Barriers to HIV Testing among Clients of Female Sex Workers an Assessment of Ogoja Local Government Area

Simon J, Agada^{1*}, Prince Ezekiel²

Master of Social Work Department, Texila American University, Guyana

Master of Public Health, Texila American University, Guyana

Abstract

Frequent engagement of men in sexual encounters with female sex workers (FSWs) while not using condoms places them at high risk for Human Immunodeficiency Virus (HIV) infection. HIV testing has been noted to be among the necessary methods to stop HIV transmission and acquisition. However, it's illustrious that not all men voluntarily test for Human Immunodeficiency Virus (HIV), take a look at how to stop Human immunodeficiency virus (HIV) transmission and/or acquisition. This study aimed to spot barriers to accessing Human immunodeficiency virus (HIV) testing services among men. World Health Organization square measure shoppers of female sex workers (clients) in Ogoja Cross River North, South-South Nigeria. A comprehensive search of recent literature uncovered a fancy array of social, Personal, and behavioural barriers, as well as knowledge/awareness of the Human immunodeficiency virus (HIV) infection's existence, perception of human immunodeficiency (HIV) risk, stigma from care suppliers or family/partners/friends, distrust of care providers/systems. The purpose of this study is to explore possible barriers to HIV counseling and testing uptake among clients of Female Sex Workers in the Ogoja Local Government area of Cross River State, Nigeria, and to see possible ways of mitigating the barriers to epidemic control. This study was conducted in Ogoja Cross River State, Nigeria, with a sample size of 100 male clients of female sex workers, via random sampling technique through an online survey system known as Mwater for data collection. Frequency counts and percentages were used for data analysis. Vital findings of the study conclude: stigma and trust impact uptake of HIV test among male clients of female sex workers.

Keywords: Acquired immunodeficiency syndromes, Barriers, Female sex workers, Human immunodeficiency virus, Human immunodeficiency virus testing, Male.

Introduction

Problem Statement Human Immunodeficiency virus (HIV) testing uptake has been continuously low among male clients of female sex workers. By the tip of 2016, 36.7 million individuals were living with Human immunodeficiency virus (HIV) infection, a half-hour of whom were unaware of their designation. More or less thirty-five.4 million deaths worldwide are attributed to infection with the human immunological disorder virus (HIV) since the start of the Human immunodeficiency virus (HIV) epidemic in the early Nineteen

Eighties. Within the U.S., by the tip of 2015, the authority calculable that one.1 million persons aged one 3 years or older were living with Human immunodeficiency virus (HIV) infection. Of those, more or less, V-J Day was unaware of their designation. More or less, 39,000 individuals were recently diagnosed with HIV in 2015--differences among subpopulations illustrated below—with a five-hitter decline in new diagnoses from 2011 to 2015 [1].

Early detection of HIV infection is of dominant importance, permitting healthcare suppliers a useful chance to stop any

 transmission of the illness and to start medical care, if guaranteed. Studies have additionally shown that infected persons U.N. agency square measure awake to their positive Human immunodeficiency virus (HIV) standing decrease behaviours related to the transmission of the illness infected population is depicted. The foremost common modes of transmission are unsafe sexual practices and blood vessel drug use.

Male clients of female sex workers (FSWs) (here on to be called clients) yet because the female Sex Workers themselves are indicated as at high-risk teams for Human Immunodeficiency virus (HIV) infection Studies with this cluster in several settings have according that Human immunodeficiency virus (HIV) infection is extremely prevailing among them Frequent engagement in sexual encounters with multiple female Sex-workers while not using condoms has been incriminated in the concert of the most contributors to the transmission of Human immunodeficiency virus (HIV) among this population cluster. Sexual activity has been, according to the concert of, the most routes of HIV unfold in Nigeria, and men, as well as these clients, compared to girls, area unit a lot at risk of the infection with fifty-nine. 2 and 40.8% severally in last five years.

Promoting access to Human immunodeficiency virus (HIV) testing yet as voluntary content among people, as well as clients of female Sex-worker in danger of HIV infection, has been thought of as a key strategy for Human immunodeficiency virus HIV hindrance and related to reduced risk behaviour. The globe Health Organization has conjointly suggested members of key populations, as well as clients of female Sex-worker, United Nations agency area units at high risk for HIV infection to endure HIV testing a minimum of once a year. However, studies and reports have shown that access of the clients of a female sex worker to Human immunodeficiency virus (HIV) testing in several settings remains low. Barriers to accessing Human immunodeficiency virus (HIV) testing services among these clients are according elsewhere. These include (i) clients' concern about HIV diagnosing that has been related to stigma and discrimination, (ii) concern of losing a footing within the community thanks to social group norms of masculinity that position men as physically robust (and HIV-being related to weakness), (iii) concern of losing the flexibility to be self-directed (having HIV being related to having AIDS that could lead on to loss of the flexibility to work), (iv) clients failing to create time for testing, and (v) the denial regarding being susceptible to Human immunodeficiency virus (HIV), as well as low self-perception of HIV risk.

accessibility Likewise, Human immunodeficiency virus (HIV) testing services and barriers to undergoing Human immunodeficiency virus (HIV) testing among clients in this nation haven't been well documented. Supported academic the backgrounds and skilled experiences within the field of Human immunodeficiency virus and Acquired immune deficiency syndrome as well as within the study settings, the study authors had previous information of HIV testing barriers delineated higher than, and including the shortage of information and knowledge on Human Immunodeficiency Virus and Acquired Immune Deficiency Syndrome, poor convenience and or accessibility of Human immunodeficiency virus and Acquired Immune deficiency syndrome-related health services, stigma and discrimination, and overall poor transportation to and from the health care facilities. This qualitative inquiry aimed to spot and document barriers to accessing HIV testing services among a sample of clients in Ogoja Cross River, North Nigeria.

This study aims to explore possible barriers to HIV counseling and testing uptake among clients of Female Sex Workers in Ogoja Local Government of Cross River State, Nigeria, and to see possible ways of mitigating the barriers to epidemic control.

Methods

The study is a quantitative study in which a link to the survey was sent to the respondents. However, random sampling was used to select respondents. 100 Data was analyzed with the use of Chi-square to identify frequencies, percentages, relationships between variables, and differences between groups [38, 39]. This study was conducted in the Ogoja local government area of Cross River State, Nigeria.

The research hypotheses for this study are as follows:

- 1. There is no relationship between stigma and HIV test uptake.
- 2. There is no relationship between HIV risk perception and an HIV test uptake.
- 3. There is no relationship between trust in health workers and HIV test uptake.
- 4. There is no relationship between friends and family support and HIV test uptake.
- 5. There is no relationship between Antiretroviral Therapy medication availability and HIV test uptake.

Significance of the Project for Public Health Practice

This study identifies barriers to HIV testing uptake among male clients of female sex workers and the effects on HIV epidemic control. The study is imperative to the social work profession as it helps determines the barriers to HIV test uptake among male clients of Female sex workers. Contributions of the study are beneficial for social work practice, policy, and further research. This study will bring awareness to the male clients of female sex workers, such as awareness creation about HIV counseling and testing, obstacles that are in place and affect prevention (This study can further assist social work practice by requiring professionals to create demand for HIV testing uptake among male clients of female sex worker and test them using an innovative strategy.

This research work will help to recommend strategies to achieve optimal HIV testing coverage among clients of female sex workers to mitigate the treatment gap among the subpopulation, provide educational information to the community, work to dispel myths and stereotypes regarding the HIV virus, and help social workers to overcome possible barriers to HIV testing uptake [2].

Definition of Terms

The definition of key terms used in this study will pose a clear understanding of the research work. HIV (human Immunodeficiency virus) is also an epidemic that attacks cells that facilitate the body's fight against infection, making somebody extra in danger of different infections and diseases. it's unfolded by contact with sure bodily fluids of somebody with HIV, most typically throughout unprotected sex (sex whereas not a security or HIV medication to forestall or treat HIV), or through sharing injection drug instrumentation.

If left untreated, HIV can cause the illness AIDS (acquired disorder syndrome). The physical structure can't get eliminate HIV, and no effective HIV cure exists. So, once you have HIV, you have it forever.

However, by taking HIV medication (called antiretroviral treatment or ART), people with HIV can live long and healthy lives and forestall transmission of HIV to their sexual partners. To boot, there are effective methods to forestall getting HIV through sex or drug use, at the side of pre-exposure prophylaxis (PrEP) and post-exposure Prophylaxis (PEP).

First famed in 1981, HIV is that the rationale for one in each of humanity's deadliest and most persistent epidemics.

HIV Test

ELISA (enzyme-linked immunosorbent assay): a screening looks at want to find infection with HIV. If positive, the enzyme-linked-immunosorbent serologic assay look at is sometimes recurrent.

Western blot: a look at typically want to make sure the results of associate enzyme-linkedimmunosorbent serologic assay. It will rule out a false-positive by distinctive HIV antibodies from alternative antibodies, which will react to the enzyme-linked immunosorbent serologic assay.

IFA (indirect fluorescent associate antibody): a take look at used just like the less costly Western blot to substantiate the results of an enzyme-linked-immunosorbent serologic assay [3].

The premiere takes a look at which will identify the genetic material, the RNA, of the HIV virus is named PCR (the enzyme chain reaction). PCR will find associated early HIV infection before associated antibodies area unit evident and verify whether or not a baby born to an HIV-positive mother can have HIV. A take a look at like PCR testing, known as the branched deoxyribonucleic acid, take a look at, additionally detects the ribonucleic acid of HIV [4].

Stigma

Stigma is degree attribute that conveys degraded stereotypes [5]. classically printed stigma as a degree "attribute that is deeply discrediting." A discredited attribute could also be without delay discernible, like one's colour or body size, or could also be hidden but notorious if disclosed, like one's list or struggles with psychopathy.

For Goffman, stigma might be a general aspect of social life that complicates everyday micro-level interactions—the stigmatized is additionally cautious of collaborating with those who do not share their stigma. Folks whereas not have a definite stigma would possibly criticize, overcompensate for, or arrange to ignore stigmatized folks. the final public, [5] argued, experiences the role of being stigmatized "at least in some connections and in some phases of life." Indeed, Goffman's broad definition of stigma incorporates many up-to-now discredited attributes, still as what he printed as "tribal stigmas" (e.g., race, ethnicity, and religion), "physical deformities" (e.g., deafness, blindness, and leprosy), and "blemishes of character" (e.g., bodily process, addiction, and mental disease [6].

Barriers

A barrier are some things sort of rule, law, or policy that makes it difficult or inconceivable for one factor to happen or be achieved. Duties and taxes are the foremost obvious barrier to trade. A barrier is also a drawback that stops a pair of us or groups from agreeing, acting, or operational with each other [7].

Sex Worker

A sex employee could be one who provides sex work, either on a daily or occasional basis. The term is employed in relevant people who add all areas of the sex business [8].

According to one read, sex work is completely different from sexual exploitation, or the forcing of an individual to commit sexual acts, in this, sex work is voluntary "and is seen because the business exchange of sex for cash or goods". In a trial to clarify the broad term "sex work", John E. Exner, AN yank man of science, worked along with his colleagues to make 5 distinct categories for categorizing sex employees [9-11].

One intellectual article details the categories as follows: "specifically, the authors articulated category I, or the class (courtesans) of the profession, consisting of decision girls; category II was brought up because the bourgeoisie, consisting of 'in-house girls' United Nations agency usually add an institution on a commission basis; category III, the lower bourgeoisie, were 'streetwalkers' whose fees and place of labor fluctuate considerably; category IV sex employees are called 'commuter housewives', and that they square measure usually concerned in sex work to supplement the family financial gain, and sophistication V consists of 'streetwalker addicts', or 'drugs-forsex streetwalkers' United Nations agency square measure thought of the social class of the profession"[12-14].

Further Information

Sex work sorts the term "sex employee" was coined in 1978 by sex worker activist Carol Vivien Leigh. Its use became popularized once the publication of the compendium, Sex Work: Writings by girls within the Sex business in 1987, emended by Frederique Delacoste and Priscilla Alexander [15-17]. The term "sex worker" has since unfolded into abundant wider use, as well as in tutorial publications, by NGOs and labour unions, and by governmental and intergovernmental agencies like the planet Health Organization. The term is listed within the English lexicon and Merriam-Webster's lexicon [18].

The term "sex worker" is employed by some varieties of sex employees (i.e., prostitutes) to avoid invoking the stigma related to the word "prostitute". Victimization the term "sex worker" instead of "prostitute" additionally permits additional members of the sex business to be diagrammatic and helps make sure that people in United Nations agency are literally prostitutes and don't seem to be singled out and related to the negative connotations "prostitute". Additionally, selecting to use the term "sex worker" instead of "prostitute" shows possession over the individuals' selections. Some argue that people who like the term "sex worker" want to separate their occupation from their person. Describing somebody as a sex employee acknowledges that the individual might have many various aspects and don't seem to be essentially outlined by their job [19-21].

The term is powerfully opposed, however, by many who square measure virtuously against the sex business, like social conservatives, anti-prostitution feminists, and different prohibitionists. Such teams read whoredom diversely as a criminal offense or as victimization and see the term "sex work" as legitimizing criminal activity or exploitation as a sort of labour [22-25].

Clients

- A person or cluster that uses the skilled recommendation or services of a professional person, accountant, agency, architect, etc.
- 2. A person World Health Organization is receiving the advantages, services, etc., of a financial aid agency, a government bureau, etc.
- 3. A customer [26-27].
- 4. Anyone beneath the patronage of another, a dependent.
- 5. Being a daily customer: Economically, and sometimes militarily, dependent upon an additional prosperous, additional powerful nation [28-29].

Summary

HIV testing is the entry purpose for each care and hindrance, and progress continues at a speedy pace. Speedy Ag/Ab combination tests and point-of-care tests for HIV RNA square measure in clinical trials.

Promising techniques to see whether or not antibody-positive persons were infected recently can shortly facilitate guide case finding and hindrance and inform efforts to live incidence. as a result of effective HIV treatment is offered, doing everything attainable to search out infected persons and link them to care is a lot of vital than ever [30-32].

Antibody tests are essential the to identification of HIV infection since the primary HIV accelerator immunochemical assay (EIA) was introduced twenty-five years ago [33-34]. Early issues concerning false-positive check ends up in a setting of low prevalence1 crystal rectifier to checking algorithms that emphasise specificity and therefore the conception of "confirmatory" checking: positive HIV protein check results need a repeatedly reactive screening test valid by a supplemental additional specific test (such because the Western blot).2 This algorithmic testing program served to determine the identification of HIV for nearly eightieth of the calculable one.1 million infected persons within the U.S. 3 distinctive the calculable twenty-first of persons still unaware that they're infected and guiding effective future hindrance efforts would force tests that notice HIV infection earlier, faster, and at less price [35-37].

Data Presentation and Analysis

In this chapter, the data collected from the respondents are presented and analyzed here for the sake of clarity; frequency counts and percentages were used.

Table1. Distribution of Questionnaire

Sex	No. of Questionnaires Administered	No. of Questionnaires Returned		
Male	100	100		
Total	100	100		

Table 1 indicates that out of 100 questionnaires earlier administered 100 were returned. The respondents administered to them are all male.

Research Question 1

1. Are you aware of the existence of HIV?

Table 2. Response to Question 1

S/n	Sex	Yes		No	
		M	%	M	%
1	Male	100	100%	0	0%
	Mean score	100	100%	0	0%

Source: Field survey (2022)

The result as shown in Table 2 above, indicates that 100 male respondents of the sampled population representing 100 percent, agreed that HIV awareness influences the uptake of HIV test, and 0 male respondents of the sampled population representing 0 percent, do

not agree that HIV awareness influences the uptake of HIV test.

Research Question 2

2. Did you trust healthcare workers to conduct HIV tests for you?

Table 3. Response to Question 2

S/n	Sex	Yes		No	
		M	%	M	%
1	Male	87	87%	13	13%
	Mean score	87	87%	13	13%

Source: Field survey (2022)

The results in Table 3 above reveals that 87 male respondents representing 87 percent of the male sampled population agreed that they trust in health care workers for uptake of HIV test, and 13 male respondents representing 13 percent of the male sampled population, do not agree that

they trust in health care workers for uptake of HIV test.

Research Question 3

3. Did you fell stigmatized for taking an HIV test?

Table 4. Response to Question 3

S/n	Sex	Yes		No		
		M	%	M	%	
1	Male	22	22%	78	78%	
	Mean score	22	22%	78	78%	

Source. Field survey (2022)

The results in Table 4 above reveal that 22 male respondents representing 22 percent of the male sampled population, agreed that they felled stigmatized for taking HIV test, and 78 male respondents representing 78 percent of the male

sampled population, do not agree that they felled stigmatized for taking HIV test.

Research Question 4

4. Do your friends and family support you with HIV test?

Table 5. Response to Ouestion 4

S/n	Sex	Yes		No	
		M	%	M	%
1	Male	99	99%	1	1%
	Mean score	99	99%	1	1%

Source. Field survey (2022)

The results in Table 5 above reveal that 99 male respondents representing 99 percent of the male sampled population agreed that their friends and family support them for HIV test and 1 male respondent representing 1 percent of the

male sampled population, do not agree that their friends and family support them for HIV test.

Research Question 5

5. Will you take an HIV test if ART is available in your area?

Table 6. Response to Question 5

S/n	Sex	Yes		No	
		M	%	M	%
1	Male	100	100%	0	0%
	Mean score	100	100%	0	0%

Source. Field survey (2022)

The results in Table 6 above reveals that 100 male respondents representing 100 percent of the male sampled population agreed to take an HIV test if ART is available in their area, and 0 male respondents representing 0 percent of the male sampled population do not agree to take HIV test if ART is available in their area.

Results

- 1. 100% of the respondents are aware of the HIV virus.
- 2. 13% of the respondents do not trust health care workers to conduct HIV tests for them.

- 3. 78% of the respondents felt stigmatized for uptake of HIV tests.
- 4. 1% of the respondent's friends and family do not support for the uptake of HIV tests.

Discussion

There is a negative relationship between stigma, trust of healthcare workers, and HIV test uptake. Though is minimal. Three of the Five hypotheses resulted in being unsupported. The research conducted shows that stigma and trust in the health care workers affect the uptake of HIV tests among clients of female sex workers.

Commendations include further exploration on barriers to the uptake of HIV tests among male clients of female sex workers, devising of policy to alleviate stigma against HIV tests among male clients and improve trust in the health care workers for uptake of HIV tests for wider coverage and epidemic control, and the engagement of community stakeholders through community dialogue meeting to destigmatize HIV test and attitudinal change of the health care workers through effective communication skill and client centric service delivery for optimal confident in health care workers.

This study found that stigma and trust influence the uptake of HIV tests. The majority of the participants are aware of the HIV virus. In addition to that, the majority of the participants also reported that the availability Antiretroviral therapy in their location would make them test for HIV. Additionally, the majority of the people agreed that friends and support them with HIV Nevertheless, there are few international studies that measure barriers related to the uptake of HIV tests among male clients of female sex workers.

Specifically, [40] a study conducted in Indonesia explored barriers to the uptake of HIV tests among male clients of female sex workers. Results showed that the majority of the barriers included: (1) personal barriers (lack of information of HIV/AIDS and HIV testing availableness, and disposition to bear HIV checking thanks to the low self-perceived risk of HIV and worry of the test result); (2) health care service provision barriers (lack of trust in health professionals and restricted availableness of medication as well as antiretroviral (ARV)); and (3) social barriers (stigma and discrimination, and therefore the lack of social supports) a significant negative relationship between stigma and knowledge of HIV/AIDS contraction. This outcome signifies that as the level of stigma increases, the level of knowledge about HIV/AIDS contraction modalities decreases [40]. Limitations for this study include a small sample size and a narrow data collection time frame. Additional data collection time would have allowed for a larger sample size and greater participant representation. The small sample size compromised the generalizability of the findings of this study. Implications for Future Research, Social Work Practice, and Policy From the results of this study.

We suggest that social staff work towards educating the world and interacting with stakeholders through community dialogue meetings to destignatize HIV take a look at, and other people living with HIV. We tend to suggest that policies are required to advocate for individuals living with HIV. Social staff ought to advocate for PLWHA to reduce health disparities and participate in the hindrance of HIV/AIDS.

The results of this analysis will be used to support exaggerated HIV education for the world. Conclusion This study was conducted to research barriers to HIV tests among male purchasers of feminine sex staff. Vital findings of the study conclude: stigma and trust impact uptake of HIV test.

Conclusion

This study was conducted to research barriers to the uptake of HIV tests. Vital findings of the study conclude: stigma and trust influences the uptake of HIV test; awareness of HIV infection doesn't have an effect on the uptake of HIV test; friends and family support the uptake of HIV test and a major negative relationship between stigma and trust and HIV test. Researchers recommend additional analysis and examination of the under representation sampled population. Researchers additionally recommend that social staff ought to destigmatize HIV test, strengthen angle of health care staff to produce client central services and policy formulation.

Acknowledgments

Sincere gratitude is extended to Paulinus, Jeremiah Ugwoke for their continuous support throughout this entire project. He is more than a research assistant; he is a local mentor and a colleague.

References

[1] Medicinenet (2020): Infectious Disease: Are These Historical Illnesses Coming Back? Retrieved from:

https://www.medicinenet.com/diseases_conditions_making_comeback/article.htm.

- [2] Wikipedia (2022): Sex worker Retrieved on https://en.wikipedia.org/wiki/Sex_worker.
- [3] Meyer KB, Pauker SG., 1987; Screening for HIV: can we afford the false positive rate? N Engl J Med. 317:238-241.
- [4] Centres for Disease Control., 1989; Interpretation and use of the Western blot assay for serodiagnosis of human immunodeficiency virus type 1 infection. MMWR Morb Mortal Wkly Rep.;38(Suppl 7):S1-S7. [5] Case KK, Ghys PD, Gouws E, Eaton JW, Borquez A, Stover J, et al., 2012; Understanding the modes of the transmission model of new HIV infection and its use in prevention planning. Bull World Health Organ. 90:831–8A.
- [6] Shaw SY, Bhattacharjee P, Isac S, Deering KN, Ramesh BM, Washington R, et al. A., 2013; cross-sectional study of sexually transmitted pathogen prevalence and condom use with commercial and non-commercial sex partners among clients of female sex workers in southern India. Sex Transm Dis. 40(6):482–9.
- [7] Couture MC, Soto JC, Akom E, Labbe AC, Joseph G, Zunzunegui MV., 2008; Clients of female sex Workers in Gonaives and St-Marc, Haiti characteristics, sexually transmitted infection prevalence, and risk factors. Sex Transm Dis. 35(10):849–55.
- [8] Xu JJ, Wang N, Lu L, Pu Y, Zhang GL, Wong M, et al., 2008; HIV and STIs in clients and female sex Workers in Mining Regions of Gejiu City, China. Sex Transm Dis. 35(6):558–65.
- [9] Jin X, Smith K, Chen RY, Ding G, Yao Y, Wang H, et al., 2010; HIV prevalence and risk behaviors among male clients of female sex workers in Yunnan, China. J Acquir Immune Def Syn. 53(1):131–5.

Conflict of Interest

There was no conflict of interest in this study.

- [10] Nguyen NT, Nguyen HT, Trinh HQ, Mills SJ, Detels R., 2009; Clients of female sex workers as a bridging population in Vietnam. AIDS Behav. 13(5):881–91.
- [11] Volkmann T, Wagner KD, Strathdee SA, Semple SJ, Ompad DC, Chavarin CV, et al., 2014; Correlates of self-efficacy for condom use among male clients of female sex Workers in Tijuana, Mexico. Arch Sex Behav. 43(4):719–27.
- [12] Suryawanshi D, Bhatnagar T, Deshpande S, Zhou W, Singh P, Collumbien M., 2013; Diversity among clients of female sex Workers in India: comparing risk profiles and intervention impact by the site of solicitation. Implications for the vulnerability of less visible female sex workers. PLoS One. 8(9):e73470.
- [13] Miller GA, Mendoza W, Krone MR, Meza R., 2004; Clients of female sex Workers in Lima, Peru: a bridge population for sexually transmitted disease/HIV transmission? Sex Transm Dis. 31(6):337–42.
- [14] Ramanathan S, Nagarajan K, Ramakrishnan L, Mainkar MK, Goswami P, Yadav D, et al., 2014; Inconsistent condom use by male clients during anal intercourse with occasional and regular female sex workers (FSWs): survey findings from southern states of India. BMJ Open. 4(e005166):1–8.
- [15] Kementrian Kesehatan RI. Laporan Situasi Perkembangan., 2016; HIV/AIDS & PIMS ddiseases Indonesia, Tahun Jakarta: Kementrian Kesehatan RI. 16 (4)18-28 Available at: http://www.aidsindonesia.or.id/ck_uploads/files/Fin al%20Laporan%20HIV%20AIDS%20TW%204%20 2016.pdf
- [16] Fonner VA, Denison J, Kennedy CE, O'Reilly K, Sweat M., 2014; Voluntary counselling and testing (VCT) for changing HIV-related risk behavior in developing countries. Cochrane Database Syst Rev. 9:1–28.
- [17] Painter TM., 2001; Voluntary counselling and testing for couples:na high-leverage intervention for

- HIV/AIDS prevention in sub-Saharan Africa. Soc Sci Med. 53:1397–411.
- [18] Cohen MS, Chen YQ, McCauley M., 2011; Prevention of HIV-1 infection with early antiretroviral therapy. N Engl J Med. 365(6):493–505.
- [19] WHO., 2015; Consolidated guidelines on HIV testing services. Geneva: World Health Organization. [20] Niccolai LM, Odinokova VA, Safiullina LZ., 2012; Clients of street-based female sex workers and potential bridging of HIV/STI in Russia: results of a pilot study. AIDS Care. 24(5):665–72.
- [21] Fleming PJ, Barrington C, Perez M, Donastorg Y, Kerrigan D., 2015; Strategies for recruiting steady male partners of female sex workers for HIV research. AIDS Behav. 19(2):362–8.
- [22] Patterson TL, Goldenberg S, Gallardo M., 2009; Correlates of HIV, sexually transmitted infections, and associated high-risk behaviors among male clients of female sex workers in Tijuana, Mexico. AIDS. 23(13):1765–71.
- [23] Darling K.E., Diserens EA, N'Garambe C. A., 2012; cross-sectional survey of attitudes to HIV risk and rapid HIV testing among clients of sex workers in Switzerland. Sex Transm Infect. 88(6):462–4.
- [24] UNAIDS. 90-90-90., 2014; an ambitious treatment target to help end the AIDS epidemic. Geneva: Joint United Nations Programme on HIV/AIDS.
- [25] Lahuerta M, Torrens M, Sabidó M, Batres A, Casabona J., 2013; Sexual risk behaviours and barriers to HIV testing among clients of female sex workers in Guatemala: a qualitative study. Cult Health Sex. 15(7):759–73.
- [26] Siu GE, Wight D, Seeley JA., 2014; Masculinity, social context, and HIV testing: an ethnographic study of men in Busia district, rural eastern Uganda. BMC Public Health. 14(33):1-11.
- [27] Levesque J-F, Harris MF, Russell G., 2013; Patient-centred access to health care: conceptualizing

- access at the interface of health systems and populations. Int J Equity Health. 12(18):1–9.
- [28] Fauk NK, Mwanri L., 2015; Inequalities in addressing the HIV epidemic: the story of the Indonesia Ojek community. Int J Hum Rights Healthcare. 8(3):144–59.
- [29] Fauk NK, Mwanri L., 2014; Economic and environmental determinants of Ojek's susceptibility to HIV infection. Int J Appl Pharm Sci BioMed Sci. 3(1):291–300.
- [30] Lobiondo-Wood G, Haber J., 2010 Nursing research: methods and critical appraisal for evidence-based practice. St Louis, MO: Mosby. 3(2) 263-300. [31] Corbin J, Strauss A., 1990; Grounded theory research: procedures, canons, and evaluative criteria. Qual Sociol. 13(1):1–21.
- [32] Ritchie J, Spencer L., 1994; Qualitative data analysis for applied policy research. In: Bryman A, Burgess RG, editors. Analyzing qualitative data. London: Routledge; 1994; p. 173–94.
- [33] Fauk NK, Mwakinyali SE, Putra S, Mwanri L., 2017; The socio-economic impacts of AIDS on families caring for AIDS-orphaned children in Mbeya rural district, Tanzania. Int J Hum Rights Healthcare. 10(2):132–45.
- [34] Ritchie J, Spencer C., 1994; Qualitative data analysis for applied policy research. In: Bryman A, Burgess RG, editors. Analyzing qualitative data. London: New York Routledge; p. 173–94.
- [35] Pope C, Ziebland S, Mays N., 2000; Qualitative research in health care: analysing qualitative data. BMJ. 320(7227):114–6.
- [36] Fauk NK, Mery MS, Sigilipoe MA, Putra S, Mwanri L., 2017; Culture, social networks and HIV transmission among men who have sex with men in Indonesia. PLoS One. 12(6):1–14.
- [37] Smith J, Firth J., 2011; Qualitative data analysis: the framework approach. Nurse Res. 18(2):52–62.