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Original Research Article

Factors Associated with Late use of Antenatal Care in the City of Mbandaka, Equateur Province, Democratic Republic of Congo (DRC)

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Abstract

Introduction: The present study was conducted to identify factors associated with late recourse to prenatal consultation in the city of Mbandaka. ***Method:*** This study was based on a case-control survey. A total of 650 pregnant women (325 cases and 325 controls) responded to a structured questionnaire. Cases were pregnant women seen late in the ANC service and each was paired with a control who came to the first antenatal visit in the first trimester. The data were analysed using SPSS 22 software where multivariate analyses based on the logistic regression model allowed the research objectives to be met. The risk of error considered was 0.05. ***Results:*** The factors associated with late recourse to ANC were: cost of ANC ($p<0.01$); lack of financial means ($p<0.01$); lack of motivation ($p<0.01$); shame ($p<0.01$); unavailability of the pregnant woman ($p<0.01$); traditional practice before performing ANC ($p<0.01$); parity ($p<0.05$) and marital status ($p<0.05$). ***Conclusion:*** The use of ANC remains late in Mbandaka. Any action aimed at encouraging pregnant women to start ANC in the first trimester of pregnancy should focus on improving the socio-familial environment, the service offer, socio-economic characteristics, socio-cultural characteristics and socio-demographic characteristics.

Keywords: Associated factors, Late recourse, Antenatal consultation, City of Mbandaka.

INTRODUCTION

Pregnant women are a category of people who deserve protection and special attention because of the high risk of death during pregnancy and childbirth. Holistic monitoring of women's health throughout the various stages of their lives, including pregnancy and childbirth, is therefore required.

The World Health Organisation (OMS, 2016) emphasises that pregnancy is accompanied by significant changes in the body, both physically, particularly in the uterus, and psychologically. Several pathologies can occur during pregnancy, whether specific or not. It confirms that every year, more than half a million women die in the world from pregnancy-related causes and 10.6 million children die, 40% of them during the first month. To achieve this, the WHO envisages that every pregnant woman and newborn should receive quality care throughout pregnancy, childbirth and the postnatal period. In a continuum with reproductive health care, antenatal care provides a platform for delivering important health services, including health promotion, screening, diagnosis and disease prevention.

In 2016, at the start of the Sustainable Development Goals (SDGs) era, preventable pregnancy-related morbidity and mortality remained high. Although substantial progress has been made, countries need to consolidate and advance these gains and expand their targets to go beyond survival, aiming for optimal health and potential for their populations (OMS, 2018).

The sub-Saharan African region is the one with the most worrying situation, so that if major efforts are not put in place, it will be difficult to reach the target of 70 deaths per 100,000 births by 2030 under the Sustainable Development Goals (SDGs).

According to UNFPA (2015), nearly 850 women died in childbirth for every 100,000 live births during the period June 2014 to June 2015 in the DRC. The tragedy is that these women die not from disease, but while giving birth. The majority of these deaths could be avoided with preventive action and appropriate care.

According to the National Reproductive Health Programme (PNSR, 2008) in the DRC, 15% of pregnancies are at risk, which is why pregnant women are recommended to start antenatal consultations (ANC) in the first trimester of pregnancy.

The DRC's Ministry of Public Health (2008) reports that the health situation of the mother, newborn and child remains alarming. It is marked by maternal and infant mortality rates that are among the highest in the world, with a ratio of 549 maternal deaths per 100,000 live births, an infant and child mortality rate of 148 per 1,000, an infant mortality rate of 92 per 1,000 and a neonatal mortality rate of 42 per 1,000. This corresponds to two women losing their lives every hour while giving birth, and also to 37 children under five, 23 children under one year old and 13 newborns dying every 10 minutes, usually from preventable causes. This places the DRC among the six countries in the world that contribute 50% of the global burden of maternal mortality, and among the five that contribute 49% of under-five deaths (EDS, 2013).

In the Democratic Republic of Congo (DRC), in order to achieve MDG 5, which is to improve maternal health, a national reproductive health programme was put in place, with a national reproductive health policy, which includes quality antenatal care (ANC) as one of its strategic priorities. It is for this reason that standards and guidelines related to ANC were put in place and are applied throughout the country (EPSS, 2019).

In the DRC, the norm for antenatal follow-up is four ANCs, one of which is in the first trimester. All pregnant women should be seen in the first trimester, but this ideal is far from being a reality. Among women who had a live birth in the five years preceding the survey, 48% had made at least the four recommended visits, and this proportion was higher in urban areas (61%) than in rural areas (42%). In 38% of cases, women made 2 to 3 visits and a small proportion (4%) made only one visit. One in ten women did not make any prenatal visits (EDS, 2013).

In Mbandaka, data from the National Health Information System (SNIS, 2018), reports that out of 100% of pregnant women, only 10% attended health centres before the fourth month of pregnancy, whereas the norm is for at least one visit in each trimester.

However, it is clear that the majority of pregnant women in Mbandaka do not come to start this prenatal follow-up in the first trimester of their pregnancies. Women who decide to start ANC late expose themselves to multiple risks as their situation and that of the foetus are not closely monitored, which is often a sign of ambivalence and a reason for increased risk.

Late attendance is a factor limiting the effectiveness of antenatal care, and does not allow the pregnant woman to benefit from the advantages associated with it. Thus, the lack of information on the determinants of late attendance at antenatal care in Mbandaka motivated the initiation of the present study, the objective of which was to estimate the extent of this phenomenon and to identify its main determinants in our context.

The lack of knowledge of the reasons for this late recourse to ANC does not allow the development of appropriate strategies to overcome this problem in Mbandaka. To be effective, actions to reduce maternal mortality require the identification of contributing factors. This is why we deemed it necessary to undertake this study on the determinants of late recourse to ANC in the city of Mbandaka.

Thus, this study was initiated to identify the factors associated with late recourse to ANC in the city of Mbandaka. It aims to contribute to improving the quality of prenatal care in order to reduce maternal mortality through the optimisation of ANC in the city of Mbandaka.

2. METHOD

2.1 Study settings

This study was conducted in the city of Mbandaka, the capital of the province of Equateur in the Democratic Republic of Congo. This study took into account three health zones in the city of Mbandaka, namely: the health zone of Bolenge, Mbandaka and Wangata.

2.2 Study population and sample

The population of our study is composed of pregnant women living in the above-mentioned health zones.

It is a probability, proportional stratified and multiphase sampling. The first step was to determine the health zones of the city where the study would take place. The second was to select the health facilities where the surveys would be conducted and finally we

calculated the proportions for each of the facilities in order to determine our sample. In total, 325 cases and 325 controls were interviewed in the 13 selected facilities.

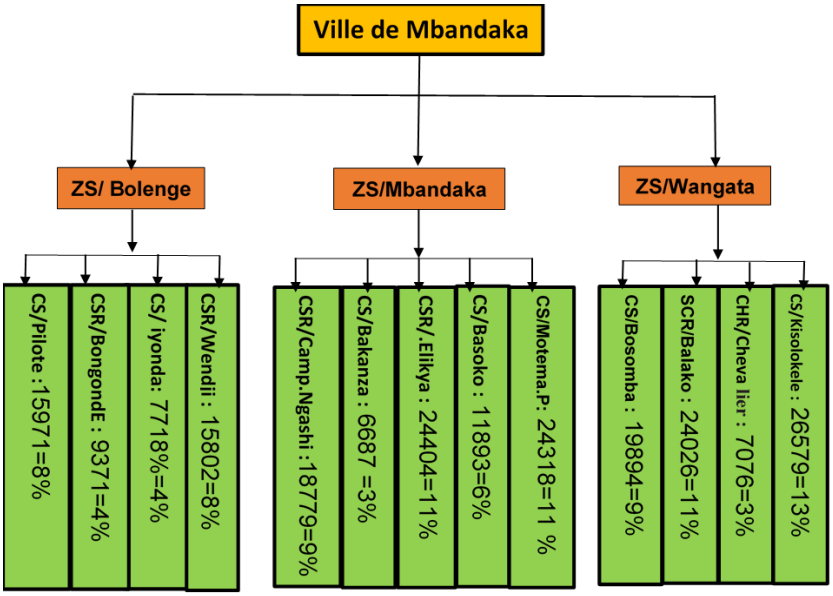

Figure 1: Proportional stratification

Table 1: Distribution of the sample according to the health structures

No.	Structures	Population	Sample	Proportion
1	Bakanza	6687	20	3%
2	Basoko	11893	32	5%
3	bongonde	9371	28	4%
4	Bosomba	19894	60	9%
5	Camp Ngashi	18779	58	9%
6	Iyonda	7718	26	4%
7	Jules Chevalier	7076	22	4%
8	Kisolokele	26579	84	13%
9	Mama Balako	24026	72	11%
10	Mama wa Elikya	24404	72	11%
11	Motema Pembe	24318	72	11%
12	Pilot/Bolenge	15971	52	8%
13	Secli Wenji	15802	52	8%
	TOTAL	**212518**	**650**	**100%**

2.3 Data collection

For each case and control, the socio-cultural, socio-demographic, and socio-economic characteristics that influence ANC use were collected using a structured questionnaire.

Pregnant women who first used ANC beyond the first trimester were considered "cases" and those seen in the first trimester were "controls".

Data were collected from pregnant women through direct interview during ANC sessions by twenty-six trained interviewers.

2.4 Data analysis and processing

The data collected was entered, processed and analysed using SPSS 22 software. Frequency measures were used to assess the level of the various indicators. As the objective of this study was to identify factors associated with late ANC use, given the dichotomous nature of our dependent variable (normal use or late use), we used logistic regression with a 95% confidence level.

2.5 Ethical considerations

We needed survey authorisations to conduct the study. During the implementation, the anonymity of the respondents and the confidentiality of the information provided were observed.

All respondents were informed of the purpose and objectives of our research in order to obtain their free and informed consent on the one hand, but also to guarantee the confidentiality of the information to be collected before the questionnaire was administered. Similarly, voluntary participation in the survey was preferred for data collection.

3. RESULTS

3.1 Data Descriptions

Table 2: Distribution of respondents according to socio-demographic characteristics

Sociodemographic characteristics	**Use of the CPN**	
	Cases (n=325)	***Controls (n=325)***
Age		
16-30	211(64.9%)	188(57.8%)
31 and over	114(35.1%)	137(42.2%)
Occupation		
Official	26(8.0%)	28(8.6%)
Non civil servant	299(92.0%)	297(91.4%)
Occupation of spouse		
Official	51(15.7%)	47(14.5%)
Non civil servants	223(68.6%)	228(70.1%)
Not applicable	51(15.7%)	50(15.4%)
Study level		
Weak	292(89.8%)	286(88.0%)
Raised	33(10.2%)	39(12.0%)
Spouse's level of education		
Raised	65(20.0%)	63(19.4%)
Weak	214(65.8%)	207(63.7%)
Not applicable	46(14.2%)	55(16.9%)
Marital status		
Bride	271(83.4%)	257(79.1%)
Not married	54(16.6%)	68(20.9%)
Matrimonial regime		
Monogamous	223(68.6%)	189(58.2%)
polygamous	53(16.3%)	84(25.8%)
Not applicable	49(15.1%)	52(16.0%)
gesture		
≤6	283(87.1%)	291(89.5%)
>6	42(12.9%)	34(10.5%)
Parity		
Nulliparous	77(23.7%)	123(37.8%)
Primiparous	51(15.7%)	58(17.9%)
Multipara	197(60.6%)	144(44.3%)
Number of living children		
0	90 (27.7%)	140(43.1%)
1-6	230(70.8%)	179(55.1%)
>6	5(1.5%)	6(1.8%)
Abortion number		
0	240(73.8%)	250(76.9%)
1-5	85(26.20)	75(23.1%)
ATCD of infant deaths		
Nope	78.5%)	262(80.6%)
Yes	70(21.5%)	63(19.4%)
Desired pregnancy		
Yes	184(56.6%)	236(72.6%)
Nope	141(43.4%)	89(27.4%)

The results of this table show that 211 cases (64.9%) are in the age group of 16-30 years, non-civil servants predominate: 299 cases (91.7%), 228 controls (70.1%) have spouses who are not civil servants; 292 cases (89.8%) have a low level of education, 214 cases (65.8%) have spouses with a low level of education; 214 cases (65.8%) have spouses with a low level of education; brides are in the majority: 271 cases (83.4%); 223 cases (68.6%) are in the monogamous diet; gestality ≤6 is predominant: 291 controls (89.5%); 197 cases (60.6%) are multiparous; 230 cases (70.8%) have 1-6 living children, 250 controls (76.9%) did not abort, 262 controls (80.6%) have no deceased children and 236 controls (72 6%) had wanted pregnancies.

Table 3. Distribution of respondents according to socio-cultural characteristics

Prenatal consultation	**Use of the CPN**	
	Cases (n=325)	***Controls (n=325)***
Religion		
Not Christian	94(28.9%)	136(41.8%)
Christian	231(71.1%)	189(58.2%)
Spouse's religion		
Non Christian	70(21.5%)	90(27.7%)
Christian	203(62.5%)	186(52.2%)
Not applicable	52(16.0%)	49(15.1%)
Have traditional practices		
Yes	130(40.0%)	45(13.8%)
Nope	195(60.0%)	280(86.2%)
Various traditional practices		
Ikolimpo, Impompo, Munzakala (Ipomoeainvolucrata)	26(8.0%)	10(3.1%)
Itau(Zaaba), Mbondjembondje (Alchornea cordifolia)	28(8.6%)	10(3.1%)
Lokulilobele, Munkutola (Sida cordifolia)	20(6.2%)	9(2.8%)
Lumbalumba, Mundulumba (Ocinamomubacilicum)	28(8.6%)	7(2.2%)
Boloy, Litotoko, Mpinga (Afromonumlaurentie)	25(7.7%)	9(2.8%)
Decision-making power at the start of the CPN		
Stepfather	6(0.9%)	22(3.4%)
Husband	26(4.0%)	3(0.5%)
Stepmother	9(1.4%)	148(22.8%)
Sister in law	83(12.8%)	2(0.3%)
Myself	3(0.5%)	22(3.4%)
Other specify	6(0.9%)	3(0.5%)
Can pregnancy be hidden?		
YES	49(15.0%)	N / A
NOPE	276(84.9%)	N / A
Reasons to hide pregnancy		
Shame	31(9.5%)	N / A
Avoid bewitchments	9 (2.7%)	N / A
Avoid being marginalized	1(0.3%)	N / A
Fear of parents	1(0.3%)	N / A
Ignoring	7(2.1%)	N / A

In view of this table, 231 cases (71.1%) are Christian women, 203 cases (62.5%) have Christian spouses; 280 controls (86.2%) do not have traditional practices and 28 cases (8.6%) use Itau (Zaaba), Mbondjembondje (Alchorneacordifolea); for 149 cases (22.9%) the ANC were decided by their husbands; 276 (84.9%) Cases do not accept hiding their pregnancies; 31(9.5%) Cases hide their pregnancies due to shame; 130 (40.0%) start their ANC late following the use of traditional practices and 136 (41.8%) controls start their ANC in the first trimester of their pregnancies to avoid abortions.

Table 4. Distribution of respondents according to current reasons for ANC

Reasons for not starting ANC in the 1st trimester of pregnancy	***Cases (n=325)***	***Controls (n=325)***
Reduce the number of visits	37(11.3)	N / A
Lack of financial means	161(49.5)	N / A
Fatigue	39(12)	N / A
Shame	10(3.1)	N / A
Parity	94(28.9)	N / A
Distance from the center with the residence	127(39.1)	N / A
Traditional practices	175(53.8)	N / A
Avoid bewitchments	9 (2.7)	N / A
bad reception	34(10.4)	N / A
Waiting time too long	39(12)	N / A
Lack of awareness	96(29.5)	N / A
Travel	33(10.1)	N / A
Reasons to start ANC in the 1st trimester of pregnancy		
Fear of abortion	N / A	136(41.8)
Sensitization	N / A	68(20.9)
Diseases	N / A	66(20.3)
Ignoring	N / A	55(16.9)

The majority of cases, ie 49.5%, did not start ANC in the first trimester due to a lack of financial means. The witnesses went there for fear of abortion.

Table 5: Distribution of respondents according to service offer

Prenatal consultation	**Use of the CPN**	
	Cases (n=325)	***Controls (n=325)***
Distance from the residence and the health center (Km)		
≤5	245(75.4%)	278(85.5%)
>5	80(24.6%)	47(14.5%)
Number of CPN to perform		
≤ 3	106 (32.6)	99 (30.5)
> 3	219 (67.4)	226 (69.5)
If free CPN		
Yes	4(1.2%)	78(24.0%)
Nope	321(98.8%)	247(76.0%)
Assessment of the cost of the ANC		
Affordable	310(95.4%)	242(74.5%)
Exorbitant	11(3.4%)	5(1.5%)
Not concerned	4(1.2%)	78(24.0%)
Welcome		
Good	308(94.7%)	318(97.8%)
Bad	17(5.2%)	7(2.1%)
Waiting time		
3 to 4 hours (too long)	18(5.5%)	21(6.4%)
2 hrs to 3 hrs (long)	87(26.7%)	40(12.3)
< 2h (not long)	220(67.6%)	264(81.2%)
Have received information on the evolution of her pregnancy		
Yes	267(82.1%)	307(94.4%)
Nope	58(17.8%)	18(5.5%)
Coming soonIn this Center for ANC ?		
Yes	301(92.6%)	316(97.3%)
Nope	24(7.3%)	9(2.7%)
Are the CPN hours right for you?		
Yes	306(94.1%)	N / A
Nope	19(5.8%)	N / A
If not why ?		
Too early	12(63.1%)	N / A
Too late	7 (36.8%)	N / A
What hours are convenient for you then?		
8am	7(36.8%)	N / A
9 am	2(10.5%)	N / A
10 o'clock in the morning	10(52.6%)	N / A
Are CPN days right for you,		
Yes	316(97.7%)	N / A
Nope	9 (2.7%)	N / A

The data in this table indicates that 278 (85.5%) Witnesses are at a distance of ≤5km from the Cs; 305 cases (93.8%); 169 Witnesses (52.0%) noted 4 as the number of ANC, 321 cases (98.8%) emphasized that ANC is not free and 310 cases (95.4%) spoke of affordable; 318 (97.8%) Witnesses appreciated the reception at the CPN; 264(81.2%) Witnesses found the waiting time not long; 307 (94.4%) Witnesses were informed about the progress of their pregnancies; 316 (97.3%) Witnesses agreed to return to do the ANC in the same health center; 306(94.1%) Cases reported that the scheduled ANC times are convenient for them; 316 (97.7%) Witnesses found that the days of the CPN suit them.

Table 6: Distribution of respondents according to their knowledge based on awareness

Prenatal consultation	***Cases (n=325)***	***Controls (n=325)***
Assistance to awareness sessions		
Yes	255(78.4%)	299(92%)
Nope	70(21.5%)	26(8%)
Where were you sensitized?		
CS	244(75%)	291(89.5%)
Market	4(75%)	8(2.4%)
Others	7 (2.1%)	N / A
Not applicable	70(21.5%)	26(8%)
Who were you contacted with?		
SC Agent	243(74.7%)	288 (88.6%)
COGS	4(1.2%)	3(0.9%)
Association	3(0.9%)	4(1.2%)
Other	5(1.5%)	4(1.2%)
Not applicable	70(21.5%)	26(8%)
Proposals to improve the frequency at the CPN on the 1st Pregnancy trimester		
Sensitization	181((55.6%)	280(86.1%)
Free CPN	76(23.3%)	35(10.7%)
Ignoring	88(27.0%)	10(3.0%)
If your mother was regularOr not at the CPN		
Yes	102 (31.3%)	171(52.6%)
Nope	223(68.6%)	154(47.3%)
Advantage of starting ANC early		
Avoid pregnancy complications	202(62.2%)	261(80.3%)
Good evolution of pregnancy	81(24.9%)	118(36.3%)
Receive appropriate care	44(13.5%)	97(29.8%)
Free healthcare	2(0.6%)	41(12.6%)
Others (guaranteeing the woman's health)	73(22.5%)	4(1.2%)
Danger signs during pregnancy		
Vaginal bleeding	188(57.8%)	149(45.8%)
Pallor	186(57.2%)	149(45.8%)
Convulsion	34(10.5%)	54(16.6%)
rapid breathing	30(9.2%)	54(16.6%)
Headaches	33(10.2%)	64(19.7%)
Edema	294(90.5%)	262(80.6%)
Abdominal pain	269(82.8%)	273(84.0%)
Others (asthenia)	23(7.1%)	6(1.8%)
Disease to prevent during ANC		
Malaria	241(74.2%)	195(60.0%)
STI/HIV-AIDS	237(72.9%)	193(59.4%)
Tetanus	42(12.9%)	54(16.6%)
Anemia	35(10.8%)	60(18.5%)
Others (Typhoid fever)	8(2.5%)	17(5.2%)
If complications during the first 3 months of pregnancy		
Yes	252(77.5%)	320(98.5%)
Nope	73(22.5%)	5(1.5%)
Complications during the first 3 months of pregnancy		
Bleeding	168(51.7%)	183(56.3%)
Abortion	163(50.2%)	142(43.7%)
Severe anemia	79(24.3%)	102(31.4%)
Persistent fever	77(23.7%)	100(30.8%)
Stomach ache	165(50.8%)	184(56.6%)
Severe vomiting	78(24.0%)	101(31.1%)
Malnutrition	26(8.0%)	33(10.2%)
Others (vertigo)	56(17.2%)	6(1.8%)

In this table, 299 (92%) Witnesses attended the awareness sessions; 291 (89.5%) Controls were sensitized to CS; 288 (88.6%) Controls were sensitized by a CS agent; 280 (86.1%) Witnesses suggested sensitization to improve the frequency of ANC; 223(68.6%)Cases admitted that their mothers were not regular at ANC; 261 (80.3%) Controls said “avoiding pregnancy complications” is a benefit of starting ANC early; 252 cases (77.5%) spoke of complications during the first 3 months of pregnancy and 184 controls

(56.6%) underlined stomach pain followed by 183 controls (56.3%) who noted bleeding ; 261 witnesses (80.3%) talked about avoiding pregnancy complications, 294 cases (90.5%) highlighted oedemas, 241 cases (74.2%) noted malaria; 320 (98.5%) Witnesses state that complications can appear in the first trimester of pregnancy; 184 (56.6%) Witnesses cited stomach ache among the complications in the first trimester of pregnancy.

3.3 Multivariate analyzes

Table 7: Logistic regression on late use of ANC by pregnant women (n=650)

	ß	P	EXP.OR	CI for OR (95%)
Dependent variable:				
Late recourse to the CPN				
ANC cost	.617	.001**	.539	.379- .768
Lack of financial means	5,081	.000**	160,883	55.753-564.249
Demotivation	3,104	.000**	22,293	8.576-57.951
Shame	3,529	.002**	34,091	3,617-321,280
Unavailability of the pregnant	4,964	.000**	143,140	18.386-143.93
Bad reception of the agents during the CPN	,114	.884	.892	,193-4,118
Long waiting time during ANC	.034	.912	.967	.532-1.757
Traditional practice before ANC	1,410	.000**	.244	.134-0.445
Parity	-.206	.044*	.814	.374-0.973
Study level	-.461	.192	.631	.315-1.262
Marital status	.906	.016*	.404	.193-0.846
Constant	4,165	.031	64,372	

*p<0.05 **p<0.01

This table shows that the late use of ANC by pregnant women is associated with the high cost of ANC [OR = 0.539 (0.379 – 0.768); p=0.001]; lack of financial means [OR = 160.9 (55.8 – 564.2); p=0.000]; to demotivation [OR = 22.3 (8.6 – 57.9); p=0.000]; shame [OR = 34.1 (3.6 – 321.3); p = 0.002], at unavailability [OR = 143.1 (18.4 –143.9); p=0.000]; traditional practice before doing ANC; [OR = 0.244 (0.134 – 0.445); p = 0.000], at parity [OR = 0.814 (0.374 – 0.973); p = 0.044] and marital status [OR = 0.404 (0.193 – 0.846); p = 0.001].

DISCUSSION

Although 95.4% (cases) and 74.5% (controls) said that the fees for ANC were affordable, they also insisted that free ANC would be a sustainable solution to enable all social strata to access it from the first trimesters of their pregnancies.

This option is based on arguments of equity, ethics and economic efficiency. The justification of an expensive transfer for preventive services such as ANC in the same way as child immunisation is difficult, especially if it obstructs access to free services to eliminate mother-to-child transmission of HIV, reduce the burden of malaria, combat malnutrition and anaemia, etc., whose coverage rates remain below the objectives (CDBPS, 2012).

Housewives, who represent 91.7% of the respondents, stated that fatigue is a factor that contributes to late recourse to ANC. They cannot bear the waiting time at ANC services because they have to attend to their daily household duties on their return.

Shame was mentioned by unmarried pregnant women, women with pregnancies that were too close together, as well as women with multiple pregnancies. It is shame towards the community, friends and health staff.

The traditional practices are applied for many reasons: to avoid bleeding during pregnancy, to prevent abortions, to escape bad luck, to protect the child from the father's infidelity, etc.

For our study, we condemn these traditional practices insofar as they make people ignore the use of ANC from the first trimester of pregnancy, making them believe that everything can be solved by the use of these products, which is why these traditional practices are classified among the factors hindering the timely use of ANC.

There was also an association between parity and late use of antenatal care (p = 0.044). This same result was obtained by Mosiana (2014), in her study on "Determinants of the low proportion of pregnant women seen at the first ANC in the 1st trimester of pregnancy" It is stated that parity exerts a highly significant statistical influence on the reason for not attending the 1st ANC (p=0.01).

The same author found that the number of pregnancies had a statistically significant influence on the reason for not attending the 1st ANC (p<0.05).

In contrast, Maleya et al (2019) found that no significant difference was found. The proportions of primiparous and large multiparous cows were 22.35% and 30.96% in group 1, 19.39% and 34.23% in group 2

and 19.56% and 35.60% in group 3. When comparing these proportions of groups 2 and 3 to the reference group, the statistical analysis shows no significant difference.

With regard to civil status, although the field of reproductive health encourages the involvement of men to accompany their wives, this initiative still suffers from implementation.

The study found that 16.6% (Cases) and 20.9% (Controls) of the women surveyed were unmarried and had had pregnancies outside of marriage, some of whom were made pregnant by partners who were already married and preferred to hide the information from their wives to avoid problems within the family. Hence some unmarried pregnant women are left to their own devices.

In terms of marital status, Maleya et al (op.cit.) found that the proportion of women giving birth alone was 1.50% in group 1 compared to 5.73 and 2.15% respectively in groups 2 and 3. When comparing the proportions of women living alone between groups 1 and 2, statistical analysis shows a significant difference reflecting that the absence of prenatal follow-up was 4.0 times higher among them than among those living in union (OR=4.00)

However, Bakouan (2011) who investigated "the determinants of the low proportion of pregnant women seen in the first prenatal consultation in the first trimester of pregnancy in the health district of Tenkodogo; National School of Public Health (Burkina Faso) - Health Attaché in Epidemiology" found a statistically significant link between age and ANC in the first trimester of pregnancy in the health district of Tenkodogo. Indeed, the youngest women (<18 years) and those over 34 years of age seem to have less ANC in the first trimester ($p<0.05$). Age influences first-trimester ANC1 in various ways. Younger women (<18 years) have no experience of antenatal care and therefore may come late for their follow-up. Women over 34 years of age, because of their advanced age, may feel ashamed to get pregnant again.

The same author further states that educated women appear to seek antenatal care earlier than uneducated women ($p=0.039$). These results corroborate those of the DHS (2013) where the authors found that the frequency of ANC was a function of educational level.

Similarly, the majority of decision-making power is held by spouses. This situation is depicted by the results of the DHS 2003 according to which 91% of households are headed by men and only 10% reported having the final say in certain decisions related to their health. Also, there is a statistically significant relationship between decision-making power and first trimester NICU ($p<0.05$), which means that women with decision-making power came to NICU in the first trimester of pregnancy more than those without.

Bouba (2010) found that age only significantly influences antenatal care wastage when ANC starts beyond the first trimester. Age affects wastage additively with other variables. Indeed, he found that young (OR= 1.31) and older women (OR= 1.39) have a high propensity for wastage compared to adult women.

Finally, diversity was found with the analyses of Wafa (2016) for which educational level ($p=0.005$), age of the woman ($p=0.011$) and knowledge of possible warning signs during pregnancy ($p=0.01$) were factors associated with the use of antenatal consultation.

Thus, there are factors identified in the present study, but not found elsewhere. This difference would essentially be explained by the context of the study.

CONCLUSION

Few women in the city of Mbandaka meet the WHO recommendations, namely to go to ANC in the first trimester of pregnancy. In order to understand the problem, we felt it necessary to carry out a study on the "factors associated with late recourse to antenatal consultation in the city of Mbandaka" to find alternatives for its resolution.

At the end of the analyses, the main results can be summarised as follows: the factors associated with late recourse to ANC in the town of Mbandaka are the cost of ANC ($p<0.01$); lack of financial means ($p<0.01$); demotivation ($p<0.01$); shame ($p<0.01$), unavailability of the pregnant woman ($p<0.01$); traditional practice before performing ANC; ($p<0.01$), parity ($p<0.05$) and marital status ($p <0.05$).

During pregnancy, both the woman and her child are confronted with various health risks. For this reason, it is important that all pregnant women are monitored by trained health workers and should receive at least four visits of quality antenatal care according to well-structured recommendations. Antenatal care has a clear role to play in reducing maternal and neonatal mortality in developing countries, especially as women use it widely.

To be effective, it should be conducted according to quality standards, but this is not always easy. Indeed, the indicators in this area are not very good, particularly the proportion of first prenatal consultations carried out in the first trimester of pregnancy in the town of Mbandaka; pregnant women prefer to consult in the second and third trimesters; few women consult at least four times and at least once in each trimester of pregnancy.

In terms of effectiveness, the cost of ANC, the high number of visits, the lack of financial means,

fatigue, shame, travel, traditional practices prior to ANC and civil status were associated with late recourse to antenatal consultation.

REFERENCES

- Bakuan. (2011). Determinants of the low proportion of pregnant women seen in the first prenatal consultation in the first trimester of pregnancy in the health district of Tenkodogo. National School of Health. Online at: https://www.memoireonline.com/02/12/5222/Determinants-de-la-faible-proportion-des-women-pregnant-views-en-premiere-consultation-prenatale.html
- Bouba, F. (2005). Loss of prenatal care in Chad IFORD/University of Yaoundé II - DESS in demography. Online at: https://www.memoireonline.com/05/09/2090/La-deperdition-des-soins-prenatals-au-Tchad.html
- Center for the Development of Best Practices in Health (CDBPS). (2012). Optimizing the use of prenatal consultation services in Cameroon. a research unit within the Cameroon chapter of the Evidence Informed Policy Networks (EVIPNet) initiative of the World Health Organization. Strategic briefing note. Online at: http://cdbph.org/documents/PolicyBriefs_Optimiser_lutilisation_des_services_de_consultation_prenatale_au_Cameroun.pdf.pdf
- Daouda, Y. (2010). Refocused prenatal consultation: perception of pregnant women and recent deliveries at the kolondieba reference health center. Thesis from the Faculty of Medicine, Pharmacy and Odonto-Stomatology, University of Bamako, Republic of Mali. Online at: http://www.keneya.net/fmpos/theses/2010/med/pdf/10M407.pdf
- EDS-DRC II. (2013-2014). Democratic Republic of Congo, National Reproductive Health Program: National Reproductive Health Policy. Online at: https://www.unicef.org/drcongo/media/1046/file/EDS-RDC%20II%202013-2014.pdf
- Ministry of Public Health, DRC (2012). Democratic Republic of the Congo: Health Zone Standards for Integrated Maternal, Newborn, and Child Health Interventions in the Democratic Republic of the Congo. Online at: https://scorecard.prb.org/wp-content/uploads/2018/05/Interventions-de-Sante%CC%81-Adapte%CC%81es-aux-Adolescents-et-Jeunes.RDC_. pdf
- Kinshasa School of Public Health (ESPK) Kinshasa and THE DHS PROGRAM ICF Rockville, Maryland USA. (2019). Evaluation of Services services of health care, Democratic Republic of Congo, Rapportfinal 2017-2018. Online at: https://dhsprogram.com/pubs/pdf/SPA30/SPA30.pdf
- Maleya, A., Kakudji, Y. K., Mwazaz, R. M., Nsambi, J. B., Ngwej, H. I., Mukuku, O., ... & Luhete, P. K. (2019). Maternal and fetal outcomes of unattended pregnancies in Lubumbashi, Democratic Republic of Congo. *The Pan African Medical Journal*, *33*, 66-66. doi: 10.11604/pamj.2019.33.66.18528.
- Mosiana, J. (2014). Determinants of the low proportion of pregnant women seen at the first ANC in the 1st trimester of pregnancy. Bachelor 's thesis in Health Sciences, National Pedagogical University / Kinshasa. ground floor. Online at: https://www.memoireonline.com/01/16/9339/Determinants-de-la-faible-proportion-des-femmes-pregnant-vues-a-la-premiere-CPN-au-1er-trimestre.html
- WHO. (2016). Maternal mortality: Key benchmarks. Geneva. Online at: https://www.who.int/fr/news-room/fact-sheets/detail/maternal-mortality
- WHO. (2018). WHO recommendations on antenatal care for a positive pregnancy experience. 1211 Geneva 27 (Switzerland). Online at: http://apps.who.int/iris/bitstream/handle/10665/259584/9789242549911-fre.pdf;jsessionid=7109E1382F46C857E9F195AF9048CD7D?sequence=1
- World Health Organization. Maternal Health and Safe Motherhood Program. ((2017baby -Mother . package: implementing safe motherhood in countries: practical guide. World Health .Organization https://apps.who.int/iris/handle/10665/63268
- Wafa, Q. (2016). The determinants of the use of maternal health services in the municipality of Zerkten, Province of Al Haouz.
- Ministry of Public Health, DRC. (2008). Training in integrated maternal and newborn care for service providers in basic structures. Volume 1, essential obstetric care. Online at: https://extranet.who.int/nutrition/gina/sites/default/filesstore/Normes%20et%20Directives%20Sant%C3%A9%20de%20la%20Reproduction.pdf
- UNFPA. (2015). For People, Planet & Prosperity. Delivering a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is ful filled. Annual Report 2015. Online at: https://www.unfpa.org/modules/custom/unfpa_global_annual_reports/docs/UNFPA_2015_Annual_Report.pdf
- National Reproductive Health Program (PNSR). (2008). National reproductive health policy. http://familyplanning-drc.net/docs/5_PolitiqueNationaleDeSanteDeLaReproduction_Juillet_2008.pdf