proportion of the population most at risk of becoming infected with HIV in developing countries.

Young people are in a period of life of experimentation and risk exposing themselves to many factors, which increase their vulnerability to HIV. Those factors include lack of knowledge about HIV/AIDS, lack of education and life

skills, poor access to health services and commodities, early sexual debut etc. (David A Ross, et al., 2006). Among those the Out of School Young People (OSYP) might be the most at risk since they drop out from school earlier, have less access to education, and are exposed to many risks in society without adequate knowledge and life skills. Finding out the risk factors for high risk behaviors of OSYP could be the most fundamental and crucial step for preventing and changing their high risk behavior and control the spread of HIV among this key population.

A pilot study on vulnerability of out of school young people in Xinjiang Uygur Autonomous Region, China, has been conducted by Anthropology Institution of Minzu University of China during July-August in 2005. My research protocol is based on analyzing some results and limitations from data bases of this pilot study and is trying to develop a more specific and precise research plan with pertinence to finding out the factors influencing high risk behaviors related to HIV/AIDS in out of school young people.

2. Background

2.1 HIV/AIDS epidemic situation

2.1.1 Global HIV/AIDS epidemic and drug consumption

According to 2008 Report of Global AIDS Epidemic, by the end of 2007, 33 million were living with HIV in the world; in 2007, 2.7 million were newly infected; about 38% of those were aged 15-24. Young people aged 15-24 account for 45% of all new infections in adults, and many young people still lack of accurate and complete information on how to avoid exposure to this virus (UNAIDS, 2008). Young people are particularly vulnerable to HIV (David A Ross, et al., 2006).

.Among several modes of transmission of HIV, sharing needle among intravenous injecting drug users (IDUs) is considered as one of the most common ways of transmission. However, globally approximately 208 million people or 4.7% of the world's population aged 15-64 have used drug at least once in the last 12 months (UNODC, 2008). Injecting heroin exposes the drug user to HIV/AIDS. In China, Central Asia and Eastern Europe, injecting drug use had been the most frequently cited mode of transmission of HIV/AIDS (UNODC, 2007). According to 2009 World Drug Report, estimated number of IDUs is 11-21million in the world. Among them, between 0.8-6.6 million people were infected by HIV/AIDS. Outside of sub-Saharan Africa injecting drug users

make up a sizable proportion of people living with HIV/AIDS, especially in Eastern Europe and Central Asia, more than half of them were infected with HIV/AIDS (UNODC, 2009).

2.1.2 HIV/AIDS epidemic and Drug Abuse prevalence in China

Currently China's HIV/AIDS prevalence remains low in general (the infection rate was estimated 0.05%), but in some sub-populations and localities there were quite high HIV/AIDS epidemics (SCAWCO/UNTG, 2007). The same resource showed that at the end of October 2007, the reported cumulative number of HIV positive was 223,405, the epidemic continued to be driven by high risk behaviors within particular sub-population such as intravenous injecting drug users (IDUs) and commercial sex workers (CSWs). Among this cumulative number, 38.5% were infected via intravenous injecting drug using.

By the end of 2007, the number of current registered drug users was 957000 in China (NCB, MOPS, 2008). The Annual Report on Drug Control in China indicated that there were 746,760 heroin users and 72.5% among them inject drugs (Wenyuan Yin et al., 2008).

Analysis on data collected in 21 drug user second generation surveillance sentinel sites from 14 provinces in China showed that overall prevalence of HIV-1 antibody among drug users in China was 5.4% (Mirjam K, et al., 2008).

Among the newly infected people during January to October in 2007 in China,

more than 80% was aged 20-40.During the same time period, age distribution of new infections in age group of 20-30 (33.3%) were increased dramatically as compared with the new infections in the age group of 10-20(3%) (SCAWCO/UNTG, 2007). As one of the most important high risk behavior of infecting HIV, in 2008, 31.6% of drug abusing began among young people under the age of 25 in China (NSCDA, 2009). Some studies conducted in different parts of China including Xinjiang suggested that risk factors associated with HIV positive status included longer duration of drug use and longer duration of injecting drug use. The prevalence of HIV was significantly higher among IDUs whose duration of intravenous drug use was longer than 5 years compared with those whose drug use duration was less than 5 years. (Yujian J, et al., 2008 and Li Zhang, et al., 2008). High risk behavior, especially the injecting drugs intravenously and sharing needles which begins around the age of 10-24 might lead to this peak of new infections happening in the 20-40 years old age group. Since change in behavior has long been understood as essential to hold the transmission of HIV/AIDS, changing the behavior of young people (aged 10-24) could be very crucial in the control of the spread of HIV in China.

All these phenomena currently presenting in the whole country, to a larger extent, are affecting some sub-regions of China. Xinjiang Uygur Autonomous Region is one of these areas with higher prevalence of drug abuse and high epidemic of HIV/AIDS among IDUs.

2.1.3 HIV/AIDS prevalence in Xinjiang

Intravenous drug abusing has become a big problem in Xinjiang Uygur Autonomous Region, especially among the minority ethnic populations of Xinjiang's cities, such as Urumqi, Yining and Kashi. (Bates G, et al., 2006).

As the largest administrative region in China, Xinjiang Uygur Autonomous Region is located in the western border of Central Asia. More than 60% of the people living there are minority ethnics, and Uygur ethnic is the largest minority ethnic group (NBS of China, 2006). This region serves as a convenient drug trafficking route between opium growing Afghanistan and Southeast Asia and heroin markets in Central Asia, Russia and Europe. Because of this special geographic location and high availability of drugs, it has become a big drug consumption area. Due to concentration of drug trafficking and availability of drugs, most of the drug users are clustered in some big cities such as Urumqi, Yining, Kashi, Akesu and Changji. In Urumqi, the capital city of Xinjiang, by the end of 2005, the number of registered drug users was 8558, which constituted about the 35% of the number of registered drug users in the whole autonomous region (Urumqi Narcotic Control Report, 2006).

Recently Xinjiang became one of 5 provinces with the highest HIV/AIDS epidemic in China. At the end of Sep 2007, the reported cumulative number of HIV positive was 20,890 in Xinjiang (SCAWCO/UNTG, 2007), which was

almost 10% of the total reported number of the whole country, but only about 1.5% population of China lives there. The estimated number of HIV positive was 60,000. It was almost 0.3% of the whole population living there (Xinjiang BOH, 2007), much higher than the general prevalence (0.05%) of the whole country (SCAWCO/UNTG, 2007). 76.2% of reported HIV infections contributed to sharing needles among intravenous injecting drug users by the end of Oct, 2007(Xinjiang BOH, 2007).

In the epidemic of HIV/AIDS and young people infection phenomena, out of school young people are representing the particular vulnerability to this virus because of the risk factors such as less access to knowledge about HIV/AIDS, inadequate life skills and resources to protect themselves from getting the virus, and being hard to be reached by the related health services, and so on.

2.2 Out of school young people (OSYP)

The data from 5th National Population Census of China which conducted in 2000 showed that there were about 3.16 million 10-24 year old young people never had been to school, about 30.4 million 15-24 year old young people had only primary education, and there were about 50 million 20-24 year old young people who only had secondary education. These large amounts of idle young people are more likely to engage in HIV related high risk behaviors such as drug

using. In 2005, 51.7% of those drug users in China were unemployed and out of school people (NCB, MPS, 2006).

Because the geographic location of Xinjiang OSYP's living area is one of the main drug trafficking routes in China, they might be more in danger to commit drug abusing behavior.

Being the largest ethnic group in Xinjiang, Uygur ethnic group is composed more than 45% of the population in Xinjiang (NBS of China, 2001). Many studies showed that being of the Uygur ethnic group and residence living in Uygur community or Uygur /Han mixed community were risk factors for infection the virus compared with Han ethnic group in Xinjiang (Li Zhang, et al.,2008; Mirjam, et al., 2008; Yujian Jia, et al., 2008).

In Xinjiang the OSYP could be much more vulnerable to HIV since they are mainly composed of those vulnerable minority ethnic groups.

Since intravenous injecting drug using is contributing the most of HIV transmission in Xinjiang, high risk behavior of OSYP especially the prevalence of drug using of OSYP could be predictive factor on incidence of HIV/AIDS in the population and this could also be a crucial cut point on preventing them from getting infected with HIV by implementing effective intervention on this behavior.

2.3 Pilot study on vulnerabilities of Xinjiang OSYP

A pilot study has been conducted on OSYP in Xinjiang in 2005 to detect the

high risk behaviors of HIV/AIDS and related factors of those high risk behaviors among out of school young people living in Xinjiang. This study showed us an overview of some characteristics and high risk behaviors of OSYP and some factors related to high risk behaviors. But because of the limitations of methodology and studying progress, it failed to expose the determining factors of their risk behaviors. And some factors found in qualitative data were not proved by statistical analysis of quantitative data which could be more reliable.

Since there is scarcity of studies about the factors of the high risk behaviors of HIV/AIDS in that area, and especially there is an absence of studies on out of school young people's HIV/AIDS related drug using behavior, it's essential to carry out an improved research program on this population based on the experience and results gained from the pilot study and to find out the influencing factors for the target population's risk behaviors.

In this thesis, there are two parts. First part presents the summarized methodology, main results from the data base of the pilot study including the analysis of quantitative data which has never been analyzed and reported before, and the limitations of the pilot study. In the second part, the objectives, methodology and expecting outcomes for new research proposal are described based on the findings and experience gained in the pilot study.

PART I : PILOT STUDY

3. Objectives and methodology of pilot survey

3.1 Objectives of pilot study

3.1.1 General objectives of pilot study

This pilot survey was aiming to find out the HIV/AIDS vulnerabilities of the OSYP in Xinjiang and their risk behaviors related to HIV/AIDS infection, and related factors of those high risk behaviors.

3.1.2 Specific objectives of pilot study

- To identify the vulnerabilities and risk factors of OSYP to HIV/AIDS in Xinjiang;

- To find out the related factors to vulnerabilities of OSYP in Xinjiang;

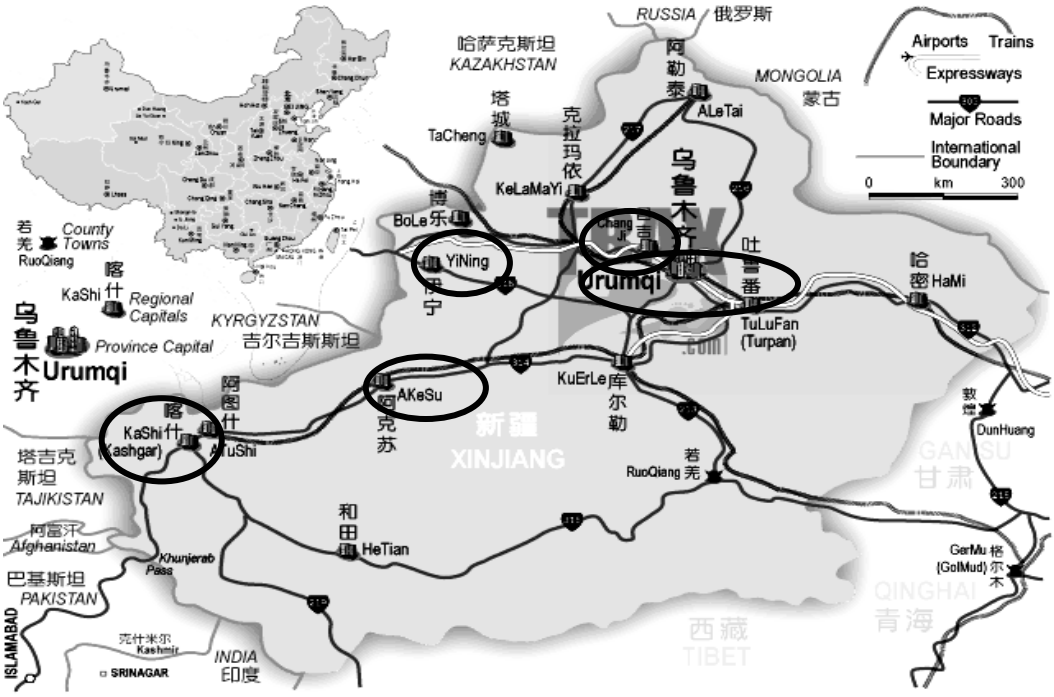
- To provide evidence based suggestions for government's HIV/AIDS control policy making in this area.

3.2 Methodology

3.2.1 Study area

Pilot study took place in 5 relatively high HIV epidemic cities in Xinjiang: Urumqi, Yining, Kashi, Changji and Akesu (see Figure 3.1, circled areas are the location of these cities). Quantitative and qualitative data were collected among out of school young people aged 10-24 who were living in those cities at the time of data collection.

Figure 3.1. Map of Xinjiang Uygur Autonomous Regrion



These 5 selected cities were geographically diverse with different ethnic group constitutions, cultural background and all of them were reported higher drug using prevalence and HIV prevalence.

Urumqi, the capital city of Xinjiang Uygur Autonomous Region, is divided into 7 administrative districts and 1 county. There was a population of 2.08 million and 24% of them were minority ethnic groups in 2000 (NSB of China, 2001). A cross sectional study on IDUs found that the prevalence of HIV among injecting drug users in Urumqi city was 37%, 12.6% among Han IDUs and 46.1% among Uygur participants (Li Zhang, et al.,2008).

Yining, capital city of Yili Kazak Autonomous Prefecture, had population of 0.36 million, 61% were minority ethnic groups in 2000(NSB of China, 2001). Community based survey conducted between 2004 and 2005 showed the

prevalence of HIV infections among intravenous injecting drug users in Yili Prefecture were 66.8% (Yujian Jia, et al., 2008).

Changji, the capital city of Changji Hui Autonomous Prefecture, had population of 0.39million and 22.54% were minority ethnicities by 2000(NSB of China, 2001).

Akesu, the capital city of Akesu Prefecture, had a population of 0.56 million and 40% were minority ethnic groups by 2000(NSB of China, 2001). Research conducted in 2005 on HIV/AIDS awareness in Akesu indicate that the knowledge and awareness of pregnant women especially in Uygur pregnant women was superficial and there were still people who have no knowledge of HIV and misconception of how it is transmitted (Rena M and Runa A, 2008).

Kashi, capital city of Kashi Prefecture, had population of 0.34 million, 78% of them were minority ethnic groups by 2000(NSB of China, 2001). Second generation sub-population HIV surveillance between 2003 and 2004 showed that HIV prevalence among intravenous injecting drug users in Kashi city was 40.3% (Ni M, et al., 2006).

3.2.2 Data collection

Quantitative questionnaires had concerned 615 persons chosen by cluster sampling method and snowball sampling method. Data collection chose districts and sub districts with higher prevalence of drug trafficking, drug abusing and commercial sexual activity according to the introduction of local related

agencies. Resident OSYP was selected randomly according to household registration records. Migrant OSYP and the other hard to reach OSYP were sampled by snowball sampling methods. After data cleaning **553 questionnaires** were kept as an effective data. The contents of the questionnaire include demographic characteristics, questions about living status, education level, HIV/AIDS related behaviors(including illicit drug abuse and sexual activity), basic knowledge and attitude about HIV/AIDS and related high risk behaviors etc.

In-depth interview selected 57 out of school young people with high risk behavior (Drug Users and Commercial Sex Workers). Some of them were reached by related agencies' introduction; others were selected by snowball sampling method. Only 52 of them were analyzed here because the other 5 interviewees' ages were older than the enrollment criteria of target people (10-24). The contents of the in-depth interview include the demographic information, family situation, knowledge and attitude about HIV/AIDS and drug abusing, the reason for their engaging in the risk behaviors etc.

Quantitative data was saved in SPSS format in Chinese language. Those variables were transformed to EXCEL format and translated into English. Some obvious mistakes of answers in data were deleted. The re-checked data was analyzed with *STATA version 9.1.* Some of them were analyzed or calculated by excel.

Qualitative data was recorded in Chinese. Relevant information was selected,

summarized and was analyzed manually.

3.3 Some Results of pilot study

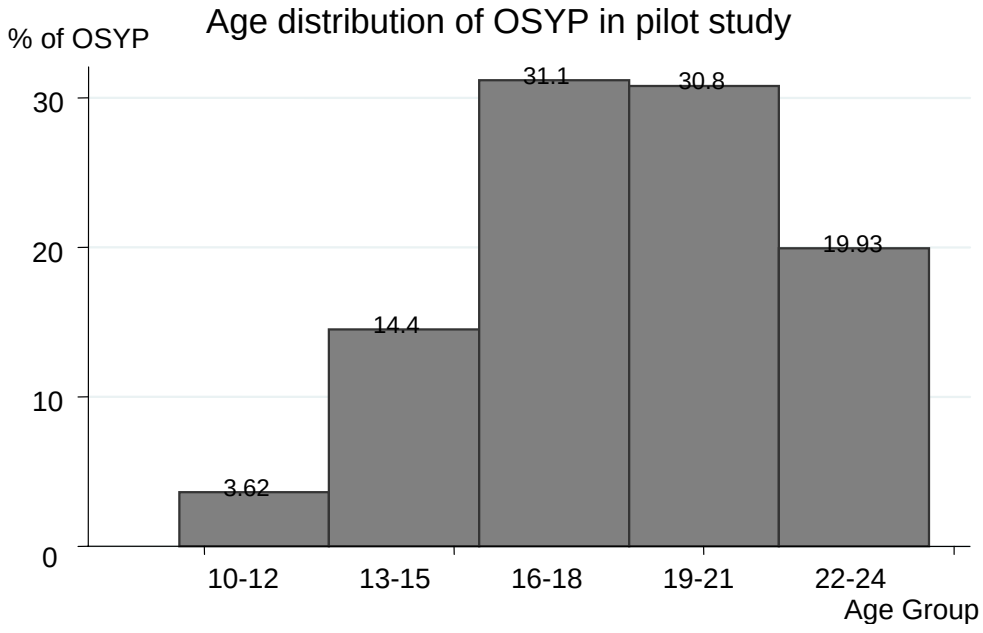
3.3.1 Statistical results from quantitative data

3.3.1.1 Social-demographic characteristics of participants and association with drug using behavior

Among the 553 participants of effective quantitative questionnaire, 62.14% were male and 37.86% were female. Most of them were Uygur ethnic (75.05%), Han ethnic (18.08%), Hui ethnic (5.42%). Other ethnicities were altogether less than 1.5%.

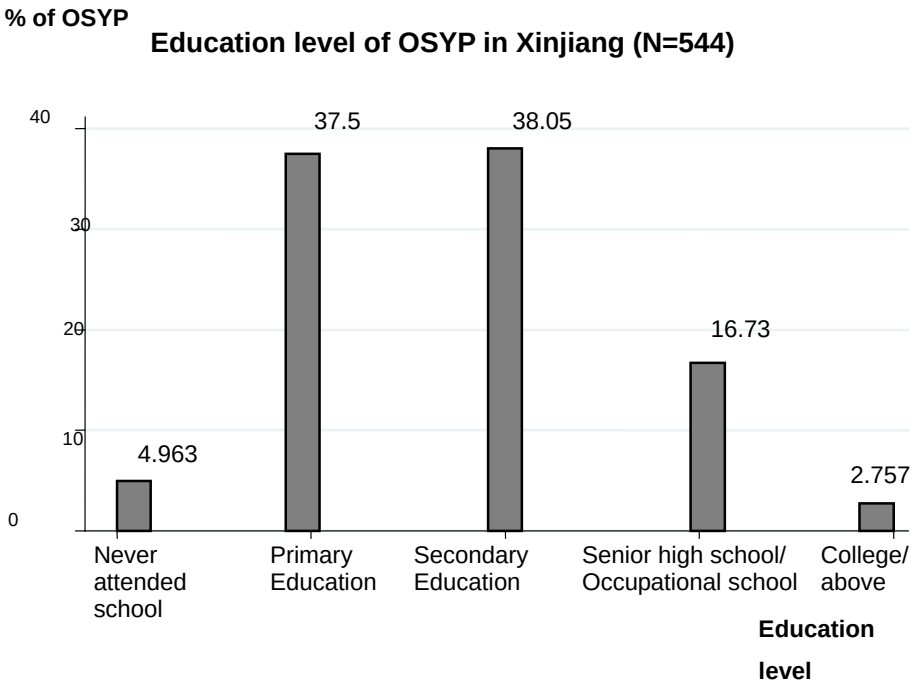
The distribution of age group of OSYP in pilot study was as Figure 3.2. More than 60% of participants were in age of 16-21.

Figure 3.2. Age distribution of OSYP in pilot study in Xinjiang, China



As shown in Figure 3.3, the education level of those 544 respondents was quite low. Almost 5% of them had never attended school, nearly 40% of them had not finished secondary education which is compulsory education level in China, less than 3% of them had college level education or above.

Figure 3.3. Education level of OSYP of pilot study in Xinjiang, China (2005)



For the household registered type, almost 70% of OSYP who participated in the questionnaire survey was registered as urban, and about 30% OSYP's household type was rural.

Chi square analysis found some social-demographic characteristics such as age, gender, ethnicity, education and registered household type which related to drug

using behaviors.

Table 3.1. Demographic factors associated with illicit drug using behavior in pilot study among OSYP in Xinjiang, China

variables		**% of OSYP had used drug**	**Chi2**	**p-value**
Total	Had used drug	13.12 (66/503)		
Age	10-19	9.12 (28/307)	11.22	0.001
	20-24	19.49 (38/195)		
Gender	Male	18.44 (59/320)	21.81	0.000
	Female	3.83 (7/183)		
ethnicity	Uygur	15.27 (60/393)	11.63	0.0007
	Han	1.25 (1/80)		
Education	No school/primary education	17.51 (38/217)	6.50	0.011
	Secondary education/above	9.71 (27/278)		
Household type	Urban	16.09 (56/348)	12.09	0.001
	Rural	4.38 (6/137)		

As shown in table 3.1, social-demographic factors which were significantly associated with illicit drug using behavior among OSYP in Xinjiang were age of older than 19 years (p=0.001), male gender (p<0.0001), being Uygur ethnicity compared with Han ethnicity (p=0.0007), education level lower than secondary school (p=0.011), and Urban registered household type (P=0.001).

3.3.1.2 Drug using behavior and economic situation

Almost half of OSYP (48.18%) in the pilot study (N=548) reported their family economic status was in middle level, there were more OSYP who reported their

family economic status was higher than normal (19.89%) or rich (18.98%) compared with the OSYP who reported their economic situation were lower than normal level (10%) or poor (3%). For another economic status related variable, 37.59% OSYP reported they had enough food, 33.76% reported their food was more than enough, and 28.65% reported they don't have enough food. Univariate logistic regression analysis on OSPY in pilot study showed that both higher family economic status (OR=0.7678266; 95%CI: 0.59-1.00; p=0.046) and abundance of food (OR=0.5977124; 95%CI: 0.42-0.85; p=0.005) were significantly associated with higher risk of drug using behavior among OSYP in pilot study.

3.3.1.3 Knowledge related factors and drug using behavior

From this pilot study we find that HIV/AIDS related knowledge of target people was quite low, only 9% (50/553) could identify the main HIV/AIDS transmission route and reject the main misconception on transmission route. Among those who gave correct answers, there was significantly more Han ethnicity (18%) than Uygur ethnicity (6.3%) (p=0.00016); and there were significantly more drug using OSYP (17%) than non-drug using OSYP (7.6%) (p=0.029).

As one of most important factor for obtaining knowledge, information about language competency was also collected in the questionnaire. OSYP of

non-Chinese speaking ethnicities in this data, 63% (266/419) had reported themselves totally unable to read and write Chinese, the only official language of China which is dominatingly used in all mass media. Among 4 variables about language competency, only lower Han Chinese language literacy had slightly significant association with higher risk of drug using behavior(OR=1.398555; 95% CI:1.08-1.81; p=0.01); others including general Han Chinese language level, native language literacy and native language level had no significant association with drug abusing.

3.3.1.4 High risk behaviors and motivations for these behaviors

Dropping out of school: Among 419 respondents, most of them (80.67%) dropped out during primary school and junior high school, 5.25% never attended school and rest of them dropped out during or after finishing senior high school. The most frequent reason for dropping out was “poor economic status of family” (48.72%), the second frequent reported reason was “poor studying performance in school” (28.21%), other reasons such as “poor health status”, “parents not allowed”, “punished by school”, “short of labor in family” and “other reasons” altogether were 20%.

Drug using: Among the 503 respondents for drug using history, 66(13.12%) reported themselves had used drug. Highest motivation of trying to use illicit

drug was “curiosity”, 63% OSYP who used drug reported it as a motivation of their starting drugs. As for the second important reason for trying drug, “pressured by others” to begin the first drug abusing was reported by 26% participants. Small number of them began to use it just for following others or relieving pain.

Intravenous injecting drug using: Among 66 drug using OSYP in the pilot study, 91% (60/66) answered the question for drug using method, among them 53.33% (32/60) reported they injected drug. But 67% (40/60) of them answered why they inject the drug, more than who reported injecting drug use method (53.33%). The most frequent reasons were “pressured by others” (22.5%), “curiosity” (20%) and “for need of higher drug dose” (17.5%). 12.5% respondents reported that they injected drug because they couldn’t afford non-injection drug. There were 7.5% of drug using OSYP injecting drugs in order to sharing with others.

Sexual activity: Among 527 respondents for heterosexual experience, 21.63% (114/527) reported they had sexual experience, 36.56% reported more than 1 sexual partner. Among 113 participants who answered the age of their sex debut, 9.73% had sex before the age of 15, 41.59% had sex under the age of 18. Among 451 respondents for homosexual behavior, 4 of them reported had homo sex, all of them reported also had hetero sex.

Table 3.2. Social behavioral characteristics of illicit drug using behavior among participants of pilot study in Xinjiang, China

variables		**% of OSYP had used drug**	**Chi2**	**p-value**
Reason for dropping out of school	Poor studying performance	19.01 (23/121)	9.48	0.002
	Poor economic status of family	7.66 (16/209)		
Highest administration level of place have been to	Been to capital level city or other country	33.33 (29/87)	44.71	<0.0001
	Been to other cities or lower administration level place	6.65 (21/316)		
Had family member use drugs	Had drug users in family	67.44 (29/43)	123.38	<0.0001
	No drug users in family	7.80 (35/449)		
Had friend who used drugs	Had friend who used drug	54.46 (55/101)	182.87	<0.0001
	No friend used drug	2.21 (8/361)		
Condom use	Never used	49.18 (30/61)	7.16	0.007
	Used some time or always use	23.26 (10/43)		
Number of sex partner	> 2	78.26 (18/23)	32.59	<0.0001
	1 or 2	14.71 (10/68)		
Age of sexual debut	< 18	46.80 (22/47)	11.28	0.0008
	≥18	22.22 (14/63)		

As shown in table 3.2, Chi square analysis on reasons of dropping out from school showed that there was statistical significance in association with drug using behavior. Participants who dropped out from school because of poor performance of studying were at higher risk of using drugs compared with dropped out for poor economic status (p=0.002).

Chi square analysis on highest traveled administration place (which is used as a crude indicator for traveled distance) showed that there was significant difference between drug using OSYP and non-drug using OSYP. The OSYP who had been to higher administration level place, the frequency of drug using behavior among them was also higher.

Table 3.2 also showed some social relationships which were associated with drug using behavior. Drug users of OSYP were more likely to have family members who also used drug ($p<0.0001$) and they also were more likely to have friends used drug ($p<0.0001$).

Sexual experiences among drug using OSYP were more at risks as shown in table 3.2. Significantly more drug using OSYP had reported to have more than 2 sex partners; there were significantly more OSYP who used drug also had hetero sex ($p<0.0001$), but age could be a confounder for this association (No interaction between these 2 variables has been proved by statistical analysis, and the confounding test showed that difference between adjusted OR & crude OR was about 12.24%); drug using OSYP were more likely to have more than 2 sex partners (<0.0001) and have earlier sexual debut ($p=0.0008$); and frequency of condom use by drug users were significantly lower than those non-drug using OSYP($p=0.007$).

3.3.1.5 HIV infection status

471 participants answered the question about the HIV infection status, 4(0.85%) of respondents reported HIV positive status, 2(50%) of the OSYP who infected with HIV were drug using OSYP. 427 (90.66%) reported they were not infected, and 40(8.5%) of respondents answered they did not know their status.

3.3.2 Summarized related information from in-depth interview

3.3.2.1 Social environment

The social relationship and drug's availability in the community were the most important factors for OSYP to begin drug abusing behavior and the most obstructive factors of quitting the drug.

- **Social relationship**

Most interviewees began drug using pressured by their friends or sex partner. And many of them also had family members or relatives who used drug.

"Not all the drug users are bad persons. But it's better to keep away from them. Otherwise it's too easy to be influenced by them." (a 24-year-old drug user and seller who began her drug using pressured by friend)

"I live with my boyfriend who influenced me to use drug. One day when I got sick he injected me with heroin and said that will relieve my pain. After that he told me he had given me several times with heroin containing cigarette. But I

still love him. Since then we always use drug together and sometimes we share the needles. ” (a 25-year-old girl in drug rehabilitation center)

“I’ve never forced others to use drug. But many of my friends began to use drug following me. ” (a 21-year-old boy whose 2 brothers also used drug)

- **Drug availability in community**

Because of the availability of drugs in those cities, OSYP living there were quite easy to get the drugs and it’s hard for them to quit it.

“If there are no people in my living area who sell drugs, I would have quit abusing drugs already.” (a drug using boy had been in drug rehabilitation center)

“Several times when I went to the rural area (where there are no drug sellers), I stopped using drugs. But when I got back to this city, I began to use it again. I have a friend who is college student and use drug too. He said he can get drug on campus.” –a 21-year-old drug using boy

3.2.2.2 Social and economical conditions of families

- **Poor family economic situation or separated family**

Depressed young people from those families were vulnerable to use drug and it’s difficult for them to give up using drug; most girls among them had to engage in commercial sex to afford drugs and living costs.

“I borne to a poor family and couldn’t finish my secondary school. It’s hard for

me to find a job with this low education level. I began to use drugs under the influence of my friend. After that I was introduced by a friend to be a sex worker since it's easier to get money to buy drug. " (a 23-year-old female commercial sex worker who used drug)

"My parents divorced when I was 9 month old. Neither of them was willing to take care of me. I began my vagrant life when I was 9 years old. Now I become like this is totally because of my parents!" (an 18-year-old female sex worker who used drug)

- **Higher family economic situation**

OSYP from higher family economic situation were more likely to be pressured by friends or other people to use drug since they can afford the drugs. Parents' pampering was also one of factor for some OSYP to engage in drug using behavior.

"I am the only child of a relatively rich family. I begin my first drug using when one of my friend used drug in front of me and he suggested me to try it. He said it's very good feeling. Second time my friend called me again to be with him together when he was doing drugs. I used again when I was not addicted to it yet by that time just because I was feeling bored." (22-year-old boy from drug rehabilitation center)

"I'm a spoiled child. I became like this because of my family catering everything I wanted. Then I was just doing everything for entertainment." (a 20 year old drug using boy from a rich family)

- **Prey of criminal groups**

Some idle younger OSYP in society who dropped out from school too early were in danger of being prey of some criminal groups. Those criminal groups kidnapped or pressured younger children to big cities far away from their hometown and forced them to commit illegal things such as stealing, robbery and drug trafficking since they are under the age criteria of being condemned by law. During this progress, some children were treated with drugs by their "boss". Their special experience developed their delinquency and that was hard to rectification even after they were rescued.

"I was kidnapped to Shanghai when I was 10 years old by 3 men. Before going, they said I would be trained to be a cook and earn a lot of money there. When I got there I was forced to steal money. When I failed to steal enough money or tried to reject doing that, they beat me with an awl. During that time they gave me marijuana to smoke and said that was good for sleep." (a 14-year-old boy in drug rehabilitation center)

"Both my brother and I were kidnapped together to another city. The 'boss' forced us to do stealing. During that time we were sold to another 'boss'. He said he would not release us until we steal enough money for him." (an 18-year-old boy who were kidnapped several times and were in detention together with his brother because of drug using)

"My parents divorced when I was 2 years old. I lived with my father after that. I was pressured by a human trafficker to be involved in a criminal group in other

big Cities when I was 11 years old. There were more than 200 children in that group. They force those children to steal money and let them addict to drugs. I was injected directly with heroin by 'boss' at the beginning. I shared needles with others several times when I couldn't find my vein and needed other's help to inject for me. Finally the 'boss' let me go since I got sick and couldn't steal anymore." (a 15 year old drug user who were seriously sick with AIDS like symptoms)

3.3.2.3 Poor support system for stopping drug using behavior

- **Detoxification center**

Many drug users who had been in drug rehabilitation center were not satisfied with the service provided there.

"If the rehabilitation could provide better service for us, I think I would have quit drug using." (a drug using boy in rehabilitation center)

The interview of the people who working in the rehabilitation centers also indicated that there were short of human resources and facilities to provide better services.

"No one would like to work here if they have another choice because the salary is very low and working condition is poor." (a nurse in drug rehabilitation center)

- **Lack of supports from social relations**

Even after quitting drug using, it was hard for many of them to rebuild others'

trust to them. Discrimination, isolation and disrespect led them go back to the drug using companions and began using drug again.

"After being released from the drug rehabilitation center, I saw one of friend who used drug with me before. He walked away pretending not to see me. I heard from others he had quit drug and got married. I felt depression by his treating me like that. Then I went to inject drug again." (a 22-year-old drug using OSYP)

"Now I feel myself like the devil. Every body is ignoring me, my family abandoned me. I feel comfortable to stay with my drug using friends because we don't discriminate each other." (a 19-year-old drug using boy)

3.4 Main limitations of pilot study

3.4.1 Limitations of data collection and sampling

Out of school young people, especially those migrant OSYP in this study were hard to reach population. Even for those resident OSYPs selected from communities, interviewers failed to reach many OSYP who seldom went back home, some of them were even out of their parents' control. Those OSYP who were not reached by this study could be the more at risk compared with the participants.

Resource of collected data was lack of variability. Ethnic groups of participants were dominated by Uygur young people (75%), which did not reflecting the actual constitution of target population in study areas.

Deriving from snowball sampling methods, some interviewees had relationship with each others or came from the same special social connections. These close connections were not avoided in sampling process. In the data from qualitative interview, there were some participants were brothers from same family or close friends with each other.

Many of the drug using participants were not from community. Some were from Drug Rehabilitation center or Reeducation Center through Labor which introduced by public security agencies. There were no clear criteria for enrollment of institutionalized OSYP to the study to reduce the difference between the non-drug using participants and drug using participants. This result in the difficulties of comparing some information collected from this two groups. For an instance, in quantitative data, 18.33% (11/60) OSYP who used drug answered all the questions about HIV/AIDS transmission route correctly and rejected all common misconception listed in questionnaire. Among OSYP who never used drug the correction rate was only 7.5% (37/493). This may suggest that there was bias of sampling methods that many drug using young people were from drug rehabilitation center, where they had been taught those knowledge related to HIV/AIDS and drugs already by the time of data collection.

Even for some drug using participants from community, many of them were led by police to do interview, the participants might hide some of their illegal practices or answer the questions in a pleasing way since they might have been

afraid of being arrested.

Time dimension was not considered during data collection. Most interviews were conducted in daytime, which would lead to loss of some target people with different characteristics who show up at evening or night.

For all those limitations of sampling progress mentioned above and relatively high non-response rate of drug using behavior (9%), sample size could not compensate for those non-randomly sampled data. As a result, the samples of the target high risk behavior, OSYP who used drug, were much less than needed for reflecting the real situations of drug using OSYP by statistical analysis(only 66 of 553 participants reported they had used drug and 32 of them reported they inject drugs). In addition, there was discordance answer for injecting drug using behavior (32 drug using OSYP reported they inject drugs but 40 of them answered the questions about why they injected drug) suggest that there were under reporting of high risk behaviors. This resulted in difficulties in analyzing the related influencing factors for this behavior.

3.4.2 Limitations of questionnaire design

All questions about behaviors did not define the time duration, which may cause less accuracy of response and lack of comparability of those variables with other researches.

Some terms in questions were not defined clearly. That may lead to the participants misunderstand and give wrong answers for those questions. For

instance, in questions about drug using behavior, “illicit drugs” was not reminded that also included cannabis using, which is relatively high prevalence in study area, and many people there don’t think of it that an “illicit drug”.

Confusing questions about dropout and education level lead to the discordance between the education level and drop out time, definition of education need to be clarified. For education level there was a stratum missed between “the never been to school” and “primary school level”, which should be “not finished primary school”.

In the questions about economic status, questions were not differentiation between the economic situation of the family and the OSYP’s disposable assets. Since many of OSYP showed in pilot study that they were actually totally or partially independent from their family, it’s essential to take the OSYP’S own economic situation in to account. In addition, there was absence of substantial economic indicators for evaluation since many of the participants were too young (about 34% of them were under the age 18) to know about their exact family income which were asked in pilot study. On the other hand many people were reluctant to give information about family income or they might under report or over report the income level because of their misperception about their family economic situation (about 17% did not answer this question in pilot study).

Language and cultural barrier was not solved thoroughly. Some minority young people were interviewed in Chinese by the interviewers who were not of

local origins, which may lead the interviewees to misunderstand some questions; also for the interviewer, there could be misunderstanding of responses from the participants; and interviewees could have been impatient with answering all the questions.

In the quantitative data there were some mistakes in answers which clustered in some area's data which may lead by collective misunderstanding of questionnaire of a group of participants. Some obvious data entering mistakes were found in quantitative data. Those mistakes had to be deleted before data analyzing and this would lead to loss of information of collected data.

3.4.3 Limitations of contents of research

There was no sufficient information about factors for risk behaviors of illicit drug abuse, intravenous injecting drug use and sharing needles when they injected drug. Especially the behavior of sharing needles, the most direct risk behavior of transmitting HIV/AIDS, was not asked in the questionnaire. The related reasons for those high risk behaviors were missing in the quantitative questionnaire.

Some other important related information was also missing in collected data. The participants were not differentiated by marital status and migrating situation. The category of used drugs was not collected in this pilot study.

Due to those limitations of sampling progress of pilot study, it was hard to avoid and assess the selecting bias; the results couldn't be confidently generalized to

all of OSYP in Xinjiang. Because of the less rigorous way of questions asked in questionnaire survey and several mistakes which were unable to be corrected during analyzing, the accuracy of the studying results was dubious. And for the absence of some most fundamental information of influencing factors of drug abusing in quantitative data, some possible important factors found in in-depth interview were lack of support from statistical data evidence.

For all those limitations, the information gained from the pilot study was failed to find out or scientifically interpret some important influencing factors of the target high risk behavior (drug use, intravenous injecting drug using and sharing needles during intravenous drug use). Since the most of HIV infection in Xinjiang was due to sharing needles among intravenous drug users(BOH, 2007), the prevention of this high risk behavior could be the most important and fundamental way to control HIV prevalence in that area. Before taking intervention on this high risk behavior, the most essential thing is to find out the influencing factors which determine those target high risk behaviors in that most crucial specific population, OSYP, in Xinjiang.

PART II : NEW PROPOSAL

4. Main objectives of new proposal

4.1 General objective

Based on a pilot study of risk behaviors of OSYP in 5 cities of Xinjiang, this study plans to identify the factors influencing the intravenous drug use and sharing needles among OSYP in Xinjiang and their perception on risks of HIV/AIDS related practices.

4.2 Specific objectives

- To identify reasons that lead the OSYP to practice the intravenous drug use and share needles in Xinjiang;
- To identify the knowledge of OSYP which link between the intravenous drug using, sharing needles and HIV/AIDS in Xinjiang;
- To propose suggestions on health policy and strategy of government who make policy for OSYP in Xinjiang and to provide reference to control HIV/AIDS among similar populations in other regions.

5. Methodology

5.1 Study setting and target population

5.1.1 Study setting

5 relatively high HIV and drug using prevalent cities in Xinjiang will be selected to conduct the survey. Those are Urumqi, Yining, Kashi, Akesu, Changji, the same cities as the pilot study (Background of these sites has been described in pilot study).

5.1.2 Target population

Target population of this study is Out of School Young People (OSYP) which is defined strictly as aged 10-24 by the time of data collection. This survey will concern young people who are: school dropouts; young people who have either graduated from high school or hold a General Equivalency Diploma, but are basic skills deficient, unemployed, or underemployed. Underemployment for OSYP in this study defined as any out of school youth who is currently employed, but not earning enough at the level of identified as the living wage for the city who is living in; or is earning at the living wage level of the city who is living in, but is not employed full-time equivalency status. (WIA, 2005-6)

According to the Labour law of People's Republic of China, a person who does not have full-time equivalency status defined as an employee who works less

than 4 hours per day in average and totally works less than 24 hours per week for the same employer (NPC, 2008).

Institutionalized OSYP such as young people in detoxification or detention center who were selected to participate the study must be the new admission or it is his/her first time to be in that center.

5.2 Study design

Descriptive cross-sectional study combining quantitative and qualitative analysis to identify the influencing factors of OSYP's high risk behavior.

5.2.1 Quantitative study

5.2.1.1 Sample size

Among the interested high risk behaviors in this study, sharing needle when injecting drug is the most direct risk for infection with HIV, prevalence of sharing needle should be chosen to calculate sample size. In the pilot study there was no information about this prevalence, so the prevalence of illicit drug using will be the substitute, which was 13.12% among OSYP in pilot study.

Formula $N=(Z_{1-\alpha/2})^2 \bullet (1-p) / p\, d^2$ is used for calculating the sample size assuming that data was collected by simple random sampling method. Take $\alpha=0.05$, estimated high risk behavior prevalence p=13.12%, take absolute precision d=0.20. Then the calculated sample size N is about 660.

Considering the sampling method is not going to be simple random sampling

and the prevalence of high risk behavior in the pilot study could be lower than actual target population (some OSYP were interviewed in drug abusing rehabilitation center, and substitute prevalence could be higher than the most direct high risk behavior, sharing needle of IDUs), the calculated sample size will be multiplied by 2.0.

Then the sample size of this study is going to be around 1320.

In each city about 260 quantitative data will be collected to ensure the variability in areas of the data collection.

5.2.1.2 Sampling methods

Considering the target people in this study are relatively hard to reach, data will be sampled with the combination method of **cluster sampling** and **snow ball sampling** or **time-location sampling**

Cluster sampling: Samples from part of the target people, especially the residence of those cities which are relatively easier to reach, will be selected by cluster sampling method based on the availability of registered records from residence administrative office. Specific method will follow this way:

At least four districts in each city where easier to get access to OSYP will be selected. In each district at least 3 sub-districts (communities) will be selected randomly or where easier to reach OSYP (usually they are the relatively poor communities or the districts with higher drug trafficking prevalence) will be selected in order to facilitate sampling process. In each community the

households where there were OSYP will be randomly selected; only one 10-24 year old OSYP of each selected households will be interviewed. If more than one eligible OSYP in one household available during survey, one of them will be chosen by random.

Time location sampling: This method will be used for sampling migrant OSYP or other hard to reach OSYP. In each interviewed location the target population must be interviewed at least in 2-4 different times (at morning, afternoon, evening and night). Time duration of interview in different locations will be decided with the characteristics of the location taken into consideration. Data collection in some entertainment place such as Kara OK hall, discotheque will be conduct during afternoon or evening and or around mid-night. Interviewing time of some other places such as video hall, pull room, cyber-café will be during daytime and evening or around midnight. The location of data collection will also be considered based on the mapping of those locations. Selected locations should be distributed evenly in data collection areas. Then all the eligible OSYP in those locations will be interviewed.

Snowball sampling: This method will also be used for sampling migrant OSYP or other hard to reach OSYP. Some “seeds” among OSYP in study community will be randomly chosen and interviewed. Each seed leads to other target population members; those are invited for participation will provide more leads. This process continues until the target sample size has been reached. Each seed is allowed to recruit no more than 3-4 target people (for the qualitative data,

each seed is allowed to recruit no more than 1-2 target people). The referral chain will be documented. Biometrics or visible features (scars, tattoos, etc) will be recorded to avoid duplication of sampling during survey.

Data will be collected in households, working places, leisure center or other locations where we can reach the target population.

5.2.1.3 Quantitative questionnaire

Structured questionnaire will be used to collect quantitative data. The contents of the questionnaire include the demographic characteristics of participants (age, ethnicity, gender, education, marital status, religion etc.), basic information about HIV/AIDS (HIV infection status, awareness and attitude about HIV etc.), HIV/AIDS related behaviors (especially for high risk drug using behavior) and demand status, attitudes toward risky behaviors and some other possible influencing factors.

Questionnaire is designed in English based on carefully analyzed results and experience gained from pilot study which is suited for both self-completed and interviewer administered method. For data collection, it will be translated carefully into Chinese, Uygur and Kazak language, which are the language of the biggest ethnic groups in the study area.

Before starting the study, the translated questionnaire will be used for a small scale survey in study field to test if it’s suitable for target population. After this

small pilot study the questionnaire will be revised according to the feedback from the field.

5.2.2 Qualitative study

In the qualitative study, methods of focus group discussions, in-depth interviews and key informant interview will be applied.

Focus group discussion (FGD): It implies a group discussion in order to identify perceptions, thoughts and impressions of a selected group of people regarding a specific topic of investigations. Sensitive or controversial issues are better handled through FGD because participants feel more comfortable or secured about expressing certain views when they are in groups. In each region four focus groups will be created with adult men and adult women who are older than 25 years, and young boys and young girls who are in the age of 10-24 years old. These groups will be chosen because adult men and women have different perception of drug use compared those of young people perception. Additionally adult people can give some information about behaviors of young people regardless of their drug use in the past time. They could be helpful to understand the present phenomena of intravenous injecting drug using among young people through acknowledges about this practice in past personal experience. To make group of young boys and young girls will aim to get boys and girls perception about phenomena studied. Each group will have 10 participants and in average each of the discussion took one hour. Dates and

venues were fixed on the convenience of the participants. Participants to FGD will be chosen in households and from the communities of the same place with the quantitative data collected.

In-depth Interview: It is a conversation in which the researcher encourages the informant to relate, in their own terms, experiences and attitudes that are relevant to the research problem. It will consist of intravenous injecting drug users and non intravenous injecting drug users. In each city 20 intravenous injecting drug users will be chosen as well as 10 non intravenous injecting drug users. In total 30 OSYP will be interviewed. They will be chosen at households but also in the communities where the OSYP usually develop their drug using behavior. Drug users will be interviewed on: their first contact with drugs; their motivation; their perception on the relationship between intravenous injecting drug users and HIV/AIDS; the benefits and inconveniences of their practice. Non intravenous injecting users will be interviewed about: reasons why they don't use intravenous injecting drugs; their attitude and knowledge about HIV/AIDS and their attitude towards their friends' behavior who use drugs.

An in-depth interview framework is designed to ensure the interview will get as much related information as possible. If it is possible, interviewer should speak the native language of interviewees to ensure good communication. Otherwise interviewers should be companied by a translator.

Key Informant Interview*:* The purpose of key informant interviews is to collect

information from community leaders, professionals, or residents who have firsthand knowledge about the community. These community experts, with their particular knowledge and understanding, can provide insight on the topic and give recommendations. In each city, at least 2 people from drug control department of public security agency, 3 health workers (doctors or nurses in drug rehabilitation center, staff from HIV/AIDS department of CDC or community clinical doctors), 2 religious staff or staff from related local NGO and 2 school teachers will be interviewed by key informant interview method based on their willingness. People from public security will provide information about drug trafficking problems and general characteristics of drug users in that area. Health workers may give some overview of HIV prevalence, its relationship with IDUs and other health related problems among target population. Religious staff or people from NGO may have closer insight into problems of the target population based on their non-governmental position. School teachers may provide some important information about the young peoples schooling trends, problems with the education system and some characteristics of young people who drop out from school at an earlier age.

6. Data analysis

Quantitative data will be entered with *Epi data3.1* by 2 persons and will be checked with this software. The effective quantitative data will be analyzed with STATA 9.1.

Qualitative data will be analyzed manually. All interviews will be transcript. Codes will be assigned to each theme and the responses noted accordingly. These will be transferred to the matrix for analysis based on the major themes.

7. Quality control of data collection

7.1 Interviewer recruitment

- Local language speaking and qualified people with education of college level or above will be recruited to be interviewers or translators in order to ensure the communication during the data collection;
- Interviewers recruited on study sites will be arranged to work in a different city from the one they used to live in. This is for reducing the possible social connection between target people and interviewers, protection of interviewee's privacy and for reducing the interviewer's bias;
- Interviewers will be trained sufficiently to understand: the purpose of the study, all the criteria for data collection, related disciplines of studying process, and all the details of questionnaire before the conduction of the survey;
- If possible the data collection will avoid the school holiday time to avoid selection of in school young people by mistake.

7.2 Quality control of sampling process

- As combined sampling methods will be used during research, we should make all efforts to improve the adherence of interviewees and interview rate of

selected sample to insure the sample size and sample variation.

- Sampling methods principle will be conducted or followed as strictly as possible.

7.3 Quality control of data management

- Data base will be well developed to automatically reject illegal or incorrect information in quantitative data; illegal information will be corrected or deleted.
- Data will be entered twice by different people and will be checked by data entering software (Epidata 3.1)
- Qualitative data records will be documented and translated as soon as possible by interviewers and researchers on site.

8. Ethical approvals

Study will start after getting the ethical approval from Institutional Review Board (IRB) and the whole study process will be monitored by them. Informed Consent Form will be designed to explain the aims and anticipated outcome of the study, risks of harm and possible benefits to the interviewees, freedom of interviewee's withdrawal at any time and right to refuse to answer any questions. Questionnaires are anonymous, confidential, self-administered (only for illiterate participants the interviewer-administered method will be used) and the answers are optional. All interviewees will be informed well with those ethical

issues and verbal consent will be taken before starting the interview. Interviewers will sign a statement to verify that the respondent has been given the required information and has given their consent.

9. Collaboration parties

The HIV/AIDS related studies would not succeed without Chinese government's approval and support. If it's possible, the study will collaborate with national or autonomous regional related government health agency based on the well communication during the studying process and sharing the study results.

Active participation of the local communities and having respects to the local cultures are very crucial in this study. Qualified volunteers from those local ethnic groups and study areas will be invited to participate in the whole research, including the research design, data collection and summarization of study result in order to facilitate the research and its results implementation.

10. Expected outcomes of new proposal

In the new proposal, sampling limitations would still exist to an extent. But compared with the pilot study, the sample could be more variable since the time and location dimension was considered during data collection. Since the sample size is calculated according to the findings from the pilot study and is

larger than the pilot study, the results of the new research could be more reliable.

As described in the objectives of the new proposal, this study is aiming at a more specific and fundamental objective, the determining factors of high risk drug using behavior, which has been understood to be the most high risk factor of HIV transmission in Xinjiang, China. Finding out these factors may enable the drug using prevention and HIV/AIDS control intervention point to the most fundamental problems and reverse the epidemic of HIV/AIDS among the most crucial population, out of school young people in that area.

The main outcomes of the new proposal are as follows:

10.1 Social-demographic factors

Some studies have been conducted among intravenous injecting drug users in Xinjiang found that there were significant differences of HIV prevalence between different sex, age, marital status, residency, ethnicities, education level among the participants (Yujian J, et al.,2008; Zhang W, et al.,2009; Yuanzhi Zhang et al., 2007). But all of them were conducted in adults and the association factors with high risk drug using behaviors were not analyzed specifically. The pilot study found some social-demographic factors such as gender, education, ethnicity etc., which were associated with drug using behavior. But the limitations of the pilot study mentioned in Part I reduced

these associations' reliability. The new proposal is aimed at a younger population (10-24 year olds) and designed the questions about social demographic factors more accurately and precisely, which could allow the results to be more reliable and significant to the crucial population of HIV/AIDS transmission.

In the evaluation of economic situation of OSYP, the new study can provide more accurate economic situations of OSYP and their family. Both family economic situation and the OSYP's own economic situation are taken into consideration. And the incomes are categorized by minimum wage in those cities, minimum wage multiplied by 2, 3, 5 and 10. Additionally their family economic condition are assessed by indicators of materials ownerships such as dwelling floor material, energy used for cooking and ownership of different vehicles in family etc. All these indicators have taken the local situation into consideration.

10.2 Factors of beginning to practice high risk behavior

Some specific factors of how OSYP in Xinjiang begin to practice intravenous injecting drug using and sharing needles will be discussed in the new proposal. Knowledge and behavioral skills among target population will be analyzed precisely in this study.

Survey on out of school youth in Tonga showed that compared with in school youth, out of school youth were more likely to feel unhappy and lonely, there

was significantly higher use of tobacco, alcohol and marijuana among out of school youth (UNICEF, 2001). In the qualitative data of the pilot study, there were some OSYP who began to use drugs when they were depressed. This indicated that psychological problems may be an important factor in OSYP's practicing drug using behavior. This assumption which has always been ignored in other related studies will be analyzed both with quantitative and qualitative data in the new study.

Motivations of OSYP to begin drug abusing will be investigated more precisely and the information gained from the qualitative study of the pilot study will be included in the quantitative questionnaire. This will allow the questions to be more relevant to real situations among the target population and provide more scientific results based on statistical analysis.

Cultural influencing factors will also be considered in this study. Archeologists discovered cannabis utilization from 2500 year old tombs in Turpan, Xinjiang. This indicated that cannabis was widely used for medical and religious rituals in ancient Xinjiang (Hong-En Jiang et al, 2006). Some drug users of OSYP in the pilot study reported that they grew up in the community where there was a long history of cannabis use and that it was still popular in the community by the time of data collection. These inherited conception and attitude about cannabis and other drug using behavior in Xinjiang area have never been discussed; their associations with higher prevalence of drug using and HIV/AIDS in those areas.

10.3 Factors of maintaining the HIV related high risk behavior

A study on adult patients who were receiving methadone maintenance treatment showed that personal relationships strongly influenced the continued drug using. Patients who have live-in partner who used drug and the extent of drug using social relationships were more likely to continue to inject drugs and share needles (Aruna G, et al., 2001). In the new proposal of community based survey on OSYP, which include the minors, these social relationships will be analyzed as some of the significant influences on drug using behavior to the same target population that has been shown in the pilot study. These associations will be precisely categorized by different social relationships and the key influencing social relationships on high risk drug using behaviors and maintenance. These behaviors will be discussed in the new study.

Some incentive factors of keeping drug using status and high risk drug using behavior (intravenous injecting drug using and sharing needles of OSYP in Xinjiang) will be discussed in the new study with quantitative and qualitative data. These factors are usually combined with the misconception of the effects of drug use and other misunderstood knowledge about HIV/AIDS. For instance, in the pilot study, some OSYP reported they became smarter if they used drugs. Some of them used it for behaving better in front of others. Finding out these factors would be useful to convey the essential knowledge accordingly and to correct the misconception of target people about HIV/AIDS and drugs.

10.4 The gap between knowledge and safer practice among OSYP

According to UNGASS 2008 China Report, 49% IDUs in China had correct concepts on HIV/AIDS prevention. But condom use among IDUs in last sex was only 34% and there were about 60% of IDUs were practicing unsafe injecting (UNGASS, 2008). This means that knowledge might not convert to safer behavior among many drug users in China. In the qualitative data of the pilot study, there were some OSYP who began to use drugs even when they already knew the terrible consequences of using drugs. But the width of this gap between knowledge and safer practice among OSYP in Xinjiang is still unknown.

In the quantitative data from the pilot study, the correct answer about HIV/AIDS knowledge among drug using participants was even higher than non-drug using participants. But this data failed to reflect the time sequences of knowledge and their high risk behavior since sampling of drug using young people was biased by institutionalized participants. In the new study proposal, the time of gaining the knowledge will be considered to eliminate the sampling bias. In addition, the obstructive factors of converting knowledge into safer behaviors will be discussed precisely. Some other social behaviors such as drinking alcohol may put some OSYP in danger of using drugs as shown in one case in the qualitative data of the pilot study. For the high risk drug using behavior such as sharing needles, the availability of clean needles and other associated factors will be discussed.

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Annex 1 Questionnaire for Quantitative Study

Code：_____
Investigated area：_____City (County)_____District (Town)
Day/Month/Year of interview:_____
Name of interviewer:_____
(The information above is for interviewer to fill in.)

Questionnaire for Pilot Study based

Research Protocol on Factors

Determining HIV Related High Risk Behavior among

Out of School Young People in Xinjiang, China

(draft)

We are from xxxxx. We are working on a research which is going to identify the influencing factors of risk behaviour related to HIV infection among out of school young people in Xinjiang. I'm going to ask you some very personal questions that some people find difficult to answer. All the information we obtained are completely confidential. Your answers will be just used for statistical analysis. Your name will not be written on this questionnaire and your information and view provided here will not be recorded and published individually. You do not have to answer questions that you do not want to answer, and you may end this interview at any time you want to.

However, your honest answers to these questions will help us in our research about behaviours. We would greatly appreciate your help in responding to this survey. The survey will take about 40 minutes. Would you be willing to participate?"

1. yes
2. no

If "yes", please begin to answer these questions below by filling in the blankets or check the choices you've chosen. If it's not explained specifically the question is multiple choice questions, all the others are monomial choice questions.

Household number:

Name of Interviewer：_____

	Questions	Answers	Skip
1	**General information**		
101	Gender	Male 1 Female 2	
102	Time of Birth	_____Year _____month	
103	Marital status	Married 1 Widowed 2 Divorced 3	

		Separated 4 Never married 5	
104	To which ethnic group do you belong?	Ethnicity	
105	Educational level	Never attended school 1 Didn't finish primary school 2 Primary school 3 Junior high school 4 Senior high school/occupational school 5 college or above 6 Other education_____7 (Please specify)	
106	What was the main reason for your dropping out of school?	economic reason/lack of labor in family 1 Poor performance in studying 2 Parents not allowed 3 Affected by friends 4 Discriminated/bullied by others in school 5 Compelled from school as a punishment 6 Other reasons_____7 (please specify)	
107	How many total years of education have you completed up to now?	Number of years	
108	What language school have you attended?	Han Chinese language school 1 Minority ethnic language school 2 Other language school_____3 (Please specify)	
109	Han Chinese Language Competency	Excellent 1 Medicore 2 Basic 3 None 4	
110	Han Chinese Writing and Reading Competency	Excellent 1 Medicore 2 Basic 3 None 4	
111	Native Language Competency	Excellent 1 Medicore 2 Basic 3 None 4 No native language 5	

112	Native language Writing and Reading Competency	Excellent 1 Medicore 2 Basic 3 None 4 No native language/character 5	
113	Where did you live mainly during last 12 months? (administrative level of leaving area)	capital city(National / provincial capital) 1 other city 2 county 3 Town 4 Village 5	
114	How long have you lived here in (name of city)?	Year_____month	
115	Health status	Very good 1 fair 2 Poor 3	
116	What religion are you?	Islam 1 Buddhism 2 Catholicism 3 Christian 4 Other 5 No religion 6	 =>117
1161	How often do you go for religion activity to some specific place?	every day 1 every week 2 every month 3 Sometimes 4 Never 5	
117	Are you working now?	Yes 1 No 2	 =>119
118	What kind of job are you doing now?	full time job 1 Part-time job 2 Temporary job 3 Running own business 4 Farming at home 5 Other_____6 (please specify)	
119	How much is the monthly wage or income of your job?	< 500 Yuan 1 500-1000 Yuan 2 1000-1500 Yuan 3 1500-2500 Yuan 4 2500-5000 Yuan 5 >5000 Yuan 6	
120	What job you did in last 12 month?		

2	**Family information**		
201	What type of household your family registered	Non-rural 1 Rural 2	
202	How many family members are there in your family currently?	Number of family member	
203	How much is your total family income during last 12 month?	Yuan(RMB) include: salary, wage of temporary job, farming, stock raising, and other incomes	
204	How much have you earned by yourself in last 12 months	Yuan(RMB) include: salary, wage of temporary job, farming, stock raising, and other incomes	
205	How is your household economic status compared with others in your living area?	High1 between high and middle2 middle3 between middle and low4 Low5	
206	Material of your dwelling floor?	Wood/tile 1 Brick/concrete 2 Dirt/straw 3	
207	Number of rooms in dwelling?	Number of rooms	
208	What kind of energy do you use for cooking?	Natural gas 1 Coal/kerosene 2 Wood/straw 3 Electricity 4 Other_____5 (please specify)	
209	Do you have some of these value things in your dwelling?	Television 1 Telephone 2 Refrigerator 3 Bicycle 4 Motorcycle 5 Car 6	
210	Is there any people infected with HIV in your family?	Yes 1 No 2	
211	Is there any people use drug in your family?	Yes 1 No 2	
212	Are your parents able to work?	Both of them able to work 1 Only father is able to work 2 Only mother is able to work3 None of them are able to work 4	
213	Could you communicate with your parents very well?	Yes 1 No 2	

214	Who has closest relationship with you in your family?	Father 1 Mother 2 Brother/sister 3 Other family member_____4 (Please specify)	
215	In the last 12 month how long have you been away from your home altogether?	Less than 1 month 1 >1 moth & <3 months 2 >3 month & <6 month 3 >6 month & <9 month 4 >9 month & <12 month 5	
216	How is your family members' relationship with each other?	Very good 1 Normal 2 Not very good 3 Very bad 4	
3	**Knowledge about drugs and HIV**		
301	Have you heard of illicit/non medical/addictive drugs before?	Yes 1 No 2	
302	Please list the name of the illicit/non medical/addictive drugs you know.		
303	Do you think cannabis is an illicit drug?	Yes 1 No 2 Don't know 3	
304	Is there long history of using cannabis or other drugs in your living area?	Yes 1 No 2 Don't know 3	
305	Do you think all people will get addicted to illicit drugs if they use it?	Yes 1 No 2 Don't know 3	
306	Do you believe that using illicit drug will do harm to the person's health?	Yes 1 No 2 Don't know 3	 =>307 =>307
3061	What bad effects will happen to a person if he/she uses illicit drugs?	Economic loss 1 destroy physical health 2 lead to mental health problem 3 will destroy family/social relationship 4 lead criminal behaviour 5 Other_____6 (Please specify)	
307	Do you think illicit drugs have some benefit to a person who uses it?	Yes 1 No 2 Don't know 3	 =>307 =>307

3071	What kind of benefits do the illicit drugs have on a person who uses it?	cause high/happy/magic feeling 1 Relieve pain 2 Improve sexual life quality 3 Let people become smarter 4 Other_____5 (Please specify)	
308	Have you heard of sexual transmitted disease?	Yes 1 No 2	 =>609
3081	Could you list the names of sexual transmitted disease?	STD list	
309	Have you heard of an illness called AIDS?	Yes 1 No 2	 =>401
310	Is there anything a person can do to avoid getting AIDS or the virus that causes AIDS?	Yes 1 No 2 Don't know 3	
3101	Can people get AIDS virus by having sexual intercourse with a person who is infected with the AIDS virus?	Yes 1 No 2 Don't know 3	
3102	Can people reduce the chances of getting the AIDS virus by having just one sex partner who has no other partners?	Yes 1 No 2 Don't know 3	
3103	Can a person get the AIDS virus from mosquito bites?	Yes 1 No 2 Don't know 3	
3104	Can people reduce the chances of getting the AIDS virus by using a condom every time they have sex?	Yes 1 No 2 Don't know 3	
3105	Can a person get AIDS virus by sharing food with a person who has AIDS?	Yes 1 No 2 Don't know 3	
3106	Is it possible for a healthy-looking person to have the AIDS virus?	Yes 1 No 2 Don't know 3	
3107	Can the AIDS virus be transmitted from a mother to a child during pregnancy, delivery or breastfeeding?	Yes 1 No 2 Don't know 3	
3108	Can a person get the AIDS virus by going to school together or working together with a person who get infected with this virus?	Yes 1 No 2 Don't know 3	
3109	Can a person get the AIDS virus	Yes 1	

	by sharing syringe/needle with a person who infected with the AIDS virus when injecting drug?	No 2 Don't know 3	
311	How old were you when you learn about the knowledge asked above?	Age _____ Don't know/don't remember 3	
312	Do you know someone personally who has AIDS virus or some one who died from AIDS?	Yes 1 No 2 Don't know 3	
313	Do you know where a person can be tested for AIDS infection status?	Yes 1 No 2	=>401
314	What is the name of the place where a person can be tested for AIDS infection status?	Name of place_____	
4	**Resource of information**		
401	Your information about drugs is mainly from	newspaper and magazine 1 Broadcast 2 TV 3 electronic software or internet 4 School 5 IEC materials 6 relatives or family members7 Friends/ companion 8 Other_____9 (please specify)	
402	Your information about AIDS is mainly from:	newspaper and magazine 1 Broadcast 2 TV 3 electronic software or internet 4 School 5 IEC materials 6 relatives or family members7 Friends/ companion 8 Other_____9 (please specify)	
403	How often are you exposed to these types of media listed below: *(please choose the No. of frequencies to fill in for each media from question 4031-4035)*	every day 1 every 2-3 days 2 every week 3 every month 4 occasionally 5 never 6	
4031	TV		

4032	Newspaper/magazine		
4033	Broadcasting		
4034	Internet		
4035	Video/cinema		
5	**Living Status and Environment**		
501	If you get sick, how do you deal with it?	go to hospital 1 go to private clinic 2 buy and take medicine without doctor's prescription3 not to seek any care for sick 4 go to the traditional doctor5 other_____6 (please specify)	
502	How often do you take shower?	every day 1 2-3 times per week 2 several times per month 3 occasionally 4	
503	Do you share toothbrush with others?	Yes 1 No 2	
504	Do you share shaver/ razor with others?	Yes 1 No 2	
505	Do you have any friend who use drug?	Yes 1 No 2 Don't know 3	
506	Have you seen illicit/non medical/addictive drug?	Yes 1 No 2	
507	Have you seen others using drug?	Yes 1 No 2	
508	Do you have any friend who has been infected with HIV/AIDS?	Yes 1 No 2 Don't know 3	
509	What kind of public place do you usually go for entertainment?	Video Hall/cinema 1 Discotheque 2 cyber cafe 3 billiard room 4 Chess and poker room 5 Night club/bar 6 Others _____ 7	
510	What is your hobby?		
511	Do you feel lonely sometimes?	Always feel lonely 1 Some times 2 Never feel lonely 3	
512	Do you feel life is boring	Always 1	

	sometimes?	Some times 2 Never 3	
513	Do you feel sad/depression sometimes?	Always 1 Some times 2 Never 3	
514	Do you feel satisfied with your life now?	very satisfied 1 satisfied 2 not very satisfied 3 not satisfied 4 totally not satisfied 5	
515	Do you agree with “Life will be better”	Yes 1 No 2 Don’t know 3	
516	What is the farthest place you have been to?	Name of the place_____	
517	What is the highest administrative level you have been to?	Town 1 County 2 city(sub-regional capital city) 3 your province’s capital city 4 other provincial capital city 5 other country 6	
6	**Behaviors**		
601	Have you ever used cigarettes/tobacco? (not including cannabis)	Yes 1 No 2	=>602
6011	How old were you when you firstly used cigarettes/tobacco? (not including cannabis)	Age _____	
6012	How many cigarettes do you now smoke each day?	Number or cigarettes ____	
602	Have you ever drunk an alcohol-containing beverage?	Yes 1 No 2	=>603
6021	How old were you when you firstly drank any alcohol-containing beverage?	Age	
6022	In the last 3 months, on how many days did you drink an alcohol containing beverage?	Number of days_____1 Never 2	
6023	In the last 3 months, on how many occasions did you get “drunk”?	Number of times_____1 Never 2	
603	Have you had sexual intercourse?	Yes 1 No 2	=>604
6031	How many persons you had sexual intercourse with?	Number of sexual partners	

6032	How old were you when you had first sexual intercourse with opposite sex?	Age_____	
6033	Have you had sexual intercourse with same-sex partner?	Yes 1 No 2	
6034	Do you use condom when you are having sexual intercourse?	Never use condom1 just use it some time2 use condom most of time3 always use condom4	
6035	Did you use condom during your last sexual intercourse?	Yes 1 No 2	
6036	Have you ever paid for sex?	Yes 1 No 2	
6037	Have you been paid for sex?	Yes 1 No 2	
604	Do you know a place where a person can get condoms?	Yes 1 No 2	 =>605
6041	What is the name of the place where a person can get condom?	Name of place_____	
605	Have you had sexual transmitted disease?	Yes 1 No 2	 =>607
606	What type of sexual transmitted disease you had?		
607	Was there anyone who had told you about knowledge of physiological or reproductive health?	Yes 1 No 2	
7	**High risk behavior and reasons**		
701	Have you ever used any illicit drug such as cannabis, heroin, other narcotics or opiates, cocaine, amphetamines, other stimulants, barbiturates, tranquilizers, inhalants, solvents, steroids etc. to get high?	Yes 1 No 2 *(Don't count any drugs used for medical purposes).*	 =>710
7011	How old were you when you firstly used the drug?	Age_____	
7012	How did you get the drug you firstly used?	I got it as a gift/treat 1 I bought it on my own 2 I gave someone money to buy it 3 I was a dealer 4 Other_____5 (Please specify)	
7013	What was that drug?	Name of the drug	

7014	Did you have any friends/family members/relatives who used drug before you began to use drug?	Yes 1 No 2	
7015	How many?	One 1 Tow 2 Three to five 3 6 or more 4	
7016	What is the relationship of them with you?	Sex partners 1 Family members/relatives who are not sex partner 2 Close friends 3 Acquaintance 4	
7017	Who influenced you to use drug at the first time?	Sex partners 1 Family members/relatives who are not sex partner 2 Close friends 3 Acquaintance 4 Other 5	
7018	Why did you firstly try to use drug?	feel curious of it 1 to relieve pain 2 To get high 3 pressured by others 3 follow the others 4 Other 5	
7019	Just before you firstly tried to use drug, what is your mood?	exciting 1 Depression 2 Sad 3 Feel Boring 4 Drunk with alcohol 5 Angry 6 Don't remember 7	
702	During latest time when you using drug, how much does it cost for using drug per day?	_____Yuan (RMB)/Day	
703	How did you get the money for the drug?	earn by myself 1 get from family 2 borrow from others 3 steal, rob or cheat from others 4 Get by sexual service 5 Others 6	
704	What kind of drug do you use during the latest time when you were using drug?	Cannabis 1 Heroin 2 Other narcotics or opiates 3 Cocaine 4	

		Amphetamines 5 Other_____6 (Please specify)	
705	How often do you use drug during the latest time when you were using drug?	Less than once a month 1 1 to 3 times a month 2 About once a week 3 2 to 3 times a week 4 4 to 6 times a week 5 About once a day 6 2-3 times a day, almost every day 7 other_____8 (Please specify)	
706	How many persons have you initiated into using drug?		
707	How do you use drug?	Intravenous injection 1 Smoke with cigarette 2 Burn and inhale 3 Sniff 4 other_____5 (Please specify)	 =>708 =>708 =>708 =>708
7071	Why do you injecting drug?	Injecting drugs is cheaper 1 Type/quality of drug available inadequate for non-injection 2 I thought it would be a better high 3 My friends/companions were injecting and I wanted to try 4 Pressure from friends/companions 5 Worried about the health consequences of sniffing/snorting6 I was depressed 7 Everyone was doing it 8 Other_____ 9 (Please specify)	
7072	Have you shared needles/syringes with others during injecting drug?	Yes 1 No 2	
7073	Why did you share the needles/syringes with others?	Have no money for buy needles/syringes 1 Don’t know where to get clean needles/syringes2 Needles/syringes was not available when urgently need drug 3 Wanted to show respect/trust to the people whom shared with 4 To share the drug prepared in	

		needle/syringe 5 The people who used need/syringe looks healthy 6 Pressure from peers 7 Don't care about if I would get any disease from this 8	
7074	Before your firstly shared needles/syringes did you think that if you inject you would be infected HIV or AIDS?	Yes 1 No 2	
7075	With whom you shared the needles/syringes in the last 6 month?	Sex partner 1 Relative/ family member 2 Friends 3 Some one you didn't very well 4	
7076	From how many different people in total did you share needles/ syringes in the last 6 months?		
7077	In the last 6 months how did you usually clean needles /syringes that someone else had used?	Water 1 Boiled water 2 Soap or detergent 3 Bleach 4 Alcohol 5 Other_____6 (Please specify)	
7078	Do you know where a person can get clean needles/syringes?	Yes 1 No 2	 =>708
7079	What is the place where a person can get clean needles/syringes?	Place(s)	
708	Why have you always used non-injection methods instead of injecting? (If Q708 is "yes", please skip this question.)	Trying to control/reduce/eliminate drug use 1 Worried about contracting AIDS/other disease 2 Easier to modulate doses, avoid overdose 3 Fear/dislike of needles/syringes or blood 4 Don't want track marks or other stigmata 5 Injection paraphernalia unavailable 6 Drugs for injection too expensive 7 More convenient, easier, faster to use non-injection 8 Satisfied with the high from	

		non-injection methods 9 Peer pressure/desire 10 Accustomed to non-injection; never thought of injecting 11 No contact with injectors/not exposed to injection scene 12 Because of the social stigma attached to injecting 13 Other_____14 (Please specify)	
709	Have you tested for HIV infection status?	Yes 1 No 2 Don't know 3	
710	Are you infected with HIV/AIDS?	Yes 1 No 2 Don't know 3	 =>end =>end
711	How did you get infected?	Sharing needles/syringes during injecting drugs 1 Sexual transmission 2 Infected from mother during her pregnancy or breastfeeding 3 Illegal blood donation 4 Blood transfusion 5 Other_____6 (Please specify) Don't know 7	

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Annex 2. Guide for In-depth Interview

Code：_____
Investigated area：_____City (County)_____District (Town)
Day/Month/Year of interview:_____
Name of interviewer:_____

Guide for In-depth Interview for Research on Factors Determining HIV Related High Risk Behavior among Out of School Young People in Xinjiang, China

We are from xxxxx. We are working on a research which is going to identify the influencing factors of risk behaviour related to HIV infection among out of school young people in Xinjiang. I'm going to ask you some very personal questions that some people find difficult to answer. All the information we obtained are completely confidential. Your answers will be just used for research. Your name will not be recorded and your information and view provided here will not be published individually. You do not have to answer questions that you do not want to answer, and you may end this interview at any time you want to.

However, your honest answers to these questions will help us in our research about behaviours. We would greatly appreciate your help in responding to this survey. The survey will take about 60 minutes. Would you be willing to participate?"

3. yes
4. no

1. General Information

1.1 Information observed by interviewer

1.1.1 Living area or environment of interviewee:

Community situation: public facilities including transportation, health facilities, entertainment places, schools etc.; cultural and demographic characteristics of community.

Living conditions (if interview is conducted in household or other living area of interviewee): housing or working conditions, sanitary conditions etc.

1.1.2 Superficial impression of interviewee: nutritional status, spirit, expression and other special characteristics of interviewee

1.2 Demographic information

Gender, age, marital status, ethnicity, religion, education, family economic status, family situations, present job

2. Questions about schooling

2.1 How is your education level?

2.2 Do you think school education is useful for your life?

2.3 Why did you dropout from school?

2.4 What did you do after dropping out of school?

3. Questions about drugs

3.1 Knowledge and attitude about drugs

3.1.1 What kind of drug have you seen? How do you think about drug abusing?

3.1.2 What kind of people are using drug in your community?

3.2 Motivations of using drug

(For Non-drug using OSYP: 3.2.1-3.2.3)

3.2.1 Are there any people who use drug in you family or among your friends?

3.2.2 Have you think about to try to use drug?

3.2.3 Are there any people who suggest you to use drug? If “yes”, Why and how did you refused?

(For drug using OSYP: 3.2.4-3.2.9)

3.2.4 Are there any people who use drug in your family or among your friends before you begin to use drug?

3.2.5How and why did you begin to use drug? Who influenced you to use drug? How old were you when you begin to use drug?

3.2.6 How is your feeling of using drug on first time? How is the feeling after that?

3.2.7 Do you want to quit drug using? Why?

3.2.8 Have you tried to quit drug using? How?

3.2.9 What are the obstructive/supportive factors of quitting drug?

3.3 High risk practice of using drug

(For drug using OSYP: 3.3.1-3.3.2)

3.3.1 How often do you use drug? How much does it cost per day?

3.3.2 How do you use drug? Why you keep this method to use drug?

(For IDU: 3.3.3-3.3.6)

3.3.3 How and why did you begin to inject drug?

3.3.4 Have you used syringes someone else used before? Have you shared the rinse water for syringes? Have you shared the cotton? How many times do you use one syringe usually?

3.3.5 Why did you share syringes/rinse water/ cotton?

3.3.6 Do you know where to get clean syringes? Is it affordable for you? How is the accessibility?

4. Questions about sexual behaviour

4.1 Do you have sexual experience?

4.2 How old were you when you had first sex?

4.3 How many sex partners do you have now? How many have you had by now?

4.4 Do you use condom when you have sex? Why do you use or why don't you use?

4.5 Do you know where to get condom?

(For drug using OSYP:4.6)

4.6 Is drug using influence your sexual practice? How?

5. Questions about HIV/AIDS

5.1 Have you heard about HIV/AIDS? How do you think about it? How it is transmitted?

5.2 Do you know someone who has infected with HIV/AIDS?

5.3 Do you know how to avoid to be infected by HIV/AIDS?

5.4 Have you tested your HIV infection status? If "yes", where and why did you test?

5.5 Are you infected with HIV? If "yes", how did you get HIV?

Annex 3. Guide for Focus Group Discussion

Code：_____
Investigated area：_____City (County)_____District (Town)
Day/Month/Year of interview:_____
Name of facilitator:_____
Name of recorder:_____

Guide of Focus Group Discussion for Research on Factors Determining HIV Related High Risk Behavior among Out of School Young People in Xinjiang, China

(draft)

We are from xxxxx. We are working on a research which is going to identify the influencing factors of risk behaviour related to HIV infection among out of school young people in Xinjiang. We are going to discuss in group some topics about drug using and HIV infection. All the information we obtained are completely confidential. Your answers or views will be just used for research. Your name will not be recorded and your information and view provided here will not be published individually.

We would greatly appreciate your help in responding to this survey. The discussion will take about 60 minutes. Would you be willing to participate?"

5. yes
6. no

1. General information of group discussion participants

Age, marital status, job, education, ethnicity, religion

2. Discussion topics

2.1 How do you think about the drug abusing problem among young people in this area?

2.2 What's the reason/motivation of young people in your area using drug?

2.3 What kind of young people are the most vulnerable to use drug?

2.4 How do you think about the HIV/AIDS problem in this area?

2.5 What kind of young people are the most vulnerable to be infected with HIV/AIDS?

2.5 How is the sexual behavior of young people in this area?

2.6 How is the inter relationship among drug using, sexual behavior and

HIV/AIDS?

2.7 What intervention should be done to young people to prevent drug using and transmission of HIV/AIDS?

Annex 4. Guide for Key Informant Interview

Code：_____
Investigated area：_____City (County)_____District (Town)
Day/Month/Year of interview:_____
Name of interviewer:_____

Guide for Key Informant Interview

for Research on Factors

Determining HIV Related High Risk Behavior among

Out of School Young People in Xinjiang, China

(draft)

We are from xxxxx. We are working on a research which is going to identify the influencing factors of risk behaviour related to HIV infection among out of school young people in Xinjiang. I'm going to ask you some questions about this drug using and HIV among out of school young people. All the information we obtained are completely confidential. Your answers will be just used for research. Your name will not be recorded and your information and view provided here will not be published individually. You do not have to answer questions that you do not want to answer, and you may end this interview at any time you want to.

However, your honest answers to these questions will help us in our research about behaviours. We would greatly appreciate your help in responding to this survey. The survey will take about 60 minutes. Would you be willing to participate?"

7. yes
8. no

Ⅰ.Interview of Drug Control Department of Public Security Bureau

1. General Information

Gender, age, marital status, ethnicity, religion, education, family economic status, family situations, present job and position

2. Questions about drugs

2.1 What kinds of drugs are sold in this area? How local people call these drugs? Where these drugs come from?

2.2 How is the prevalence of drug abusing in this area? Why drugs are prevalent

in this area?

2.3 How is the prevalence of drug related crime in this area?

2.4 What kind of people vulnerable to using drug? What kind of people sells drugs?

2.5 Why these people are using drug? How they usually begin to use drug? What is the motivation of them to use drug?

2.6 How do you deal with the drug users if you arrest them?

2.7 How is the relationship between drug using and commercial sex?

3. Questions about HIV/AIDS?

3.1 How is the relationship between drug abusing and HIV/AIDS prevalence in this area?

3.2 How do you think about providing/selling clean needles/syringes to drug users to prevent HIV/AIDS transmission?

3.3 How do you deal with the drug users who were infected with HIV if you arrest them?

Ⅱ.Interview of health workers

1. General Information

Gender, age, marital status, ethnicity, religion, education, family economic status, family situations, present job and position

2. Questions about drug

2.1 What are the characteristics of drug users in this area?

2.2 What's the main health problem of drug users in this area?

2.3 Are there any legal drugs available in pharmacy or hospital are used by drug users as substance for illicit drugs when they can't get drug or when they want to quit it? If "yes", is that used widely?

2.4 Is there any Methadone Maintenance Treatment clinic in this area? If "yes", how it is functioning?

2.5 Are there any drug rehabilitation centres in this area? How many? How is the general condition of these centres? How is the price?

3. Questions about HIV/AIDS

3.1 How is the prevalence of HIV in this area?

3.2 What kind of people is vulnerable to HIV?

3.3 How the prevalence of drug using affecting the HIV transmission?

3.4 Are there any projects doing on HIV/AIDS prevention in your agency?

Ⅲ. Interview of religion staff or staff of related local NGOs

1. General Information

1.1 Demographic information of interviewee: Gender, age, marital status, ethnicity, religion, education, family economic status, family situations, present job and position

1.2 What kinds of people usually take part in the activity of your organization/group?

2. Questions about drug

2.1 How serious is the drug abusing among young people in this area?

2.2 Why these people are using drug? How they usually begin to use drug?

2.3 What's the recent main problem of the young people in this area?

2.4 How is your organization/group response to these problems?

3. Questions about HIV/AIDS

3.1 How is HIV/AIDS transmitting in this area?

3.2 How is your organization/group response to the HIV/AIDS problems?

3.3 What kind of intervention could be useful to prevent HIV/AIDS in this area according to the people's cultural background?

Ⅳ.Interview of school teachers

1. General Information

Demographic information of interviewee: Gender, age, marital status, ethnicity, religion, education, family economic status, family situations, present job and position

2. Questions about school education

2.1 What kind of students usually drop out from school earlier?

2.2 What's the main reason of students dropping out from school?

2.3 What is the tread of students' dropping out from school in recent years?

2.4 Are there any problems of school system which lead to the students' dropping out from school earlier?

3. Questions about drugs

3.1 Are there any students use drug in school? How do you deal with them if you find their drug using behavior?

3.2 What kind of students/OSYP is more vulnerable to drug abusing?

3.3 What is the motivation/reason of young people using drug?

3.4 Do you have any programme or course on preventing drug abusing? What's the main problem on conducting drug abusing prevention programme in school?

4. Questions about HIV/AIDS?

3.1 How is the relationship between drug abusing and HIV/AIDS prevalence in this area?

3.2 How do you deal with a student if he/she is infected with HIV/AIDS?

3.3 Do you have any programme or course on HIV/AIDS education? What's the main problem on conducting HIV/AIDS education in school?