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**Original Research Article**

# Practical Knowledge and Attitudes of Pregnant Women on HIV/AIDS at the Niananankoro FOMBA Hospital in Segou

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## Abstract

***Introduction:*** According to epidemiological surveillance in Mali in 2013, the prevalence of HIV/AIDS infection is high among pregnant women in the Ségou region. ***Objective:*** The aim of our study was to study the knowledge and practical attitudes regarding HIV/AIDS of pregnant women followed in prenatal consultation in the gynecology-obstetrics department of the Niananankoro Fomba hospital in Ségou. ***Method and material*:** This was a prospective descriptive cross-sectional study that took place from September 1, 2019 to April 31, 2020. Included in the study were all consenting pregnant women seen in prenatal consultation (CPN) or in labor at the hospital. ***Results***: The seroprevalence of HIV/AIDS in our study was 1.4%. The age group of 20 to 29 years was the most represented in our study with 51.1% of cases with an average of 26.5 years. The pregnant women were housewives in 96.1% of cases. The main source of information for pregnant women on HIV/AIDS was television (44.2%). The best-known mode of transmission was sexual (47.7%) and weight loss was considered the main sign of HIV by 27.5% of the pregnant women questioned. The VH screening rate was inversely proportional to the level of education P=0.062. About 82.3% of pregnant women favored psycho-emotional support for people living with HIV (PV-HIV). The acceptance rate of pregnant women for HIV/AIDS screening was 87.8%. The fear of being stigmatized (46.0%) was the frequent reason for refusing the screening test. Fidelity was cited as the main means of preventing HIV transmission by 35.7% of pregnant women. ***Conclusion:*** Our study reveals that the level of knowledge of pregnant women on the modes of transmission and measures to prevent mother-to-child transmission of HIV/AIDS is generally good. However, awareness should always continue to bring the reluctant to take the screening test.

**Keywords:** HIV, transmission, prevention, screening, Ségou.



## INTRODUCTION

Human immunodeficiency virus (HIV) infection is a public health and development problem in every country in the world. In 2020, 680,000 people died of AIDS-related illnesses worldwide, compared to 1.9 million in 2004 and 1.3 million in 2010 [1]. East and South Africa are particularly affected by this pandemic with more than 20.4 million people infected; West and Central Africa were home to 4.7 million people living with HIV in 2020. The Malian state has implemented a national policy to fight against HIV / AIDS, emphasizing free ARVs and pre-treatment HIV examinations in 2005, also by organizing awareness campaigns and voluntary screening through the media, health workers; conferences and training of peer educators in all regions of Mali. Thanks to these efforts, the seroprevalence of HIV infection has decreased significantly in Mali, ranging from 1.3% to 1.1%

between 2006 and 2013, making Mali a low prevalence country [2, 3].

Overall women are more affected than men with respectively 1.3% among women against 0.8%at men's. In 2013, national epidemiological surveillance mentions a prevalence of HIV/AIDS infection of 4% among pregnant women in Ségou [3]. The female population and more particularly pregnant women constitute a vulnerable group. The lack of knowledge on the modes of transmission and the means of prevention which influences the practical attitude of pregnant women vis-à-vis HIV/AIDS could explain this vulnerability. We initiated this work to study the knowledge, the practical attitudes regarding HIV/AIDS of pregnant women followed in prenatal consultation in the gynecology-obstetrics department of the hospital of Ségou.

## METHODOLOGY

This was a prospective descriptive cross-sectional study which took place from September 1, 2019 to April 31, 2020. The sampling was exhaustive, concerned all pregnant women seen in CPN or parturients at the Niananankoro Fomba hospital in Ségou during the study period. Included in the study were all consenting pregnant women seen in CPN or in labor at the hospital. Counseling was systematic during which the pregnant women were informed about the modes of transmission of HIV, the meaning of the test, the possible results, the therapeutic opportunities and the means of prevention. A rapid screening test was carried out in those who accepted and then an appointment at three months for the verification of HIV serology for negative tests was fixed. TheData were entered in Microsoft Word and analyzed using SPSS software (chi2 statistical test with $P < 5\%$).

## RESULTS

During the period of our study on 1422 new prenatal consultations we collected 901 volunteers of which 737 accepted the HIV screening test. Among the pregnant women screened, 10 were positive, i.e. a seroprevalence of 1.4%.

About 31.2% of the patients were nulliparous, of whom 39.70% were not informed about HIV against 30.62% who had received information about HIV.

The rate of previous screening was inversely proportional to the level of study. Thus according to the level of education among the unscreened women there were 47.7% of uneducated, 33.4% of primary, 13.8% of secondary and 5.1% of higher education (P : 0.062).

In our series 92.5% against 7.5% of pregnant women had declared having already heard of HIV, their sources of information were mainly television (44.2%), radio (29.6%), health workers (17.8%), school (2.5%).

Although most of our pregnant women had heard of HIV/AIDS, 31.4% of them knew no signs of HIV/AIDS. Among the signs mentioned, weight loss was the most cited at 27.5% followed by death (22.4%), diarrhea (13.7%), dermatological lesions (2.8%), headaches (1.3%) and fever (0.8%).

According to the mode of transmission, they identified as HIV transmission routes, the sexual route (47.7%), instruments soiled with blood (15.7%), blood transfusion (14.3%), the mother-child route during pregnancy and kisses (4.4%) each, mosquito bites (3.0%) and witchcraft (1%).

The means of prevention of mother-to-child transmission were, among others, the administration of pharmaceutical drugs to the mother (37.8%), to the baby (34.3%), avoiding breastfeeding (21.8%), wearing grigris, respect for morals (1%), traditional medicines (0.8%) and 4.3% had no knowledge.

During our study, 82.3% of pregnant women had a positive attitude towards people living with HIV (PV/HIV).

**Table-I: Socio-demographic characteristics**

| Socio-demographic characteristics | Variables | Workforce | Frequency (%) |
|---|---|---|---|
| Age | <=19 | 143 | 15.9 |
| | **20-29** | **460** | **51.1** |
| | 30-35 | 186 | 20.6 |
| | > 35 | 112 | 12.4 |
| Marital status | **Married** | **866** | **96.1** |
| | Single | 35 | 3.9 |
| Profession | **Household** | **626** | **69.5** |
| | Trader | 79 | 8.8 |
| | Pupil-student | 63 | 7.0 |
| | Official | 62 | 6.9 |
| | craftswoman | 21 | 2.3 |
| | Others | 50 | 5.5 |
| **Educational level** | **No schooling** | **430** | **47.7** |
| | Primary | 301 | 33.4 |
| | Secondary | 124 | 13.8 |
| | Superior | 46 | 5.1 |

**Table-II: Distribution of pregnant women according to HIV/AIDS screening**

| Screening | Variables | Workforce | Frequency (%) |
|---|---|---|---|
| Screening history | **Yes** | **674** | **74.8** |
| | No | 227 | 25.2 |
| Reasons for previous screening | Curiousity | 16 | 2.4 |
| | **BPN** | **535** | **79.4** |
| | Make sure you are HIV-negative | 58 | 8.6 |
| | Following an illness | 65 | 9.6 |
| Consent to testing | **Yes** | **737** | **87.8** |
| | No | 164 | 18.2 |
| Reason for accepting testing after counseling | **Protection of the future baby** | **302** | **41.0** |
| | Receive ARV if HIV positive | 189 | 25.7 |
| | Know your HIV status | 155 | 21.0 |
| | Protect yourself if HIV-negative | **91** | **12.3** |
| Reasons for not testing | **Believe to be in good health** | **102** | **44.9** |
| | Fear of stigma | 73 | 32.2 |
| | No pattern | 26 | 11.5 |
| | Don't believe HIV | 21 | 9.2 |
| | Prefer not to know | 5 | 2.2 |

**Table-III: Distribution of pregnant women according to their opinions on protective measures after information on HIV/AIDS**

| Preventative measures | Workforce | Frequency (%) |
|---|---|---|
| **Loyalty** | 273 | **33.7** |
| No reviews | 235 | 29.0 |
| Abstinence | 95 | 11.7 |
| Condom | 70 | 8.6 |
| Avoid levirate sororate | 52 | 6.5 |
| Avoid polygamy | 40 | 4.9 |
| Avoid collaborating with PLHIV | 24 | 3.1 |
| Avoid sharp objects | 13 | 1.6 |
| Do your screening | 8 | 0.9 |

## DISCUSSION

During the study period, 737 pregnant women accepted the HIV screening test. Among them, 10 were seropositive, i.e. a seroprevalence of 1.4%.

Our seroprevalence was higher than that of pregnant women seen in CPN at PMTCT sites in Mali, which is 0.52% [4]. It was lower than those reported in Mali where sentinel surveillance surveys among pregnant women revealed a seroprevalence of 2.9% in 2012 [5]. To that of Cameroon, with a prevalence of HIV infection in pregnant women varying between 8% and 17% nationally [6]. In Burkina Faso and the DRC in hospitals, it is respectively 10.84% [7], and 19.3% of cases [8]. Our low seroprevalence is explained by the fact that this was a hospital study.

The age group of 20 to 29 years was the most represented in our study with 51.1% of cases with an average of 26.5 years. This was comparable to that of Togo with 25.9 ± 5 years[9]but lower than those of Traoré. SO and pass. [10] in Mali, Morocco [11] and France [12] with respectively 27 ±7 years; 28 years old and 29 years old. In most of these studies it appears that it is young women who are most frequent, this would be due to the fact that this age group corresponds to the period of potential fertility and sexual activity of couples.

In our study, it was married women in 96.1% of cases, housewives in 69.5% of cases, uneducated in 47.7% of cases, 31.2% of whom were in their first pregnancies. In Togo, Tatagan. A and col. [9] and Azumah. K.D. [13] reported similar frequencies of married women which vary between 94.8 and 95.3% of cases and nulliparous with 32.9% of cases, but with rates of housewives (35.3 to 37.2%) and illiterates (22.4 to 7%) lower than the ours.

Early marriage, low enrollment of young girls, lack of employment that characterize developing countries, could explain the high rates of unemployed married women (housewives) who are illiterate in African studies.

In our series, 92.5% of pregnant women said they had already heard of HIV, their sources of information were mainly television (44.2%), radio (29.6%), health workers (17.8%), school (2.5%). A no less important part of 7.5% of pregnant women declared to be unaware of the existence of HIV. Our result was

similar to Diallo's. B *et al*. [14] who had found 100% of pregnant women informed about HIV. Tatagan. A and pass. [9] had found the same sources of information with the main source of information being PMTCT sites (79.5%), radio (28%), television (17.1%) and school (11.4%). Their frequency of women who said they were unaware of the existence of HIV with (7.1%) was comparable to ours.

The level of information in our study can be explained by the implementation of programs for the prevention of mother-to-child transmission (PMTCT), the training of health providers, awareness raising by peer educators through non-governmental organizations (NGO), the public media through the institutionalization of a month of fight against HIV/AIDS in Mali.

Although the majority of our pregnant women had heard of HIV/AIDS, 31.4% of them knew no signs of the disease and 44.8% were unaware of the modes of transmission.

Among those who knew at least one mode of transmission, they identified as HIV transmission routes, the sexual route (47.7%), instruments soiled with blood (15.7%), blood transfusion (14.3%), the mother- child during pregnancy and kissing (4.4%) each. The low level of knowledge of pregnant women on HIV in our study is related to that of the general population, of which 16% of women and 23% of men aged 15-49 have complete knowledge of HIV [3].

However, a no less important part of our pregnant women had local misconceptions about HIV transmission such as meals (9.5%); mosquito bites (3%); wizards (1%).

Misconceptions about HIV transmission with significant frequencies have been reported by Dorsaz. VS [7] in a multicenter study where women believed that HIV could be transmitted by kissing (66.1%), breathing (37.3%) or even wearing the same clothes (40.7%) and sharing the same cutlery (28.2%) as an HIV-positive person.

Means of prevention of mother-to-child transmission included the administration of pharmaceutical drugs to the mother (37.8%), to the baby (34.3%), avoiding breastfeeding (21.8%).

The level of knowledge of the means of prevention of mother-to-child transmission in our study reflects that of the national level because according to the demographic and health survey in Mali (EDSM-VI) [3] overall 49% of women and 38% of men know that HIV can be transmitted from mother to child during pregnancy, childbirth, or through breastfeeding. In addition, 38% of women and 38% of men know that the risk of transmission from mother to child can be reduced by taking special drugs.

In France according to Morin. M and Col [12] the rate of women knowing about the possibility of HIV treatment during pregnancy ranged from 61.5 to 85.6%.

In our study, 74.8% of pregnant women had already taken an HIV screening test, 79.4% of which had been done during a previous pregnancy. In Morocco in the MEGHRAOUI study. AT [11] 59.25% of known HIV-positive pregnant women knew their HIV status before their current pregnancies. In France Morin. M and col [12] reported 88.7% of patients who had already performed a test before pregnancy.

Among the women who had not already undergone a screening test 44.9% believed to be in good health, 32.2% were afraid of the stigmatization and 9.2% did not believe in HIV. The test was not performed before pregnancy in 45.9% of patients in the Morin study. M and Col [12]. because they declared themselves to be HIV-negative.

In Mali, PMTCT is included in the minimum package of activities in health structures [15]. Thus, after counseling from which all our pregnant women benefited, the attitudes identified as means of prevention were, among others, fidelity (33.7%), abstinence (11.7%), the use of condoms (8.6%), avoid levirate sororate (6.5%), avoid polygamy (4.9%). A no less significant part of 29.0% had given no opinion.

During our study, 82.3% of pregnant women had a positive attitude towards PV-HIV because they thought it was necessary to provide psycho-emotional support by being around them, unlike Diemer. S and pass [16] who had reported an index of stigmatization and discrimination of PLHIV of 87%, much higher among women (90.1%) than among men (79.9%). Our high rate of positive attitude could be explained by the fact that all our pregnant women had benefited from counseling during prenatal consultations, which may have influenced their attitude.

In our study, the HIV screening test acceptance rate was 87.8%. Our screening acceptance rate was comparable to the overall rate in the Ségou region (85.80%) [17] and that of Benin (87%) [18]; lower than that of Tatagan. A and pass [9], in Togo (92.4%). The main reasons given for refusing the test during our study were fear of stigmatization (46.0%); spousal consent (23.0%); the risk of divorce (16.4%). The same reasons for refusing the test were mentioned in Togo [9], in Mali [10, 13] and in Benin [17]. In Cameroon, the rate of voluntary adherence to screening was 78.86% against 45.30% of pregnant women who were not screened [19].

In Africa the pregnant woman has to overcome several difficulties when she reveals her HIV status to her husband. This includes the fear of being abandoned, discriminated against, abused and accused of infidelity [11]. These are among other factors that can explain the refusal of the test, thus constituting a blockage to the prevention of mother-to-child transmission of HIV.

## CONCLUSION

Our study reveals a certain knowledge of pregnant women on the modes of transmission and measures to prevent mother-to-child transmission of HIV/AIDS. However, awareness should always continue to bring the reluctant to take the screening test.

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