

Amaanat Gill's CFID Project Summary Report

From the months of June 2021 to the end of August 2021, I worked on a draft manuscript that examined the HIV risks and associated factors among male clients of female sex workers (FSW) in Dnipro, Ukraine. The support of this project was provided by Dr. Lyle McKinnon from the University of Manitoba's Department of Medical Microbiology and Infectious Diseases.

Through my role I had interpreted data that had been collected for the project through a first round of data collection. Specifically, I utilized the data that had been collected from geographic mapping which determined areas that were associated with high sex work activities, known as 'hotspots.' The hotspots that were identified had led to target groups, such as clients and FSWs, to be identified for this study. Clients and FSWs who agreed to participate in the study took part in cross-sectional bio-behavioural surveys, which were conducted from September 2017 to September 2018. A total of 370 clients participated in the study. The questions of the surveys pertained to socio-demographic characteristics such as marital status, occupation, and education level completed. Additionally, clients also answered questions regarding behavioural activities that were associated with HIV and HCV risk and susceptibility.

Through analyzing and interpreting the methods and survey responses from the first round of data collection, I first developed detailed tables that summarized the socio-demographic characteristics and behavioural activities among clients. The table for socio-demographic characteristics consisted of the clients age, marital status, occupation, and education status. It was found that the marital status among clients had varied, however, the greatest proportion had reported they were single at the time of the study.

The sexual behaviours among clients was also interpreted and summarized in tables based on survey responses. This included the clients age at the first purchase of sex services,

number of years purchasing sex services, and the number of different sex workers they had sexual relations with the past 6 months. Additional information that was summarized and interpreted was types of sex acts performed among FSWs (i.e. vaginal or anal), proportion of condoms use among different FSWs, and the different types of partners clients had sexual relations with (i.e. transactional sex partners, casual sex partners, intimate sex partners, etc.). It was found that participants had seen a median of 3 different sex workers within the past 6 months. The number of times clients had paid extra for sex without a condom was low, as 8.92% reported they had either always or most of the time paid extra to have sex without a condom.

Additional risk factors examined included substance use among clients. This included whether or not clients had ever reported use of drugs, and of those who said yes, the number who injected drugs. It was found that 141 participants reported using drugs in their lifetime, and of these individuals who used drugs, 14 reported to having injected drugs. It was found that more than half of clients who injected drugs (n=8) had done so more than a year prior to when the study took place.

The HIV and HCV prevalence data was determined through serological testing. If participants provided consent, a dried blood spot (DBS) sample was sent to the National HIV and Retrovirology laboratory in Winnipeg, Canada for viral sequencing and analysis. Participants had the opportunity to access the results of the DBS HIV and HCV serological test results through the toll free hotline number that had been created for the purpose of this study. Using this information, the HIV and HCV prevalence was determined. A total of 369 clients had participated in this component of the study. It was found that 56.2% of clients (n=208) had reported to having tested for HIV at some point in their lifetime. Whereas 43.5% (n=161) reported to not having tested for HIV. Of those who tested for HIV, 26.4% (n=55) clients had

tested within the past year of the study. The HIV prevalence for participants who tested positive for HIV in their most recent test was found to be 2.4% (n=9). The HCV prevalence for clients who tested positive was 6.5% (n=24). This data was summarized in a table.

Following the construction of the tables, I had briefly summarized key results from each topic (i.e. sexual behaviours, biobehavioural characteristics, and HIV/HCV results).

Following the summary of the results, I developed the background for the draft manuscript. This included highlighting the study's hypothesis, objectives, and background on the HIV epidemic within Ukraine. Additionally, the methods section was also developed. This included discussing the study's setting: Dnipro, Ukraine. This location had been chosen due to its association sex work activities. The process of the data collection had also been discussed, which included a summarization of the process of geographic mapping to identify hotspots. The cross-sectional bio-behavioural surveys that were used for data collection were also highlighted in this section. The laboratory testing for the HIV and HCV results among survey participants had also been summarized. Lastly, ethical approval had also been summarized.

Next steps for this project include developing the discussion and conclusion sections of the manuscript. The goal is to examine if the results indicate if any of the factors pertaining to injection of drug use and contraception were associated with HIV risk among clients. Currently, there is limited data on HIV risks and vulnerabilities among clients of FSWs in Ukraine. Thus, this manuscript will serve to provide data on HIV transmission among male clients of FSWs within Dnipro, Ukraine. The data from this project will provide information to public health officials and policy makers, which enables them to construct preventative measures and healthcare delivery services for his demographic.