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Mapping and Size Estimations of Women at higher Risk of HIV in Iran

Protocol

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Contents

Mapping and its importance

Given all the advantages of various methods for estimating population size, these methods do not specify the location or gatherings of female sex workers. The lack of this important information and the use of information to estimate population size to target and access these individuals makes it very difficult to serve them.

However, another method used to estimate the population size and determine the hotspots of target groups is geographical mapping, which is applied to estimate the location as well as the number of people or groups at high risk. In this method, it is possible to directly estimate the population size of groups at high risk, their focus areas and the density of hotspots in order to plan for local and even national programs and then offer proper services by knowing the dominant behaviors in each region.

So far, various countries such as Egypt, Afghanistan, Indonesia, Nepal, Cameroon, South Africa, India and several other countries have used this approach to estimate the populations size of groups at high risk and determine the locations of areas at high risk in order to improve the status of services.

Mapping method has two types:

- Geographical: physical places or venues where populations at high risk gather together or do their activities:
    - Privately-owned places like private houses or shared houses, etc.
    - Enclosed public places, such as hotels, bars, etc.
    - Open public places like streets, squares, highways, parks, etc.
- Virtual: The virtual places where people plan their appointments:
    - Internet websites such as Facebook, twitter, etc.
    - Phone applications like WhatsApp, Telegram, Instagram, etc.

Regarding virtual mapping, we should state that these social tools and networks are not widely used among people at high risk and few studies have used this approach, including the researches performed in Egypt and the United States, which investigated groups at high risk through specific applications. Finally, it is necessary to mention that in Iran the use of this approach is subject to limitations due to numerous reasons such as unconventionality and illegality of high-risk behaviors like prostitution and the lack of applications exclusive to these people.

Aims and purposes of mapping

- ✓ Finding hotspots or the most important places where FSW gather
- ✓ Making informed decisions on the best venues or places to establish service facilities for FSW
- ✓ Estimate the size of FSW using mapping method and findings
- ✓ Descriptive of the status of sites, apps and virtual pages dedicated to female sex worker groups in social networks

Methods of estimating population size

A limitation of the mapping and enumeration method is that it can only be used to count the accessible and visible members of the key people (KP). We acknowledge that an unknown proportion of the KP are more hidden and do not typically engage in high risk behaviors at physical venues. To get a better approximation for the size of the entire KP within a city, we will use indirect population size estimation methods, which are detailed below. Nonetheless, an assessment of the accessible population is useful information to inform future access points for interventions and venue-based sampling frames. Moreover, the population size estimates based on mapping and enumeration may serve as lower, plausible bounds for the total numbers.

Wisdom of the Crowds

While at each venue for the mapping and enumeration exercise, the field team will approach identified members of the KP and ask them to participate in a short survey. Respondents will be asked to give their estimate for how many members of the KP they believe regularly visit that venue as well as their estimate for the size of the KP in the whole city. Our team also interview with owners and staff at the venues or other persons familiar with the population to collect their approximate estimates of the KPs size in the venue, and the locations of other KP venues.

Analysis. The median (and the interquartile range [IQR]) of all responses for the size of the KP in the city will be the "Wisdom of the Crowds" estimate for the size of the population. For comparison, we will also take the median of estimates for the size of the KP at a particular venue and sum them across all venues to total the city KP population size.

Service Multiplier Method

Several multipliers are used to estimate the population sizes and minimize potential bias from any single data source. During the key informant interview and FGD, our team in each city, will collect, review and assess the availability and quality of unduplicated FSW service counts. Service data will be collected by staff assigned. Double counts or duplicates will be removed to ensure that data represent service access by individuals with unique codes (one code for one person) rather than service delivery counts. Theoretically, the service data must correctly ascertain FSW status among clients and de-duplicate individual contacts for population size estimates to be unbiased. The staff assigned also define the types of service multiplier questions to be included in the survey instrument. A period of 3, 6 or 12 months prior to the survey start date is proposed as an appropriate time interval for service multipliers, to balance the need for narrow confidence intervals and the risk of recall bias among respondents about service visits.

During the field investigation at each venue, study field staff will approach members of the KP they can identify and ask them to participate in a short survey. Respondents will be asked if they have ever attended any of the listed service providers during the pre-specified time interval. The proportion of all respondents, across all venues within a city, who report having visited the service provider will be "p" in the above multiplier method equation.

Analysis. The multiplier method requires two data sources: the "benchmark" (n), which is a count of the number of people who are a part of the KP and accessed a service (for example, HIV counseling and testing) during a pre-specified timeframe and the "multiplier" (p), which is the proportion of people from a sample of the KP who report receiving the service. Dividing the benchmark by the multiplier gives an estimate of the size of the target population (e).

$$Multiplier\ Method = e = \frac{n}{p}$$

Example: If during the interviews, 40 persons out of 400 PWID reported HIV testing in a DIC in Kabul in 2018, and the program data in 2018 from that DIC have records for HIV testing for 300 individuals who were PWID, then the population size estimation for PWID in Kabul using the service multiplier method will be 3000 persons:

$$Multiplier\ Method = e = \frac{300}{\frac{40}{400}} = 3000$$

Modified Delphi

To further synthesize the multiple estimates and to foster end-user buy-in, a panel of stakeholders, people familiar with the KP (e.g., service providers, governmental officials) will be convened to review the data. Before sharing the data with the panel, each stakeholder will provide their own best estimate for the size of the KP in that city, informed by their personal/professional experience.

Our research team will then present

- The results of the population size estimation study (by city and province), describing each method, potential sources of bias, and final results.
- The Bayesian synthesized estimate
- Regional benchmarks provided by UNAIDS and discuss particularities.
- National level estimates with ranges and discuss their use for:
    - high level national target setting and resource mobilization;
    - data inputs into Specturm/EPP estimations and projections of the HIV epidemic in the country.

After reviewing the data, searching for agreement on which individual estimates are included, stakeholders will be asked to update their initial estimate, now informed by empirical results. The median of stakeholder size estimates, taken from the second round, will be the final Delphi estimate for the size of the KP in each city. This Delphi estimate can be re-entered into the Bayesian model as the prior or as a separate point estimate to examine any change in the "best" estimate and plausible range.

Definitions and Concepts in Mapping

High-risk behavior (for HIV infection)

Unprotected sexual behaviors, injecting equipment sharing and other common behaviors leading to HIV infection and transmission

In this study, high risk behaviors include unprotected sex (sex without a condom), having multiple sex partners (spouses or boyfriends) over the past years as well as injecting equipment sharing that increase the likelihood of HIV transmission. Some patterns of sexual behaviors such as group sex, having multiple sexual partners, and consuming substances like alcohol and stimulants (such as Methamphetamine, etc.) during or before intercourse also increase the risk of unprotected sex. In addition, certain patterns such as self-harm, drug use by group injection or tools like a pump, etc., also increase the risk of these behaviors.

Female sex workers (prostitutes)

A woman who supplies her living expenses in general or in part, through surrendering herself to others for sexual purposes. In addition, there is no affection in such sexual relations and it is usually temporary. This term does not refer only to people who are engaged in prostitution for a lifetime, but also to any woman or man who, while engaged in other works, occasionally receives money for sexual intercourse, during which he or she is called a prostitute (Farley, 2010).

In practice, female sex worker refers to any woman over the age of 18 who has established sexual intercourse (oral, anal or vaginal) with more than one man (other than his spouse or boyfriend) over the past year in exchange for receiving money or goods and services (charge, drugs, food, sleeping place, etc.).

Key informant

A key informant is a term that can include many individuals and groups. What makes to call them with this title is having the most important and influential information in relation to subject (female sex workers), due to:

- Personal or professional experience
- Work in the field of subject (female sex workers)
- Study and research in the study field (female sex workers).

In this study, key informants refer to two categories:

- Type 1 Key Informant: The women engaged in sex work, who by virtue of their experience, have firsthand information on the subject.
- Type 2 Key Informant: Individuals who are not engaged in sex work themselves but have some kind of information in this regard that include:
  - Other practitioners of this profession, such as pimps, go-betweens, house of prostitution owners, customers, etc., due to involvement with the studied groups.
  - Managers, care providers and consultants at drop-in centers, camps and special health centers for women and girls, counseling centers for behavioral diseases due to close relation and service to these groups.
  - Relevant Experts in organizations like State Welfare Organization, the Health Ministry and its subunits, the Prisons Organization, the Police, the judges involved in cases of crimes against chastity.

- Physicians and paramedics in the field of women, midwives, through the information they have due to their responsibility criminologists, sociologists, researchers, and experts in HIV and sexually transmitted diseases.
- Finally, the informants who are located near the hangouts and can provide information about these groups such as vendors, taxi drivers etc.

Choosing key informants, we should note that it is best to choose those individuals who are easy to access.

Hotspot

The hotspots of female sex workers are places where they attend due to reasons like access to drug or clients, lack of supervision, safety or the presence of peers, etc. and mostly they are present there in groups for some time to carry out their work related activities. In addition, it should be possible to provide services (Harm reduction services) in these locations. The main features of the hotspots are as follows:

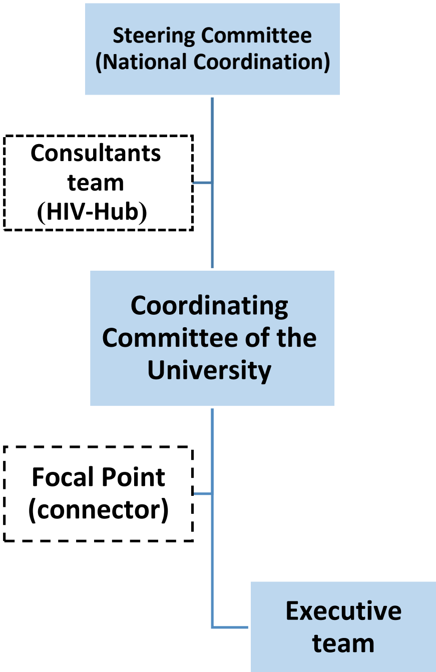
Place: the places that are restricted in terms of access to either public (publicly accessible) or private (requiring a form of authorization or coordination for entry) and are limited mainly in terms of width. Public hotspots are for example a corner of a park, a ruin, an incomplete house, under a bridge, etc. and private hotspots are hotels, bars, clubs, houses, rooms, tents, cars, etc. Therefore, the use of a term such as hotspot to places such as a long street (such as Valiasr Ave. Tehran, which is from north to south of the city) or a large district (such as Shoosh district of Tehran) is not correct and we should specify certain areas. For example, in the Shoosh district of Tehran, there are several hotspots such as: Haqani Park located at Harandi Street, Oraghchiha Street on the eastern side of the Shoosh Square and ...).

Activity: The activity aspect of the presence of people in work hotspots varies depending on the different target groups. For example, the activity of drug users in hotspots may be drug use or purchase and the activity carried out by female sex workers in hotspots may be attracting a customer or engaging in sexual intercourse. Although these groups may come together in some hotspots, they may have an activity other than their high-risk behaviors. For example, we can name some of the places where many drug users gather to drink and smoke hookahs like cafeterias (aggregation hotspots). There are also some places like a body building club, a hairdresser shop (a hotspot for female sex workers) and places where for some reasons a group of these women are kept (in prisons or special detention centers, etc.)(keeping hotspot) and places where these women receive a service like clinics or special centers for women etc (service hotspot) .

Time: people usually spend special hours around the clock in hotspots. It is important to specify the time spent in such areas in limited intervals. However, it is not true to mention long times like the whole day or night to describe a hotspot and it is better to refer to specific time intervals (in this study, the four-hour-intervals are considered). Since time changes during weeks and seasons may alter the attendance time in the hotspot, thus it is better to conduct studies with quick evaluation in a limited time interval of one to two months and describe hotspots at the exact hour and day limit (for example, from 4 to 8 pm on Fridays in September).

The structure of project

The scientific, operational and regulatory structure of the project is as follows:



Steering Committee (National Coordination): The committee is formed at the Center for Communicable Diseases management of Ministry of Health with the presence of employer representatives (the Office of AIDS and the WHO Representative), advisers and representatives of Legal executives [It may be a working group under the supervision of SIP Committee].

Duties of Steering Committee (National Coordination):

This committee will have the task of ratifying the protocol and creating a suitable condition for its piloting.

Coordinating Committee of the University: this committee includes the head of Diseases Department, the AIDS Specialists of the University of Medical Sciences, SWO AIDS Specialists, the invitees from Prisons Organization, the Police Force, the specialists of AIDS Center, the Managers of Counseling Centers for Behavioral Diseases and the managers of counseling centers featured for women at high Risk of HIV.

Responsibilities of Coordinating Committee of the University:

Their main responsibility is to coordinate and facilitate data collection for executive teams, as well as to formulate executive suggestions based on the findings. The monitoring of the project will also be the responsibility of the committee.

The committee chooses one person as executive. The executive is required to compile a team for data collection and analysis. The members of this team can be a combination of experienced researchers working with hidden populations especially female sex workers. However, in universities where there is active women's center (and in cities where women's centers are not established, but there are mobile centers or other related forces), it is better to choose certain members of the committee from the forces of women's centers. In addition, in the cities where there are Non-Governmental Organizations active in the field of women, it is better to have a representative of them in the committee.

Focal Point (connector): Based on the work and performance experiences, the knowledgeable and relevant experts are selected with the suggestion of the university (the head of Diseases Department and Vice-Chancellor for Treatment) and the approval of the Steering Committee.

Duties of Focal Point (connector): it is responsible for establishing a Coordinating Committee, planning and documenting its meetings, monitoring the scheduling plan and facilitating the work process of executive and executive teams, receiving relevant data and reports and submitting it to the committee and creating a connection between the Ministry of Health and the University.

The supervisor of university:

It is suggested that the supervisor to be selected from the head of Diseases Department of each university and be responsible for monitoring the function of the focal point (connector).

Executive team centers in each city (university):

Executive teams: it consists of one project manager (the executive), a team of at least two informed and trained experts in the women's centers (or researchers who are involved in the work by the suggestion of the executive and the approval of the coordination committee). Moreover, a peer force (one who can be different in each region and for each executive team) and if possible, it consists of a driver.

The duties of the executive team: They will be responsible for collecting qualitative and quantitative information, observing hotspots and compiling project reports.

- ➢ The number of executive teams in each city will be determined according to its population and available facilities.
- ➢ Generally, an executive team is needed for small cities; 2 or 3 executive teams based on the city zoning are needed for average cities; and more than 3 executive teams based on city zone and district is needed for large cities. The Coordinating Committee of the University undertakes the decision about the application and the number of executive teams.
- ➢ The Coordinating Committee of the University Confirms the competence of executive teams supervises the good work of the team and verifies their final reports, they can determine an actual supervisor to facilitate the submission of their report to the Committee and then the committee can make decisions based on these reports.

It should be noted that at the pilot stage, the training and counseling of these teams will be the responsibility of project consultants.

Mapping method steps

1- Formative Assessment (Providing Information and Master List)

The first step of this study is formative assessment that includes following actions:

1-1-Review the existing literature

1-2- Getting informed on local and general culture of those areas and terms and conditions

1-3- Preparing maps and geographic zones

1-4- Engaging stakeholders

1-5- Determining the geographical scope of the study

1-6- Prepare a Master list for hotspots

1-1-Review the existing literature

This means that before performing or executing the mapping method, we must have complete and adequate knowledge of the information available in relation to populations at high risk that are supposed to be studied, identified or estimated. This information should include:

- Selecting supervisors and executive team (field work team) and Key Informants
- Identify the different types of female sex workers
- Identify the mode of activity of the female sex worker groups based on typological diversity
- Identify facilitators and barriers to identifying and accessing the female sex worker groups
- Identify existing services (Preparation of the list of centers and existing services)
- Determining the geographical scope of the study
- Identify the known hotspots of each city
- Estimate the number of people per hotspot if possible
- Estimates of the number of female sex workers based on all available resources, including studies, or estimates of the number of people based on other methods, such as expert opinion.

1-2- Getting informed on local and general culture of those areas and terms and conditions

The team that is supposed to participate in fieldwork and field operations must be aware of the culture, terms and cultural traditions of those areas. This will increase the level of cooperation and provide stronger communications of people with field team.

1-3- Preparing maps and geographic zones

Since this method is carried out based on mapping and locating hotspots on the map, we need to provide the map of geographic zones of cities in general and in details for field and research team to determine high risk areas.

1-4- Engaging stakeholders

Before starting the process, all stakeholders and those who will play a role in this program should be informed. For example, if we intend to work on PWID, we should inform the Ministry of Health, the Welfare Organization team, Drug Control Headquarters team, NGOs involved in this field, related research centers and etc. about the implementing this project. Informing these groups and teams is a critical step to prepare plan for estimating the size of populations at high risk. We can even invite and consult with organizations that help identify the high-risk injection sites, for example, the municipality.

The set of actions for this step is carried out in order to achieve the following objectives:

- Familiarize key stakeholders with goals, needs, achievements and roadmap for project implementation
- getting initial agreements and initial coordination of government and government agencies and decision makers in relation to the HIV risk group
- Obtain big-level general information and detailed information for small towns about information and how to contact local people and institutions.

1-5- Determining the geographical scope of the study

The identification of hotspots is based on the size and population of cities in two or three stages.

Stage A: Identifying the main points of female sex workers' activity within large urban areas (municipal areas or certain zones, such as urban areas. etc.) on a city map. For example, district 12 of Tehran Municipality may be declared as one of the high-risk areas for these activities. This district has about 240,000 inhabitants and includes 6 municipal zones and 13 neighborhoods with populations between 3-33000 people.

Information resources:

- Documents and Reports
- Key Informants: The people who have the information on the whole scale of the city (for example, a person in the Social Security Department of Tehran or the Police Headquarters in Tehran).

Tools: City Map; a questionnaire; a list of informants for this stage.

Stage B: [Only special for metropolises] this stage is related to metropolises like Tehran, Mashhad, Tabriz, Isfahan and Shiraz. Determining the high-risk areas within the identified areas. For example, in the previous example, in which parts of the district 22 of Tehran (the sixth regions or the thirteenth neighborhoods) is there a greater density of these hotspots?

Information Resources:

- Documents and reports related to this part of the city
- Local Key informants: People who have information on the scale of that urban area (for example, mayor of the district or mayors of the regions) or police stations located in this area.

Tools: A map of urban areas; a questionnaire; a list of informants for this stage.

Stage C: Collecting information about the specified hotspots from previous steps

Information Resources:

- Local documents and reports
- Local Key informants: those people who have information on the scale of that urban scale (such as local councils) or local police in this area; experts in public and local public centers; service centers; people from the target group or those involved with them (pimps, procurers, guards, ...); drivers of transportation vehicles and local businesses; residents and etc.

Tools: A map for the scale of desired area; a questionnaire; the list of informants for this stage; the master list that should be completed.

1-6- Prepare a Master list for hotspots

A master list should be prepared to select hotspots.

Objective:

Getting informed of all hotspots in each part of the city. These places should be differentiated according to the type of high-risk groups. The study supervisor can hold this list.

Getting informed of the information of each hotspot to plan visit-field. The supervisor can determine the time and place of visits by knowing the exact time when high-risk people in each place gather together.

Process:

Making decisions on hotspots should be carried out in a meeting with all key informants and experts. Those who are invited to these sessions can be either current members of key population or former members of the population at risk for HIV. Also, non KAP-KI should be invited to the focus group. It is recommended to run focus groups of KAP-KI and non KAP-KI in a separate group.It is recommended that at least 12 interviews be provided with key informants from 4 different authorities (managers and experts of the relevant government department; managers and experts in the non-governmental sector; target group [women of different sex work]; researchers or experts working with the female sex workers).

Also, in these meetings try to identify those who have information about, female sex workers who are working virtually and set up another session for these people.

To access all the locations where key population members, gather, it is suggested that the city maps are handed out to people and they specify the hotspots on the maps.

If the presentation of maps are done through electronic devices, the hotspots should be specified on the paper maps by some other individuals.

Preparing the list of hotspots for each group of key population can also be done separately by NGOs or any other organization or member of key population who can complete this list.

It is possible that some individuals have valuable information on hotspots where people gather around but they are not willing to disclose these information in focus group discussions. In this case, we need to do a few in-depth interview in order to be able to add their information to the list.

This list would be prepared like the list in Form 7 and completed during group discussions and by KIs.

After the preparation of master list (or the main list) which includes all hotspots, it can be decided which of the hotspots should be selected to visit. Since this is a paper list, the data can be entered into an excel file after being completed.

The list can be shared with other experts and we can ask them to add further hotspots to the list if there is any other rather than those mentioned in the list.

We should also ask about whether these hotspots are active or not with other experts too.

Discuss the time when key population members are available in these hotspots (the peak time for the presence of KPs at any outlined hotspot). Collect such information for each hotspot.

Considerations for creating a hotspot list

In the developmental stage and the initial observation, it is necessary to consider the following:

Determining the exact location of the hotspots:

- In terms of access; whether the hotspot is public (Customer and non-customer integration) or private (publicly available; generally available to the customer)
- In terms of scope, the attempts should be done to determine the range of open hotspots to the extent that is visible for counting.

Determining the exact time of the hotspots:

- Where applicable, hotspots may be restricted to a specified time period (4 hours). However, hotspots may be active all the time or more than a 4-hour period, in which case:
- Determine the peak time of the hotspot (when the most women in the target group can be found).
- Try to get information on hotspots and holidays as much as possible.

Determining the exact activity:

- During interviews, make sure that the types of work hotspots, gathering hotspots, keeping or service hotspots are differentiated.
- Ask whether the initial identification in open (public) hotspots can be done based on which of the followings:
- Unsuspicious activities: Asking an address, taking a taxi, waiting or meeting with a familiar person (non-customer);
- Suspicious activities: Negotiation or bargaining (plenty of people or cars that interact with a person); Standing longer than a passenger; Multiple negotiations;
- Normal appearance - Abnormal appearance;
- Combination: family (husband and wife - woman and child - woman and woman / old man); one or more women
- Other clues

2- Preparing Field Activities to Visit Hotspots

At this stage, based on the findings of the previous stage, we need to be ready to enter the hotspots. Here, we need to bring other people into the team, whose combination and tasks has been specified in the following. Next steps will include the formation of the Field survey team of hotspots, the preparation of team (division of labor and determination of roles) and final control to enter hotspots.

2-1- Combination and Tasks of Field Team Members

Team members will consist of 3 people plus one driver (optional).

Team leader for hotspot visits: A person familiar with the basics of research and working with a group of female sex workers, who will be responsible for any executive team by the selection of executive, will have the necessary training, and will be present at the stage of the developmental study. [This person has the responsibility of guiding and ensuring the safety of the team and completing the observation letters and recording the geographical coordinates]

Counter: A woman from a group of female sex workers (peer member) who has been trained previously and selected as a team member. [This person is responsible for verifying the identified individuals and counting the target group]. This person is different for each executive team and for each geographic region.

Questioner: One man or woman familiar with the basics of questioning and working with women's groups who has received the necessary training. [He or she has the task of completing at least two questionnaires in each hotspot with target group women and interviewing with at least three people of local informants in each hotspot]. It is recommended that a woman be elected for this purpose.

Driver: Optional team member who is selected by the project manager. [he has the responsibility of relocation and logistics as well as the safety of the team (if identified by the team leader)]

2-2- Team Preparation (Coordination before entering the field)

After the formation of the team and before the entry into the field, the team will need to organize a meeting to review the training and determine the roles. The key points of this meeting are how to get in and out of the hotspot; review security points at the hotspot; weather control and more.

To do this, the following should be done:

- Review the master list for hotspots. Pay close attention to the number of hotspots in each area or zone.
- Based on the number of outlined hotspots, the supervisor can determine the number of executive team members. To increase the security, the executive team should not visit any hotspot individually. They should be accompanied by one member of the key population.
- Have timelines to collect information. Since key populations can move from one hotspot to another in short periods of time, we should try to collect information quickly (two to three weeks). However, this time also depends on the number of hotspots detected.

- Make sure a member of the key population who is willing to work with the executive team is present in the field team. The presence of these people can help to communicate with key populations at hotspots.
- The supervisor must provide the necessary trainings for the executive team on how to collect and record data.
- An individual must be assigned as a secretary to transfer the recorded paper information of hotspots to an excel form.

3- Field Work (Visiting Hotspots)

At this stage, based on the master list of hotspots, planning is done to visit hotspots.

3-1-Steps to enter and work in hotspots:

The team attends the hotspot in the scheduled time based on the specific strategy of entering each place (Including the placement of team members and the type of transfer to the place) and work 4 hours in this place. (Team leader announces Exit time from hotspot). The next steps are as follows:

- The deployment of team in the hotspot: the deployment of members should be in a way that does not cause sensitivities and draw the least attention (team leader [in consultation with a peer member] determines how to deploy members)
- Completing the observation letters [by team leader] (Form 10)
- Data collection of local informants [by questioner] (Form 9)
- Confirmation of the hangout's activity [All team members]: for this, you must be at least one hour in the hotspot, complete the observation letter and carry out interview with the local informants. If the team's conclusion from the status of the hotspot indicates its inactivity, you should immediately refer to the alternate hotspot that day if it is already specified. If no other program has been set up that day, the work will be completed in that hotspot in coordinating with the university observer, recording of observations in the hotspot as well as getting information from the local informants about the hotspot status. You should ask local informants whether “this hotspot is no longer active or its working time has been changed. This information should be given to the observer to re-schedule visiting the hotspot if necessary.
- Begin counting the target group [counters]: The launch guide for a counting area in Appendix 4 provides descriptions in this regard.
- Observation and identification of target group women (identification confirmed by a peer)
- Record in the counter form (observation letter) [by team head)
- Sampling from the recorded list and communicating and filling the questionnaire (not by all means) [by the interviewer]
- Completing questionnaires for up to 2 people in each hotspot [by interviewer]
- Team Exit: After completing the above steps and finishing the work, you will control documents when exiting team and the work ends in this hotspot based on predefined output strategy (and may be revised at work time).

3-2-Visiting new hotspots

The process and the stages of work at this stage are the same as the previous stage. And the new hotspots achieved at each stage are followed by the team's master list.

4- Integration, analysis and data processing

At this stage, the information obtained from the three documentary, quantitative and qualitative methods, and from teams and various field visits must be merged and integrated. This is done by the moderator (in collaboration with someone from his or her team from the executive team or colleagues of the university) and based on the training given at the workshop.

5- Review the findings on the meeting with the stakeholders

At this stage, the information gathered from the whole process should be discussed at expert meetings (with stakeholder participation) in order to apply the design of interventions. This is done by Focal Point (in collaboration with the presenter) and based on the training given at the workshop.

Ethical considerations

Potential risks:

One of the ethical concerns is that team members declare that KP members are involved in some risky or illegal behaviors. The dissemination of information during the program and collection of data may put KP members at risk, thus disclosing such information should be prevented. To minimize these risks, perform the following steps:

- ✓ Hold meetings with key informants and ask them to use nicknames to enhance their security
- ✓ There should be no name or identity information of individuals or other information in data collection forms
- ✓ All information collected (paper-based and electronic) should be kept in a safe place
- ✓ Staff and field team should not ask the identification information from individuals
- ✓ During the meetings, the supervisor must take all necessary precautions to protect the privacy and the rights of FSW, MSM and other groups. He/she should not put such people at the risk of injury, arrest or other risky situations.

Approvals and consultations:

This study should be confirmed and approved by the ethics committee.

Reporting unfortunate events:

Any unfortunate event such as the occurrence of certain events for the research team, events for KP members and events for the recorded data and information should be reported to the research team. Confidentiality of information may be lost, in such circumstances the reporting should be done to protect the privacy of people and data. Any event must be reported to the authorities and research and work teams.

Data security and privacy and compliance with the protocol:

One of the responsibilities of research team is to be aware of following up research protocols. The executive team and research team must communicate with each other at all stages of work. These communications or interactions will be monitored by supervisor. Data quality and data collection methods should be explored.

Potential advantages:

Estimations based on this method should be helpful to support projects and receive funding from national and international organizations to assist prevention and treatment programs.

Incentives for participants:

Key informants which are a member of KP (KAP KI) should not be given incentives or benefits unless in some cases or situations something is given to them. For example, when they are hungry, they may be given some food.

Safety Considerations

The objective of these guidelines is to provide a general overview of safety issues. Participating sites should develop local safety procedures and train field staff on those procedures. It is important for staff to avoid trouble through common sense and advance planning. Staff must be alert to their safety and to that of their co-workers at all times. A basic awareness of one's surroundings is critical when working in the community. By adopting the recommendations in these guidelines, staff will be able to effectively recruit and interview participants while still maintaining their personal safety.

Plan Ahead

Have an emergency action plan. Know what you are going to do ahead of time in case things suddenly go very wrong. Know whom to contact in case of emergency. Always know the location of all exits from any point in the storefront. During interviews, always position yourself closest to the door if indoors. You do not want an unruly participant to be stationed between you and the exits. Consider developing a code word or action to call for assistance from a co-worker. For example, you might use something like the phrase "bring the red folder." If a staff member was not comfortable interviewing participants by themselves or needed help with an uncooperative participant, they would ask one of their co-workers to bring them the "red folder" to indicate that they needed assistance. Call the local emergency services phone number without hesitation if you feel that you are in danger.

Be Alert

Be aware of your surroundings. If a threatening situation arises, remove yourself from the location immediately. Leave quickly, but do so carefully and with a "cool head." Use all of your senses to assess a situation. If something does not "feel right," do not discount that feeling. Approach every potential respondent as though s/he is welcoming, but be cautious if you have concern about an individual.

Use common sense

Limit the amount of cash available during each sampling event (including participant incentives). Only bring the amount of cash that is needed for the sampling event. For example, if it is only necessary to conduct 7 interviews for the night, then only bring that much money. Avoid wearing or carrying articles that look valuable; jewelry, expensive watches and purses may invite theft. Do not leave any valuables or project materials unsecured or in view.

End the interview at any point if you feel threatened by the participant or the environment

- Aggressive or threatening individuals
  If directly confronted by an individual, employ verbal de-escalation techniques: position yourself at an angle and allow extra space between you and the other person; do not smile; let them vent; listen to and acknowledge their concerns; avoid becoming defensive; lower your voice, tone and tempo; and respond to valid complaints. Local safety officials may be able to provide de-escalation training to project staff.
- Sexual harassment
  If a respondent is sexually coming on to you or sexually harassing you, you have the right to terminate the interview. If you feel the respondent is behaving inappropriately, you should first remind them that you are only there to interview them and that you are not interested in any sexual offers. If the respondent continues,

tell them that you are going to terminate the interview if they cannot stay focused on the question. If this does not work, terminate the interview. In turn, it is also inappropriate for interviewers to sexually harass their clients. Staff should be trained in sexual harassment issues if possible.

- Drunk, high, or drowsy respondents
  A respondent may not be able to complete the interview or give accurate responses for a variety of reasons. If they had little sleep or have recently used alcohol or drugs, they may be unable to give coherent answers to questions, nod off, or appear to be very drowsy during the interview. If you are screening someone for eligibility and they cannot give coherent answers, complete as much of the eligibility screener as possible and document in the interviewer notes that the individual was not a candidate for interview because of this condition. If you have begun the interview and the participant is no longer giving coherent answers, stop the interview, thank the respondent for their time, and describe what happened in the interviewer comments.

Develop field incident reporting procedures
Set up local safety guidelines and procedures for incident reporting prior to starting work in the field.

Appendix 1- Forms

Form 1- List of steering committee

Province: Name of Medical University:			
	Name / Last name	Position	Contacts Information
Supervisor of University			
Focal Point			
Executor of Study			

Form 2- List of coordinating committee

Province: Name of Medical University:			
	Name/Last Name	Position	Contact Information
Member of coordinating committee			
Member of coordinating committee			
Member of coordinating committee			
Invited member of coordinating committee			
Invited member of coordinating committee			
Invited member of coordinating committee			

Form 3- Executive teams

	Name/ Last Name	Job	Contact Information	Duties
Team leader				○ General Coordination ○ Security ○ Geographic Registration ○ Note ○ filling the observational form
Counter				Counting and Size Estimates of Female Sex Workers This person must be a peers of female sex workers.
Interviewer				Interview and filling forms

The peer member is different in each team and individual geographical location.

Form 4- list of key Informants to conduct a qualitative interview and focus group discussion

Province:

Name of Medical University:

The name of site:

Formative assessment in city level

Code	Name/ Last Name*	Job / Position	Contact information	Reference

*In special case they can use nickname

Formative assessment on district level

Code	Name/ Last Name*	Job / Position	Contact information	Reference

Form 5- List of references and documents that used in the formative assessment

Province:

Name of Medical University :

The name of site:

Code	Type of Resource 1-Administrative Report, 2-Article or Research, 3-Book, 4- Internet Resources, 5-Others	Source Specifications	Reference

Form 6- Interview Questions with Key Informants in Focus Group Discussion

Group/ Individual Interview

Interviewer: Date: Duration of the interview: min

Primary explanation
This study was conducted by the……………… University of Medical Sciences and HIV/STI committee, your name is not registered any where but please mention your own specialty.

Profile of interviewees:

Row	Name/Last name	Position/ expertise	Job Location	Experience in this field / topic

Tools for Focus Group Discussion:

Safe, stable, and secure place
Food and Beverage
Sound recorder (get consent from people before recording)
City map
Notebooks (pens and paper)
Interviewed person
Form 7

Focus group and in-depth interview questions to find a FSW hotspot
1- Think about female sex workers in your community, can you describe them in terms of behavior, social status and pattern of customer service? Have you noticed any change in this community over the past year? (new community, new behavior and …..)
2-What are places and locations that you know more? Can you show the exact FSW hotspot On the map? Please specify the time and days that this group have most activities and gathering in this hotspot. What is your estimated maximum and minimum number of FSW at this hotspot?
3- Do you know any FSWs that work through the social network applications and internet?
4- How do you evaluate the access of FSWs to health care services?
5- What are the health care barriers that FSWs faced with them?
6- In your opinion, how we can get the FSWs attention to understanding their problems? What consideration should be given to working with these women?
7- Thanks for participating in this focus group, Do you have any comment?

Form 7- Master List

Hotspot Code	Hotspot Type					Hotspot Characteristics						Hotspot Profile			Reference Code
	Keeping Hotspot	Service Hotspot	Aggregate Hotspot	Public Hotspot	Private Hotspot	History and Consistency of Hotspot (month/year)	Peak day activity	peak Hour	Population Estimation						
									Max	Average	Min	address	Region	Name or topic	

Form 8- Check List of Key Informants Confirmation of Hotspots

Hotspot Code	Hotspot Profile			Population Estimation			Confirm		Key Informant Profession	Time of Visit	Date of Visit
	Consistency	Peak Day	Peak Time	Max	Mean	Min	No	Yes			

Form 9- Questionnaire

Date of Visit :	Hotspot Name :	Visit Area :
First Visit /Second Visit	Hotspot Code in Application :	Hotspot Code in the masterlist:
Ending Time of Visit:	Starting Time of Visit :	Visit in PeakTime: Yes /No

Please explain to Individual the goals of the study and ask him to cooperate and fill out the oral consent form

We want to ask you a few questions. This discussion will help you and your peers in planning for better health services. All the information you give us will be completely confidential. Would you like to participate in our study?

1	How old are you?	...............Year Date of Birth / /		
2	How long have you been living in this city/town?	.... Month		
3	What age you experienced your first sexual relationship?	................Year		
4	What age you started sexual relationship for money?	................Year		
5	How long have you had sex for money?	................Year .... Month		
6	In average, how many clients do you have per week?	....		
7	In average, how many days do you work per week?	...........................day		
8	Is Prostitution your permanent income or temporary income?	☐ Permanent ☐ Temporary		
9	Do you have any other jobs?	☐Yes ☐No		
10	Did you use drug in the past three months?	☐No	Yes :Type of drug ☐ Opioid ☐ Stimulant	
11	Did you drink Alcohol in the past three months?	☐Yes	☐No	
12	Have you ever injected drugs?	☐Yes	☐No(Jump 15)	
13	Have you injected drugs in the past three months?	☐Yes	☐No(Jump 15)	
14	Have you shared injection in the past three months?	☐Yes	☐No	
15	Have you ever been tested for HIV?	☐Yes	☐No(Jump 19)	
16	When was the last time you got tested for HIV?	☐less than 3 months	☐Between 3-12 months	☐over than 12 months
17	Do you know about your HIV status?	☐Yes	☐No	

18	What was the result of your last HIV test?	□negative	□positive	□ I do not want to answer
19	Have you received in (year) .... from the (center) .... located on the (street) .... or (Mobile center)............some services like (services) ……………? **Each city should fill out the blanks according to the information received from all service centers.**	□Yes	□No	
20	How many female sex workers are in this hotspot?	…………………		
21	How many female sex workers in this hotspot are under 18 years old?	…………………		
22	How many female sex workers are in this city?	…………………		
23	How many sex workers in this city know you by your name?	…………………		
24	How many sex workers in this city are under 18?	…………………		
25	In the last 12 months, how many female sex workers in this city have injected drugs?	…………………		
26	How many of this women who have injected drugs have you seen in the last month?	…………………		
27	Do you know other hotspots in this city that you and other people like you can go there?	◯ No ◯ Yes ◯ I don't know If the answer is Yes, please ask for the name of the hotspot and enter the name in the master list.		

- In regarding to Question 19, it is important to note that only the names of the centers and type of services that provide accurate statistics on the number and type of services provided to sex workers during the year are given in the blanks, if there is not the exact numbers of these centers do not require an inquiring of people about these centers (this question can be broken down into several separate questions based on the availability of information for each center)

Form 10- Observational Form

Date of Visit :	Hotspot Name :	Visit Area :
First Visit /Second Visit	Hotspot Code in Application :	Hotspot Code in the masterlist:
Ending Time of Visit:	Starting Time of Visit :	Visit in PeakTime: Yes /No

The number of FSWs who were counted in the hotspot………..

Appearance
✓ **Functional status of area around the hotspot:** ()Commercial ()Official ()Residential ()Transportation ()Park ()Military ()Abandoned ()Other …………………… ✓ **Socio-economic status of area around the hotspot**: ()Slumdog ()Lower-Intermediate ()Intermediate ()Upper-Intermediate ()Rich ()Mix ✓ **Dominant social groups in hotspot:** ()Worker ()Driver ()Businessmen and Employees ()Pilgrim ()Tourist ()Beggar ()Gang ()Afghan ()Gipsy ()Other…………… ✓ **Dominant age groups in hotspot:** ()Youth and Teenagers ()Elderly People ()Children ()All of them
Safety and Security
✓ **Observation the conflict in the Hotspot:** ()Yes ()No
Harms
()Sign of homeless ()Drug dealing ()Mugging ()Joining children to high-risk groups ()Other ....
Services
Observation the mobile van in the hotspot: ()Yes ()No
Target groups in hotspot
()Female sex workers (Individual) ()Female sex workers (Team) ()Children sex worker[under the age of 18] ()Pimp () Bodyguard
Characteristics of Customers (Age, Social status,…)
()Workers ()Drug Users ()Drivers ()Local People ()Non Local People ()Youth ()Other.........
Extra Comments:

Form 11- Final Confirmed Hotspots

Hotspot Code	Confirmation in the field visit				Confirmation in the formative assessment		Type of Hotspot					Hotspot Profile			
	Confirmation of one of the women in the hotspot	Confirmation by the executive team	Confirmation by the key informant 1	Confirmation by the key informant 2	Verbal Verification by Key Informant 1	Verbal Verification by Key Informant 2	Keeping Hotspot	Service Hotspot	Aggregate Hotspot	Public Hotspot	Private Hotspot	History and Consistency of Hotspot (month/year)	Peak day activity	Peak Time	Number of women in the hotspot (the mean of key informants in formative assessment)

Form 12- Incident Reporting Form

<table>
<tr><td colspan="2">Manager of Executive Team:</td><td>Name of Medical University :</td><td>Province:</td></tr>
<tr><td>Name of Hotspot :</td><td>Hotspot Code:</td><td>Visit Zone:</td><td>Visit Region:</td></tr>
<tr><td colspan="2">Hotspot Code in Application:</td><td colspan="2">Geographical Information:</td></tr>
<tr><td colspan="2">Time of Event :</td><td colspan="2">Date of Event :</td></tr>
<tr><td colspan="4">Location of event:</td></tr>
<tr><td colspan="4">Type of event :</td></tr>
<tr><td colspan="3">Human:</td><td rowspan="3">Outcome</td></tr>
<tr><td colspan="3">Financial:</td></tr>
<tr><td colspan="3">Others:</td></tr>
<tr><td colspan="4">Brief description of the event :</td></tr>
<tr><td colspan="4">Immediate action to control the event:</td></tr>
<tr><td colspan="4">Possible Causes of the event :</td></tr>
<tr><td colspan="4">Final result of the event :</td></tr>
<tr><td colspan="4">Witnesses declaration of the event :</td></tr>
<tr><td colspan="3">Description of event</td><td>Witness type</td></tr>
<tr><td colspan="3"></td><td></td></tr>
<tr><td colspan="3"></td><td></td></tr>
</table>

Form 13- Supervision form

The City Supervisor completes this form whenever they meet with the data collection teams either in office for morning sessions or at the hotspots.

Date: ………./………./……… City: …………………

If this form is being completed for specific hotspot, write the code and addresses:

Hotspot Code: ………

Hotspot Address: ………

Field manger assessment

Team visited the hotspot at the scheduled date/time?	☐Yes ☐No ☐Not assessed
Security measures were assessed and managed carefully?	☐Yes ☐No ☐Not assessed
Any violence or events reported or observed?	☐Yes ☐No ☐Not assessed
Enumeration form did not miss any key information?	☐Yes ☐No ☐Not assessed
GPS code recorded correctly?	☐Yes ☐No ☐Not assessed
Number of interviews with member of key populations was 1 to 3?	☐Yes ☐No ☐Not assessed
Number of interviews with other key informants was 2 to 4?	☐Yes ☐No ☐Not assessed
Duration of presence at the venue was minimum 4 hours?	☐Yes ☐No ☐Not assessed

If the answer to any of the above questions is No, investigate for the reasons and troubleshoot. Write bellow the reasons and the action you did for troubleshooting:

………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………

Interviewer assessment

Screening for eligibility was done appropriately?	☐Yes ☐No ☐Not assessed
Only eligible people were enrolled?	☐Yes ☐No ☐Not assessed
Response rate (% eligible people who interviewed) was more than 80%?	Yes ☐No ☐Not assessed
Collecting informed consents were done correctly?	☐Yes ☐No ☐Not assessed
A private spot used for interviews?	☐Yes ☐No ☐Not assessed
Low rate of missing data for key questions?	☐Yes ☐No ☐Not assessed
Consistency between data from different sections and questions?	☐Yes ☐No ☐Not assessed
Incentive was given at the end and appropriately?	☐Yes ☐No ☐Not assessed

If the answer to any of the above questions is No, investigate for the reasons and troubleshoot. Write bellow the reasons and the action you did for troubleshooting:

………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………
………………………………………………………………………………………

Form 14- Service data collection matrix from NGO and public providers

This form is used to count the number individual clients and types of services for use in the population size estimation multiplier calculations.

Name of NGO/ Facility and Address	Type of service being provided [choose only one per row]	Number of individual persons of FSW who have been visited [exclude duplicates]	The time period for the reported count [Example: Jan to June 2018]	Data manager name, email and phone number
	☐ HIV test ☐ Free condom ☐ STIs test or treatment ☐ Hospitalization ☐ Shelter ☐ Arrest ☐ Other (specify clearly ________________________________)			
	☐ HIV test ☐ Free condom ☐ STIs test or treatment ☐ Hospitalization ☐ Shelter ☐ Arrest ☐ Other (specify clearly ________________________________)			
	☐ HIV test ☐ Free condom ☐ STIs test or treatment ☐ Hospitalization ☐ Shelter ☐ Arrest ☐ Other (specify clearly ________________________________)			

Form 15- Staff Confidentiality Agreement

Staff Confidentiality Agreement

Recognizing the sensitive nature of this study and in consideration of my access to information and records relating to this study:

I agree not to make use of, disseminate, disclose or in any way circulate or broadcast any confidential information relating to the study except as necessary to conduct my work in the study.

I agree not to disclose any computer passwords or otherwise provide access to confidential information to any unauthorized person.

I agree to comply with all applicable laws and regulations regarding the confidentiality of individually identifiable health care information.

I agree to notify my supervisor immediately should I become aware of or suspect a breach of confidentiality or a situation which could potentially result in a breach, whether this is on my part or on the part of another person.

Date: ____________________________

Name (printed): ____________________

Signature: _________________________

Appendix 2- Background

HIV status in the countries of the Eastern Mediterranean region and North Africa and its neighbors

HIV is at the stage of centralized epidemics in the Eastern Mediterranean region and North-Africa. According to estimates in 2016, HIV in this region affected about 230,000 people. We can infer that virtually this virus is scattered in all countries of the region, and most of the cases occur in subgroups that have high-risk behaviors associated with drug injection or sexually transmitted infections. In the neighboring countries of Iran, the epidemic situation and transmission routes are more or less similar to those of other countries in the Eastern Mediterranean and North Africa.

HIV status in Iran and groups at high risk

The HIV epidemics in Iran began with the spread of infection among injecting drug users and formed with its outbreak in prisons in the mid-1990s. Hence, such an outbreak pushed health officials to increase their capacity in the health system to respond to the growing HIV/STI trend. Available information on the prevalence of HIV infection in Iran indicates that the country is at a central level. Although the main source of HIV transmission in Iran is injecting drugs, in recent years, the virus has been transmitted sexually. According to the data collected from the country's medical universities, about 36.8% of the new cases identified in 2014 were due to sexual transmission. Meanwhile, the share of sexually transmitted infections in newly diagnosed patients in 2010 was 20.8%. According to the latest information, the transmission of the virus through drug injection has been replaced by sexual transmission. Iran is confronted with the third wave of HIV during which the infection through sexual transmission surpassed other ways and now it is developing in the country. The growing increase in the incidence of HIV infection among women worldwide has been raised as a global challenge due to the widespread impact of reproductive health on the part of health organizations.

One of the main groups at high risk of developing HIV worldwide, which is disproportionately at high risk of HIV prevalence, are female sex workers. It is estimated that almost one-eighth of female sex workers in developing countries are infected with HIV. While, according to reports from 38 countries, only 58% of these women have access to health services on HIV prevention and sexually transmitted diseases. For this reason, the World Health Organization and the United Nations Program on HIV/AIDS control (UNAIDS) emphasized that the integrated services of health care services in the prevention of HIV should focus on high-risk groups like female sex workers. Although many of these people are present in some parts of the city and there is a possibility to access and count them, regularly these groups are hidden in the underlying layers of the community, and in most cases there is no access to them. The importance of these groups is that they act directly as the transmission factor of HIV infection within their homogeneous groups, and indirectly as an intermediate ring and transmit the infection to their sexual and injectable partners.

Appendix 3-Focus Group Discussion and In-depth Interview Guideline

1) Prerequisites for the interview

a) Belief in democracy; unlike current approaches, avoid top-down view to the interviewees.
b) The Cultural relations of interviewer-interviewee: Instead of establishing an administrative relationship, you must establish a cultural relationship and respect cultural values and norms.
c) Interviewee as a source of knowledge: Contrary to quantitative and survey methods in which the responder answers in the form of questioning options, she is the source of knowledge in interview and narrates.

2) Types of interview:

a) From the perspective of structure: closed and open (in depth) / structured, semi-structured and unstructured. / structured (closed, regular) / semi structured (/ semi closed, semi-regular) / unstructured (open, in depth, irregular).
b) From the perspective of the number of interviewees: Individual interviews and collective interviews
c) Collective interviews: group interview / group discussion / focus group / group narration
Choosing an interview type depends on the characteristics of the research field.

3) Uses of focus group

- Being familiar to a new field
- Hypothesizing based on the view of informants
- Evaluating various research sites or population surveys
- Designing interviews and questionnaires
- Getting the participants' interpretation from the results of previous studies

4) Advantages and disadvantages of the focus group:

A) Advantages

- A dialogue instead of a monologue
- Collecting data in their real context: Group interviews unlike individual interviews are closer to everyday life,
- Time saving (low cost): Interview with different people at the same time
- Helping to remember the events: Participants control each other, moderate and screen socially unconsidered, misguided and extreme views.
- The importance of a focus group in Iran that is in the face of a burgeoning process (in collective interviews, people control and respect each other).

B) Disadvantages and sensitivities

- Group members may not be able to express their true opinions on sensitive issues.
- This method is not suitable for when abundant quantitative data is considered.
- It is not applicable in complex quantitative and qualitative multivariate research.
- It can’t predict future problems.

- If the group has previously formed a meeting in one case, it cannot be used again for the same subject.

5) The preliminaries of focus group

- Accessories needed: personalized kits, voice recorder, writing Supplies, handwriting for group members, list of contributors with details, marker, food and beverage, watch.
- Place of discussion: The discussion place should provide the possibility of expressing opinions freely and equal dialogue for all members of the group, and does not cause the dominance of certain people over others. An environment that is very quiet, informal and without any pressure is recommended.
- Respecting the cultural issues of the group on behalf of the interviewing team: The cultural sensitivities of the group from simple affairs, such as coverage, to more complex issues such as ethnic, political, ideological issues, etc. should be considered.
- Being stranger or familiar: In interviews with familiar people, the points that are supposed to be definite and are not discussed, are more than those from the interviews with strangers. Therefore, in familiar groups, the interviewer should keep in mind the points that are important for research purposes and encourage the group to further discuss them.
- Homogeneity and heterogeneity: Considering the necessity of research, initially begin with heterogeneous groups and then go to homogeneous groups. Homogeneous people are useful for a time when we want to reach an agreement in a limited time and heterogeneous people are useful for getting a range of different opinions. Groups that do not tolerate inhomogeneity and the arrival of individuals from outgroup people within their own group, should be interviewed individually.
- Artificial or natural group: The natural group is a group that exists before research and artificial group is created due to the necessity of the research. Each choice depends on the subject and the necessity of the research.

6) The role of the interviewer in a group interview; the interviewer as facilitator / coordinator: he or she is responsible for coordinating and facilitating relations between individuals and not domination over them

a) Formal monitoring: Monitor the people turn to speak
b) Thematic guidance: Questions / Discussions. For example, give an example for us / say more about this / continue your talk / summarize and ...- avoid the questions with yes and no answer
c) control of interactions: preventing the domination of some people over group

7) Practical steps in concentrated groups

A) First step; analysis and preparation

- choosing group members and identifying their responsibilities including organizers, coordinators (within and outside), coordinator assistant, analyzer and reporter
- identifying ends or research purposes
- designing questions
- identifying and choosing group members, arranging appointments with them, recoding their features and obtaining their informed consent
- identifying place and time

B) Second step; initiation and introduction of meeting
- How to start discussion; act like following examples:
Example 1) before we start discussion, we should get to know them. Please introduce yourself. Let's start with X. please tell me what your job is and so on
Example 2) now we are going to talk about something that you have a lot of information about but before we start let me ask you something. First, I record our talk so that I can write my report later; if you have any problem with this, you can leave now. Please speak clearly. Please do not interrupt each other. Please express your true feelings and do not care about what others say and I will tell you whose turn it is. Before we start, you can ask anything that you do not understand well.
C) Third step; key information
- use brain storming before you ask any questions
- ask the main questions
- let them think and then persuade them to give some short answers
- do not let them start personal discussions
- ask for complete answers and ignore incomplete answers

D) Fourth step; checking or analyzing questions
- repeat interview questions again
- shed lights on discussion
- At the end of discussion, review discussion summary and write what you have forgotten
E) Fifth step; interpretation and reporting results
- summarize discussion subjects
- analyze summaries
- write the final report

8) In-depth interview: definition, difference with other interviews, application and strengths
Structured interview/ semi-structured (in-depth interview)/ unstructured interview
Structured interview with specific content and form (this is used for quantitative interviews not qualitative ones)
Semi-structured interviews (the content is more or less specific, the main themes are specific but the form is different)
Unstructured interview: like narrative interviews, I am interested to hear your story, I am here to listen to your story, there is no intimacy, we cannot ask questions, he committed murder, he committed suicide, I am just generally asking, we derive our questions based on what they say. The interviewee has the authority.
They say structured interviews are like artificial situations because interviewees are separated from their everyday relations. In addition, interactions in a standard interview is very different from everyday interactions.
Definition: this is the kind of interview in which questions are specific but the way that questions are asked or the number of questions vary based on interviewees (age, knowledge level, education, social position etc.). We do not aim to answer questions, evaluate others or investigate the hypothesis but to understand their experience and the way they get meanings.

9) Understanding the shortcomings to get the right information and dealing with it

A) The obstacles for cooperation and former experiences: in a society where people do not tend to cooperate, people have problems in discussions.

B) Researcher's behavior: inadequate knowledge, not following interactive and communicative culture harms data collection. Interviewer is a knowledgeable, polite and comfortable person.

C) Adjusting interviewer's expectations with interviewees (following special individuals including interviewer, the elite etc.)

D) Giving wrong information intentionally: the interviewer gives wrong information on purpose.

E) Problems in recalling information: general and ambiguous questions make people forget events.

F) Weakness in expressing information: interviewer cannot explain well.

10) Guidelines for an in-depth interview

1) Starting the interview

- The interviews must be performed by informed consents of participants; they should trust you and must be aware of the consequences of research for them.
- consider the time and location of the interview: the time and location of interview should not be unpleasant for interviewees.
-essential tools: a kit for personal stuff, tape recorder (battery), writing supplies, refreshments, watch.

Considering cultural issues: consider participants cultural issues like their clothes and ethnic, political and ideological issues.

2) Probing questions

Probing questions make interviewees give more information without bothering them.

This type of questions deals with the answers of interviewees and their explanations. Probing questions include:

- Calm probing questions: like pauses, showing attention, or words like wow, how interesting, OMG and so on
- Reflection probing questions: repeating the last part of interviewees sentences.
- Yes probing questions: yes, I know, you're right
- Long probing questions: asking long questions
- Leading probing questions: lead to some extent to reach an answer.
- Pre-informing probing questions: interviewer pretends to know the answer.

3) Characteristics

- The start and end process is unknown.
- The questions and their order changes based on different individuals.
- The interviewer shows interest in discussion and tends to discuss more.
- The interview starts with general questions and then deals with detailed questions.

4) During interview

A) Do not develop questions: in the beginning ask undeveloped question. Information will be developed gradually. Don't say: "did you get fired?", say "why do they fire workers?"

B) Specify questions: interviewer should extract the special information that renders a specific event.

C) Adequate coverage (extended): cover all aspects you need and do not be tricked with minor details.

D) Make the discussion deep and pay attention to different fields

- go beyond expressing general feelings. In case of ambiguous answers (that was good/ interesting) lead the discussion to get answers that are more exact.
- persuade them to talk about their unexpressed/ not well-expressed feelings
- listen more and speak less. Do not interrupt them.
- do not suggest or interpret answers
- repeat important questions. Liars do not remember the stories they made up.

E) Come back to main points in case they beat around the bush.

F) Control your reactions when interviewees express their feelings

G) Do not act as if you are giving guidelines, trying to treat, help or make friends with interviewees.

H) Pay attention to field notes: observations, gestures, colors, clothes, odors, smiles, theoretical interpretations, methodological decisions

Appendix 4- Setting Up an Enumeration Area

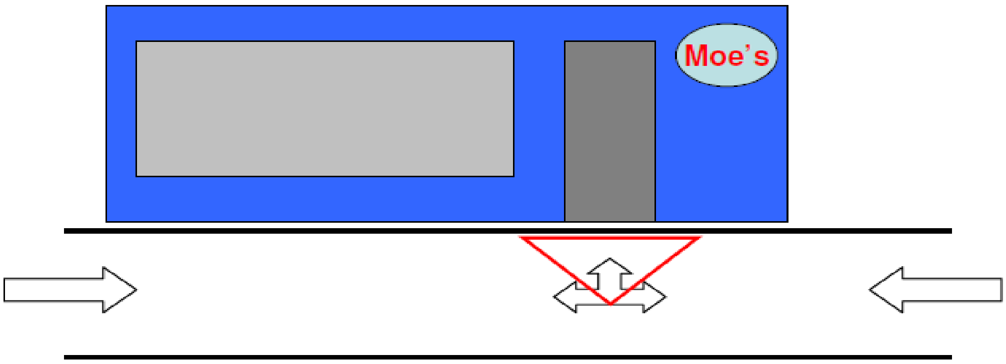
Each venue will have unique physical characteristics. These features need to be taken into account when deciding on the placement and type of enumeration area and the number of staff needed to adequately cover the area. There are three general types of enumeration areas: line based, area based, and moving line. Note that there may be other ways to set up an enumeration area depending on unique situations such as inside bathhouses and waiting rooms.

Line Based

During **line-based enumeration**, people are counted as they cross an imaginary line for the first time during a sampling event. Line based enumeration is conducted in locations with high street traffic flow for example as shown in Figure 20. At locations where the external flow includes a mix of populations, line based enumerations help identify the priority population.

Area Based

In the case of **area-based enumeration**, people are counted when they enter a defined area for the first time during a sampling event. Area based enumerations work best when there is a low flow of the population. The area can be small or large depending on the venue.



Moving Line

A moving line can be used when there is a large physical space such as a park where members of the population are congregated but are not moving around. Staff starts at one end of the area and slowly walk side by side through the area. All persons are counted as an imaginary line crosses the people. Illustration below shows the start of a moving line enumeration. The star represents the enumerator and the smiley faces represent the interviewers. As the interviewers move through the crowd making intercept approaches, the enumerator systematically counts all members of the MARP in the area.

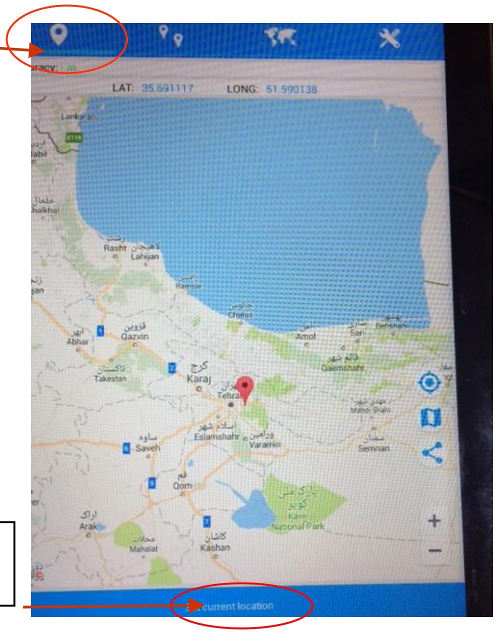
Appendix 5- Guide on how to use “AndLocation” mobile app

First, install the application using this link:

https://play.google.com/store/apps/details?id=com.AndLocation.AndLocation&hl=en&referrer=utm_source%3Dgoogle%26utm_medium%3Dorganic%26utm_term%3Dandlocation+app+download&pcampaignid=APPU_1_4fX9Wdu-GMiwsAfunlewBw

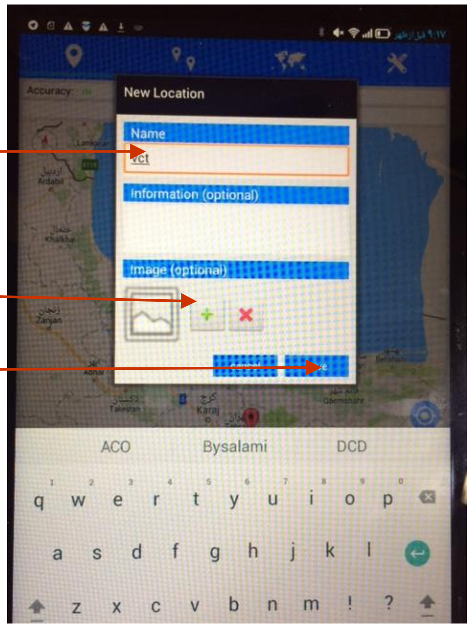
Use the below procedures to use software

1. First click on this icon and put the red point on the venue to determine the coordinates.



2. Click on set current location

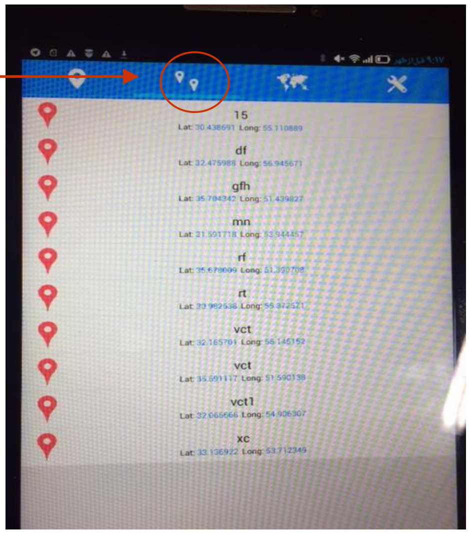
3. When you click on set current location, this window will be opened. You can type the code of the venue at name section. At the information section, you can add the number of people of the mapped group; also you can add a picture of that venue to application.



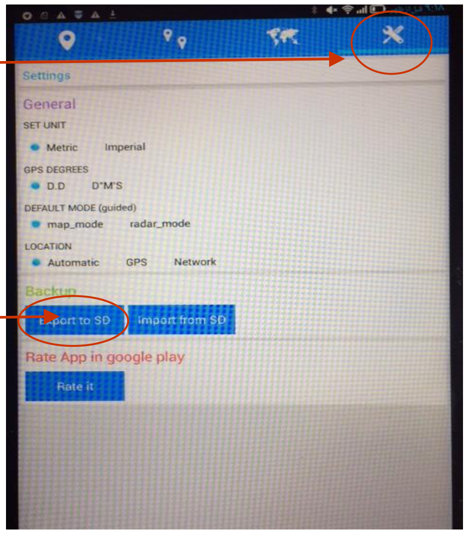
Add picture here.

4. Then out save bottom.

5. When you want to see all venues click on this icon.



6. press setting to enter to this page

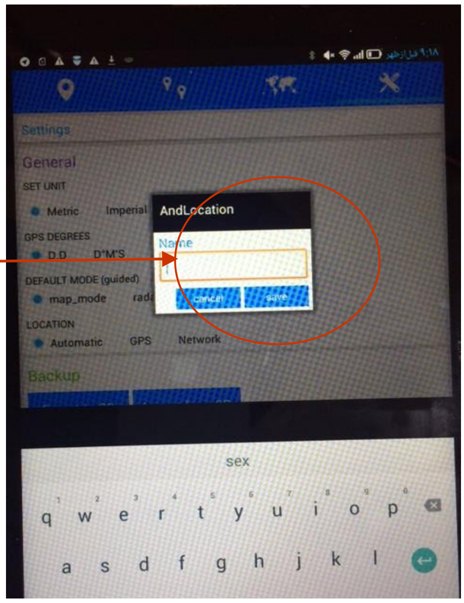


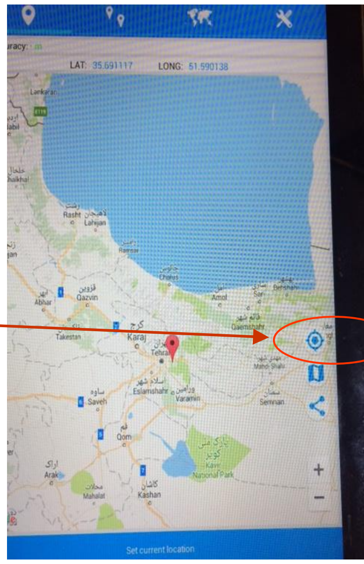
7. Click on "export to SD". Then you will see a window shown at the next picture.

8. Add the team code and date here.

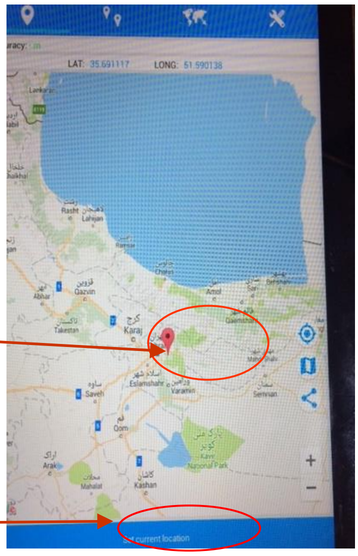
Click on Save

For example, 21 March and team 2, should be written as: 2103-2





9. If you could not connect to the net when you are in the venue, OR the venue is not safe and you could not use the device. When you could connect to the internet for example at the nearest location or at the office, you can use the device. When you connected to the internet and the map was loaded, click here.



10. Set your location manually, Scroll to the venue location

Then click on set current

11. Click on set current location.

The other process is similar to the previous steps. Please follow from step 3.

After you did these phases, it depends on your tablet or cell phone go to the section where the information saved. In internal memory, you could see the saved location at a section named Andlocation Backup with .db style.

You should save this folder in a CD or a memory and send it to the supervisors. You can send it via email, telegram or whatsApp.

Supervisors could open with “db browser software” OR “SQlite.Expert.professional Software”. You could copy the cells in the file and copy them in an Excel sheet. We use this file for geographical analysis of the venues.

Appendix 6- The final report design format

- The cover of report paper
  The emblem of University of Medical sciences
  Title: a study of mapping female sex workers (first edition [Date])
- **First page**

Report ID: include information about correspondent, supervisor and steering committee staff and executive teams

- Second page: list of contents and appendices
- Third page: introduction and the background of the subject in the city of study
- Fourth page: methodology

Includes the number of performed interviews during developmental studies, the number of completed questionnaires during field study, the number of completed reports during field studies

- From page five: findings
- Findings of developmental studies
  - ✓ A description of FSWs in the city of study (a summary of interviews during developmental studies)
  - ✓ A description of their customers (a summary of interviews during developmental studies)
  - ✓ A description of practitioners and interventions and their limitations (a summary of interviews during developmental studies)
  - ✓ A description of essential interventions (a summary of interviews during developmental studies)
- Findings of developmental studies
  A description of women's characteristics based on completed questionnaires
  - ✓ The average age of women
  - ✓ The average age of their first experience of sexual intercourse
  - ✓ The average age of their first experience as FSWs
  - ✓ the average of their daily customers
  - ✓ the average of their working days
  - ✓ the prevalence of drug abuse
  - ✓ the prevalence of alcohol drinking
  - ✓ the prevalence of injection and injecting equipment sharing
  - ✓ the test rate
  - ✓ the number of people with positive test results from the whole population and from those who have received their test results
  - ✓ the prevalence of STDs
- the screened final list of hotspots

Mapping of Virtual Locations

Engage with local KAP members knowledgeable about use of virtual locations

To identify a small, yet diverse group of KAP members who can assist in making a list of the web sites and cell-phone apps utilized to meet partners.

During meeting(s) on *geographic* mapping, identify KAP members who are knowledgeable about the use of web sites and cell-phone apps to meet partners/clients.

Describe the purpose of virtual mapping and invite these KAP members to participate in a follow-on meeting to make a list of the sites and apps and discuss each in turn.

Develop a list of web sites/apps and criteria to identify KAPs using them

To develop a master list of websites and apps used by KAP members to meet partners/clients. For FSW, these may be sites used to meet clients or used by FSW to advertise services to clients.

To gather sufficient information on each website and app in order to systematically count the number of FSW on the site at a particular day and time who are looking to meet partners/clients in a particular province.

For this purpose:

1. Convene a meeting of the KAP members who are knowledgeable about virtual locations and who were identified during the geographic mapping meeting(s). Include KAP members from different areas in the governorate. Hold multiple meetings as necessary.
2. Brief the experts about the purpose of virtual mapping and ask them to begin listing any additional web sites and apps they are aware of, and add these to the Master Virtual Site Listing.
3. Show them the consolidated Master Virtual Site Listing and ask them if they think any of the virtual sites are no longer active.
4. Ask key informants to provide information about how to use each site in order to identify the number of FSW on the site at a given time in the province. This may include how to set up a profile that will permit browsing profiles of all FSW on the site; as well as how to define a search using specific criteria that will identify FSW on the site. Criteria to identify FSW should include:
    - ✓ FSW: female seeking a male sex partner in province; specific indications that the individual is interested in exchanging sex for money or in kind
    - ✓ How to identify the unique profile name of the FSW.
    - ✓ How to identify the age of the FSW (in order to differentiate <18 year-olds if deemed necessary during the analysis)
    - ✓ For FSWs who are advertising on a standalone web site, unique identifying information such as a telephone or cell-phone number or street address
5. Determine whether observations need to be conducted on-site.
6. Ask key informants to discuss how different kinds of FSW may use the site and how this may influence who is on the site at different days and times. Record the peak days and times on the Master Virtual Site Listing. Aim to include several days and times when the number of FSW on the site is expected to be higher than normal.

The Master Virtual Site Listing - This is a paper-based format (Form 1) that should also be entered into Excel. The Master Virtual Site Listing will be maintained electronically, so that progress in gathering information from each site can be monitored over the course of the mapping. The Master Virtual Site Listing should be updated as new web sites and apps are identified during the mapping process.

Prepare for the fieldwork of virtual mapping

- ✓ To consolidate the information obtained at the previous stage about web sites and apps
- ✓ To standardize how each web site and app will be used
- ✓ To verify that the expected peak times are truly peak times
- ✓ To finalize the days and times when field staff will conduct observation of the sites and apps

For this purpose:

1. Focal point will share findings from the previous meetings, including the Master Virtual Site Listings from the province with the National Coordinator.
2. The National Coordinator will work with the Central Team to standardize the search procedures as necessary. Standardizing how each site/app will be used is critical to ensuring that results from the provinces are comparable to one another.
3. Train field staff in the process of visiting the sites and apps using the standardized profile information and FSW search criteria
4. Field staff will observe the sites/apps at 4-hour intervals during selected days to verify the peak times identified, and record observations on the Virtual Peak Time Verification Sheet (Form 2)
5. Review the Peak Time Verification Sheet to adjust the peak days and times as necessary.
6. Record the final peak days and times on the Virtual Visit Schedule (Form 3)
7. Select a random time to observe the site within each peak day-time interval by using a random number generator in Excel.
8. Each week, select new random times to observe each of the peak day-time intervals.

This step will not take place if there are not all sources of information about websites and apps used by FSWs.

Observe the sites/apps at the peak times

During this phase, the sites and apps will be visited repeatedly throughout the data collection period. During the peak day-time intervals identified, information will be recorded on the FSW on the site seeking partners/clients in each province.

For this purpose:

1. Visit each of the sites and apps identified at the scheduled days and times listed on the Virtual Visit Schedule.
2. If needed, create a profile on the site/app using criteria needed to view all FSW on the site. It may be necessary to create different profiles for different provinces, or the same profile might be able to be used for all provinces.
3. Record information on the number of FSW on the site at the scheduled time using the Virtual Site Visit Sheet (form 4).

4. If the search includes several pages of profiles, it may be helpful to take a “snapshot” of each page to avoid a situation where the search results change while the results are being recorded. If snapshots are taken, store the files in a separate folder with a name to reflect the site/app, province and time of the visit, for example SITE-PROV-DDMMYY-HH:MM.

Form 1- Master Virtual Site Listing

Serial #	Virtual Site Name	Virtual site type	Profile configuration details	Search criteria details	Data needed to uniquely identify a user and age	If type is SP, data needed to uniquely identify the FSW	Peak days and times

Instructions:

Serial #: For each site identified a serial number is assigned (in the order that the site was identified).

Virtual site name: The name of the Internet web site or cell-phone app (e.g. Facebook, Instagram)

Profile configuration details: Enter details on how to set up a profile that will permit browsing profiles of all FSW on the site. For example, this might include:

- ✓ set profile governorate of residence
- ✓ set profile sex to “male”

Search criteria details: Enter details on how to define a search using specific criteria that will identify FSW on the site who are looking for sex partners in the governorate of interest. For example,

For FSW this might include:

- ✓ set preference of desired match to “female seeking male”
- ✓ set geographic preference to “seeking partners in Alexandria”
- ✓ set keyword to [“generous” or “sugar daddy” or “$” or “hotel”]

Data needed to uniquely identify a user and age: Enter details on how to identify the unique profile name and age of the FSW. This might be:

- ✓ profile name uniquely defines each person on the site;
- ✓ use Menu->Search->Show Matches Online to list all users
- ✓ get profile name and age from first line of each listing

If type is SP, data needed to uniquely identify the FSW: This only applies to sites of type SP (standalone web pages used to advertise a particular person(s)’ sex services. The way to uniquely identify a SW advertising using a standalone web page is likely to be the phone number, cell phone number or address.

Peak days and times: Enter any days and times when the number of FSW is thought to be particularly high. Make sure to record the day and the time interval. Try to make intervals no longer than 4 hours. Use 24-hour format for the times. For example:

- ✓ Friday and Saturday from 20:00 to 00:00

Form 2- Virtual Peak Time Verification Sheet

Virtual Site Name: Virtual Site Type: Virtual site serial #:

Note: Define 4-hour intervals. Make 4 observations spread evenly over the interval and note the number online at each time.

Day	Time Interval	Time of observation/search	Number of unique KAP members on site in province

Day: Enter the day when the observation was conducted (e.g. Wednesday)

Time interval: Enter the time interval. Choose a range of time intervals to test whether the peak times mentioned by key informants are correct. Choose time intervals mentioned by the key informants and other suspected peak times not mentioned by key informants. Write the interval as *start time – end time* (e.g. 12:00 – 16:00). Use 24-hour time format.

Time of observation/search: Enter the time when the search was executed. For example, when the "show matches" option was selected to show a list of profiles online just then. This should be a specific time, e.g. 13:30. Use 24-hour times.

Number of unique KAP members on site in province: Enter the number of unique KAP members that were observed on the site during the entire time. This is probably the number of distinct profile names listed in the search results.

Form 3- Virtual Visit Schedule

Make a new schedule each week with new random times for each of the peak day-time intervals

Serial #	Virtual Site Name	Virtual site type	Peak day-time interval	Random time selected to observe interval	Code for scheduled visit

Peak day-time interval: In each row, enter the different peak day and time intervals that will be observed during data collection. For example, if 3 peak days and times were identified, and these were Friday and Saturday nights from 8pm to 12pm and Thursday afternoons from 3pm to 7pm, then 3 rows should be added:

- ✓ Friday 20:00-00:00
- ✓ Saturday 20:00-00:00
- ✓ Thursday 15:00-19:00

Random time selected to observe interval: Use a random number generator (Excel Spreadsheet) to choose a random time in each of the peak day-time intervals. This is the time when the observation will be made. For the example above, the random times selected might be:

Peak day and time interval: Random time selected:

- ✓ Friday 20:00-00:00 - 21:35
- ✓ Saturday 20:00-00:00 - 23:07

Code for scheduled visit: Enter in a code for this scheduled visit using the format SITE-GOV-DDMMYY-HH:MM. For example:

fb-02-231014-21:35 would be:
fb = facebook
02 = governorate #2 (this might be Alexandria)
231014 = 23 October 2014
21:35 = the time scheduled, 9:35pm

Form 4- Virtual Site Visit Sheet

Virtual Site Name:

Code for scheduled visit:

Actual time of observation:

Number of unique KAP on site at time of observation:

List of profiles and ages of KAP members on site at time of observation:

Profile name	Age	[Other data needed to uniquely identify an individual on the site]