Correlates of pregnancy among Female Sex Workers (FSWs) in semi urban Blantyre, Malawi

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Research article

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Abstract

Background

Little is known about female sex workers’ (FSWs) reproductive health apart from their being at higher than usual risk of sexually transmitted infections (STIs), including HIV. The problem addressed in this study was: “what are the correlates of pregnancy among FSWs in semi – urban Blantyre in Malawi?”.

Methods

We used systematic sampling to recruit a total of 200 FSWs in four different study sites in Blantyre. Data were collected through questionnaire interviews. We calculated the mean and standard deviation for continuous covariates and proportions for categorical variables to describe the data. Logistic regression analysis was used to examine the correlates between the outcome variable (pregnancy) and independent variables.

Results

Ninety one (45, 5%) FSWs were between 18 and 24 years. The prevalence of pregnancy was 61% for FSWs born in rural place as compared to 37% for those who were born in town. In multivariate analysis FSWs who reported to value being respected as mothers had 12 times the risk of pregnancy comparing to the ones who did not (AOR: 11.8, 95% CI: [4.56, 30.72] p -value <0.001). FSWs who reported using condoms inconsistently had 5 times the risk of pregnancy compared to the ones who did not, (AOR: 5.26, 95% CI: [2.29, 12.081], p -value <0.001). FSWs who had a request to bear children from steady partners had 5 times the risk of pregnancy comparing to the ones who did not (AOR: 5.07, 95% CI: [2.14, 11.99]). FSWs who reported forgetfulness of contraceptives’ use had 3 times more risk of pregnancy comparing to the ones who did not (A0R: 3.49 CI: [1.29, 9.37], p- value < 0.013).

Conclusion

The study documents a wide range of correlates of pregnancies among FSWs in the study sites. It is important to recognize the child bearing desires and circumstances of FSWs in order to inform health programs responsive to their needs.

Background

Little is known about FSWs’ reproductive health apart from their higher than usual risk of sexually transmitted infections, including HIV. Many health promotion programs and researchers on FSWs have focused mainly on HIV infections’ prevention, transmissions, diagnosis and treatment [1, 2]. Although there are some studies on unintended pregnancies among FSWs, there are limited data on the specific contexts FSWs’ experience pregnancies and their intentions to have children [1, 3, 4–8]. The decisions on whether, when and with whom to have children among FSWs in semi – urban Blantyre have not been
adequately explored. In attempt to fill this gap, we conducted cross-sectional quantitative study in semi-urban Blantyre to investigate the correlates of pregnancy among FSWs in the same location.

Other than limited access to reproductive health services due to discrimination, there is also stigma in this marginalized population with consequent high prevalence of HIV and sexually transmitted diseases due to non-responsive health services [9]. All these challenges associated with the complex environment FSWs operate may have an effect on their reproductive health.

Studies have unveiled that there are individual, relational and cultural factors that are associated with FSWs’ desire to have children. Those factors include but are not limited to: bad outcomes with the previous pregnancies, contraceptives unmet needs, steady partners’ request to FSWs to bear children, sexual violence, motherhood's obligation, and missing contraceptives’ pill [2, 10]. Study findings also suggest that due to considerable value of children, some FSWs seek pregnancy in sex work, and return to their families as expectant mothers [2, 11]. Pregnancy reflects their achievement and/or their own abilities. After delivery they are satisfied to be called mothers and they are well respected in their communities [2].

About 75% of FSWs in Sub Saharan Africa have at least one child [2, 12]. Estimates of pregnancy among FSWs range from 27% in Madagascar to about 91% in India [2, 13, 14]. In Madagascar a study reported that 250 FSWs out 935 FSWs who were enrolled in a study to promote condom use got pregnant within 18 months of follow up [5]. It can be therefore suggested that not all pregnancies in FSWs community are unintended.

The unavailability of sufficient information on FSWs reproduction is a big challenge to FSWs fertility programing as well as to the policy makers. Pregnancy and child bearing in FSWs implies unprotected heterosexual sex in this community known to have high prevalence of HIV. Condomless sex puts FSWs, their partners and clients at risk of HIV infection. In the absence or limited PMTCT services, female sex workers’ unborn babies are at risk of vertical transmission of HIV [9–13]. Female sex workers should be healthier, and have access to reproductive services. It is anticipated that our findings will inform policy makers to consider future interventions protecting FSWs, their clients, partners and their unborn babies. There is a need to integrate reproductive health services in HIV and AIDS programs [15].

We collected quantitative data to investigate the correlates of pregnancy among FSWs in semi – urban Blantyre, Malawi. To the best of our knowledge no similar study has ever been done in the same area.

Methods

The study was conducted between November 2018 and January 2019. In this cross sectional study, we used quantitative methods to collect data on the prevalence and correlates of pregnancies among FSWs, in semi urban - Blantyre. The study was conducted in four townships Chirimba, Lunzu, Kachere, Mbayani located in semi -urban Blantyre, Southern region of Malawi.
FSWs aged between 18 and 49 years, who had exchanged sex for money or goods and who signed the consent were eligible for the study participation. They are some known FSWs who usually assist Mlambe Hospital in health promotion activities. These FSWs were recruited as seeds in snow ball sampling. They assisted us to have access to FSWs in four purposively selected study sites.

The outcome variable of the study was pregnancy. We had many hypothesized socio-demographic variables and behavioral related characteristics, for instance: missing contraceptive pills, having steady partners, inconsistence condom use, to be respected as a mother, alcohol intake, violence, rape, extension of clans, challenges in accessing contraceptive pills, mothers’ obligation, peer pressure from FSWs, condom breakage or slippage.

In this study, pregnancy also known as gestation was defined as the maternal condition of having a developing of one or more offspring in the woman's body. Female Sex Workers were defined as women who sell sex in the exchange of money or goods. Condom breakage was defined as rupture of a condom during sexual intercourse. Condom slippage is getting out of a condom from a penis during sexual intercourse. Inconsistence condom use was defined as using condom sometimes or rarely during sexual intercourse.

The sample size was calculated using single population proportion formula. We used 15% as the prevalence of FSWs trying to conceive with one of their partners [10]. Marginal error of 5%, and at 95 level of confidence. Thus the required sample size was calculated at 196. We used on average 200 FSWs as study participants.

At each of the four sites, data collection took place at neutral and confidential places mutually agreed to by the study team and research participants. Fifty FSWs from each site were systematically selected to participate in the study. A specific period was identified within which the questionnaires were completed by the research assistants through the interview process with FSWs.

Female research assistants trained in data collection and research went to each site at a pre-arranged time. They explained the purpose of the study and emphasized the fact that FSWs who do not wish to participate may either leave, or remain in our study but they will not be adversely affected by their voluntary decisions not to participate. Following the explanation, study participants were given an opportunity for questions and clarifications. Each of the FSWs was asked questions by the research assistant and the survey questionnaires were completed by the data collector. Cash reimbursement of Malawi Kwacha (MK) 1,500.00 (approximately 2 US$ at the time of data collection) was provided to all study participants as compensation for their time in the study.

For this study we had a database for entry of quantitative data from the completed questionnaires. Data analysis were conducted in Stata 14.1 (Stata Corporation, College Station, TX, USA). Descriptive statistics were used to analyze data from socio-economic and demographic characteristics of the study participants. Logistic regression analysis was used to investigate the relationship between pregnancy (binary outcome) and explanatory variables among FSWs.
Ethical Consideration

The study was approved by COMREC (College of Medicine Research and Ethics Committee), University of Malawi, (certificate number P.07 / 18 / 2444, dated 08 – Sept – 2018). We got clearance from the local authorities before the study started. All study staff were carefully trained in human subjects’ protection, especially the importance of protecting privacy and confidentiality and obtaining informed consent from each study participant using the approved consent forms. Participants were informed of their right to withdraw from the study and not to answer any questions they felt uncomfortable with answering. All the information which was provided by the participants was treated with confidentiality.

Limitations Of The Study

Sex work is a sensitive issue; as such there is potential for social desirability bias which in turn underestimates the magnitude of studied issue in FSWs community. Since great care was taken to assure the study participants of confidentiality of the information and privacy of the research participants, we hope that this problem was minimized. The research was cross sectional, meaning that it is not possible to assign causation between the study outcome and the variables. There is also a possibility of recall bias and misreporting of personal experiences.

Results

Socio-demographic characteristics

We recruited a total of 200 study participants (FSWs). Ninety one (45.5%) FSWs were between the age of 18 and 24 years. Ninety eight participants (49%) had steady partners. One hundred and forty six (73%) FSWs interviewed had attended only primary school as their highest level of academic achievement.

Table 1: Socio-demographic and economic characteristics of female sex workers in semi-urban Blantyre 2018 (n=200)
| Characteristics                    | Frequency | Percent (%) |
|-----------------------------------|-----------|-------------|
| Age in years (n=200)              |           |             |
| 18–<24                            | 91        | 45.5        |
| 24–<29                            | 34        | 17          |
| 29–<34                            | 38        | 19          |
| 34–<39                            | 17        | 8.5         |
| 39–<44                            | 15        | 7.5         |
| 44–<49                            | 11        | 5.5         |
| Relationship status (n=200)       |           |             |
| Had regular partner               | 98        | 49          |
| Had no regular partner            | 63        | 31.5        |
| Dissolved (widowed and divorced)  | 39        | 19.5        |
| Educational status (n=200)        |           |             |
| Level attained                    |           |             |
| Primary (1-8)                     | 146       | 73          |
| Secondary (9-12)                  | 47        | 23.5        |
| Higher education                  | 7         | 5.5         |
| Religion (n=200)                  |           |             |
| Christianity                      | 133       | 66.5        |
| Islam                             | 67        | 33.5        |
| Place of work (n=186)             |           |             |
| Night club                        | 98        | 49          |
| Bar                               | 61        | 32.8        |
| Homes (in-house)                  | 16        | 8           |
| Hotel                             | 3         | 1.6         |
| Additional work (n= 200)          |           |             |
| Yes                               | 64        | 32          |
| No                                | 126       | 63          |
| Type of additional work (n = 60)  |           |             |
| Small activity                    | 28        | 46.7        |
| Waiter                            | 7         | 11.7        |
| Housemaid                         | 5         | 2.5         |
More than half were Christian. Nighty eight (49%) of the study participants sell sex in the bars. One hundred and three (67.3%) of the FSWs interviewed grew up in the rural place, and searching for better life was the main reason of leaving the rural place (88% of the respondents). One hundred and twenty six (63%) of the respondents reported relying only on the sex work for their income. Daily labor was the main income generating activity mentioned by the majority of the respondents (33.3%).

Table 2: The correlates of pregnancy among female sex workers (FSWs) in semi urban Blantyre, Malawi

| Characteristics                                      | Pregnancy | COR (95%CI) | p-Value | AOR (95%CI) | p-Value |
|------------------------------------------------------|-----------|-------------|---------|-------------|---------|
|                                                      | Yes       | No          |         |             |         |


Place of birth

|          | Urban | Rural |
|----------|-------|-------|
|          | 37(40.22) | 55(59.78) | 0.496 | (0.281-0.875) | 0.016 | 0.308(0.137-0.690) | 0.004 |

Inconsistence condom use

|          | No   | Yes   |
|----------|------|-------|
|          | 43(35.83) | 77(64.17) | 4.282 | (2.319-7.906) | 0.000 | 5.259(2.289-12.081) | 0.000 |

To be respected as a mother

|          | No   | Yes   |
|----------|------|-------|
|          | 17(21.25) | 63(78.75) | 8.112(4.184-15.727) | 0.000 | 11.844(4.566-30.720) | 0.000 |

Request from a steady partner

|          | No   | Yes   |
|----------|------|-------|
|          | 29(27.62) | 76(72.38) | 7.534 | (4.006-14.167) | 0.000 | 5.071(2.145-11.990) | 0.000 |

Missing contraceptives’ pills

|          | No   | Yes   |
|----------|------|-------|
|          | 33(38.82) | 52(38.82) | 2.101 | (1.182-3.732) | 0.011 | 3.490(1.299-9.370) | 0.013 |

AOR-Adjusted Odds Ratio; COR-Crude Odds Ratio; CI-Confidence Interval.

There was collinearity between mother obligation, to be respected as mothers and peer pressure from fellow female sex workers. There was also collinearity between condom rapture and forgetfulness of contraceptives use (missing contraceptives pills). Challenge in accessing contraceptives was not significant in adjusted crude ratios. We did not find an association between pregnancy and duration in the sex work, mothers’ obligation, rape, alcohol influence, and contraceptives’ failure, loss of children and pregnancy, God’s orders fulfillments, and extension of the clan.

Discussion

To the best of our knowledge this is the first study which investigated the correlates of pregnancy among FSWs in semi urban Blantyre, Malawi. The prevalence of pregnancy was 61% for FSWs born in rural place as compared to 37% for those who were born in town. Our study findings suggest that inconsistent condom use with the clients, desire to be respected as mothers, request from a steady partner, and missing contraceptives’ pills are associated with pregnancy in FSWs community in semi urban Blantyre.

The strong association between inconsistency condom use and pregnancy among FSWs in our study is consistent with other studies’ findings in other countries [10]. FSWs face multiple barriers to consistent condom use, including limited negotiation power with paying and nonpaying partners, voluntary and/or
accidentally condom's rupture [16], refusal to use condoms because of sexual dissatisfaction. [17–19]. Alcohol intake, violence, have been also reported to correlate with inconsistent condom use. Studies done elsewhere also suggest that the more the clients pay for sex the more power they have to dictate unprotected sex [20]. Most FSWs live in poverty and have many responsibilities, such as caring for children and extended families. These challenges make them likely to accept increased pay for unprotected sex which may results in getting pregnant, HIV, or both [20–22]. It is also possible that FSWs who don’t compromise on condomless sex, theirs clients may opt to rupture condoms deliberately without the FSW's prior knowledge [16]. Sometimes FSWs are put in positions which facilitate condom rupture with the aim to have condomless sex [16, 23]. Study findings from South Africa on action taken after condom breakage or slippage, 36% of the FSWs reported that they continued sexual act up to the end despite having knowledge of the condom failure. After 24 hours 53%, admitted that no health care action was taken or sought despite knowing that they can get pregnant or be infected with HIV [23].

Managements for sexual transmitted infections, emergency contraception, pre-exposure prophylaxis and post-exposure prophylaxis for HIV are currently available in Malawi and many countries [24]. Due to stigma and discrimination and non-responsive health care providers, FSWs will not easily access those helpful health care services. Female sex workers should be healthier; they should not be tricked and their clients should not take advantage of their poor socio-economic status to dictate the way sexual intercourse must be done. Through reproductive health services integrated in HIV and AIDS programs, and tailored to the nature of sex work, FSWs can overcome most of their reproductive health challenges. There is a need to remove all barriers hindering FSWs access to health care services.

Study findings suggest hat in Mombasa, Kenya 80% of FSWs reported inconsistent condom use with their steady partners [25]. In our study almost half (49%) of the study participants have steady partners. Our research also unveiled that steady partners’ request of having children with FSWs is highly associated with pregnancy among FSWs. Female sex workers and their steady clients face dilemma on the use of condoms during sexual intercourse [26]. Given the close ties between HIV, STI and pregnancy and high prevalence of HIV in FSWs community there is a critical need for accessible and targeted PMTCT services, combined with other reproductive health services such as family planning, antenatal, post natal care and rearing children [2, 16]

Female sex workers’ experiences of pregnancies differ from other women of reproductive age because they have a broader range of partners. They may have many steady partners, casual or anonymous partners [2, 27]. According to our study finding some circumstances are also similar. Female sex workers who reported that they want to be respected as mothers had high odds of pregnancy comparing to the ones who did not have the same desire. Study findings in several countries show that with childbearing FSWs and other women of the same reproductive age earn respect [2, 11]. Children also solidify relationships between women and their partners. Our findings concur with those previous study’ findings but many other studies suggest that pregnancy has a negative impact on the ability of sex trade due to the additional stigma of being a pregnant sex worker, or being perceived as less sexually attractive [28]. Contrary to the previous study findings, [2, 11] we did not find the relationship between FSWs’ pregnancy
and the following variables: mothers’ obligations, rape, challenges in accessing contraceptives, extension of the clans,

If many FSWs accept to have children as per request of steady partners, there is a high risk of HIV infection and other STI because of obvious unprotected sex. In the absence of PMTCT, there is also a high risk of mother to child transmission of HIV when FSWs get pregnant. [15]. Our study findings suggest that FSWs experience pregnancy under diverse circumstances. The health promotion programs should be tailored with FSWs needs as well as the complex environment they operate from.

Declarations

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Availability of data and material: The data sets used and/or analyzed during this study are available from the corresponding author on reasonable request.

Authors contribution: DT contributed to the study design, data collection, data analysis, and in the writing of the report. AM contributed in the study design, interpretation of the data, writing the report and provided important intellectual content to the study process. All the authors read and approved the manuscript.

Ethical approval and consent to participate in the study: The study was approved by COMREC (College of Medicine Research and Ethic Committee, approval P.07 / 18 / 2444, dated 08 – Sept – 2018). We got clearance from the local authorities before the study started. Informed written consent was obtained from the study participants.

Competing interests: None of the authors have conflicting interests

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