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Determinants of the Low Involvement of Husbands in the Prenatal Consultation in the City of Kinshasa, Democratic Republic of the Congo

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Abstract

Introduction: The presence of men with their pregnant partners at facility-based antenatal care (ANC) visits is important for maternal and child health and gender equality, but remains rare in parts of the Democratic Republic of the Congo. **Method:** This is a quantitative study, of the correlational and cross-sectional descriptive type, centered on the factors linked to the low involvement of husbands during ANC. The target population consisted of married or common-law men residing in the Mombele health area during the survey period from 27/10/2021 to 30/11/2021. **Results:** The level of male involvement in antenatal care in Mombele Health Area in Limete Health Zone is 53.8%. The determinants underlying this low involvement in these services are: age (OR = 8.498; 95% CI 3.913 - 18.452; p = 0.000); religion (OR = 5.978; 95% CI 2.282 - 15.657; p = 0.000); negative perception or feeling of embarrassment (OR = 5.836; 95% CI 1.275 - 26.725; p = 0.023); marital status (OR = 10.995; 95% CI 4.231 - 28.575; p = 0.000). **Conclusion:** The involvement of men in prenatal care is still low. Hence, it incorporates a component of community participation in health programs for greater involvement of partners in order to contribute to improving the use of ANC services.

Subject Areas

Public Health

Keywords

Determinants, Low Involvement, Husbands, Prenatal Consultation

1. Introduction

Every year 529,000 women die as a result of pregnancy, childbirth or after childbirth. If awareness is growing regarding the importance of the role of men in the sphere of maternal, neonatal and child health, this would significantly reduce the occurrence of these unfortunate events [1].

But, it is clear that men are involved only rarely. This is due to the lack of knowledge about the most adequate and efficient ways to integrate men; while the involvement of men in reproductive health activities is part of the fight against maternal and infant death.

Yet well-designed programs involving men and boys are showing results indicating that they lead to changes in behaviors and attitudes. Changes include an increase in contraceptive use; improved communication with spouse or partner about child care, contraception, and reproductive health decisions; increased use of sexual and reproductive health services by women with men [2].

Maternal mortality can be reduced only with the involvement of health personnel, including the midwife in charge of these pregnant women and the husband, who has a very significant role to play in improving the survival of the mother and newborn child. Whether his presence is desired or strongly encouraged, the father must nowadays be integrated into the monitoring of pregnancy and welcomed at childbirth [3]. Along the same lines, Olugbenga-Bello *et al.* (2016) add that there is now no longer any doubt that the role of men is a major determinant of mothers' health [4] and that it is important to take this into account in the fight against maternal mortality and gender-based inequalities. It had been observed that involving men in maternal health is a promising strategy to promote maternal health; that involving husbands or partners and encouraging joint decision-making within couples is an important strategy for achieving women's empowerment; this will ultimately impact the reduction of maternal morbidity and mortality [5].

The involvement of men in reproductive health activities it is imperative for all health systems. It is for this reason that they have been inserted as the fifth component of reproductive health in the DRC. But, despite this introduction since 1994, men seem to miss reality. However, the health organization recommends that fathers (husbands) be recognized as full partners and not just as a simple companion, but also as a centerpiece of support for the pregnant woman [6].

In 2010, the WHO notes that the involvement of men in reproductive health activities, in particular participation in prenatal consultations, involvement in

the use of contraceptive methods in the couple as well as at the time of childbirth is very low, less than 20% in developing countries like ours against 70% in developed countries [7].

In countries with high status such as in Europe (France, Italy, Sweden, Germany, and Portugal), the proportion of pregnant women who attend ANC accompanied by their husbands is 81% and this has a positive consequence in the sense that all these women start ANC in the first three months of pregnancy [8].

In Africa, on the other hand, the situation is quite different because a large majority of pregnant women do not follow the CPN where they are accompanied by their partners and resort to traditional care such as Togo, Zambia, and Namibia only nearly 60% of pregnant women said they were followed up at the health centre, which is why the average number of prenatal consultations accompanied is low [9].

In Burundi, a baseline assessment conducted by the Health Care Improvement (HCI) Project showed the low participation of male partners of pregnant women. Only 6% of the partners of pregnant women enrolled in CPN are accompanied by their partner [10].

According to the WHO (2012), the frequency of men's involvement in ANC in developing countries is low, around 38.1%, yet ANC represents several advantages for mothers and couples. Notwithstanding, says Olugbenga-Bello *et al.* (2013) [4], men do not appear to be very present, paradoxically, in their dominant position with regard to certain decision-making responsibilities, planning and access to health services which have serious consequences for women's health.

Referring to the descriptive and cross-sectional study carried out in the DRC, precisely in the province of South Kivu by Faraja Lydia in 2019, the majority of men do not get involved in ANC. Only 20% of the partners who had accompanied their wives, all of the men were able to explain the importance of their involvement in the ANC and are informed about the topics commonly addressed in this service [9].

Locally in the city of Kinshasa, we note in the observation that during the activities organized within the framework of maternal health, in particular the prenatal consultation, we note an almost total absence of men and an almost total disconnection from information related to the evolution of pregnancy. This is why a study that can shed light on the factors that are linked to the low involvement of husbands in prenatal consultation remains essential. The general objective of this study is to identify the factors linked to the low involvement of husbands in ANC. Knowledge of these factors will enable decision-makers to develop strategies that promote the involvement of male partners in reproductive health activities.

2. Material and Method

2.1. Research Quote

This study is in the field of public health and more specifically, it is part of the

component of reproductive health. This is a quantitative study, of the correlational and cross-sectional descriptive type, centered on the factors linked to the low involvement of husbands during ANC.

2.2. Description of the Study Environment

The study is conducted in the city of Kinshasa, commune of Limete, in the Health Zone of Kinshasa, Aire de santé Mombele, in the Democratic Republic of the Congo.

2.3. Target Population, Sample and Sampling Technique

Our target population consists of married or common-law men residing in the Mombele health area during the survey period from 10/27/2021 to 11/30/2021.

The selection of sample units was based on the following criteria: being married or living common-law for at least 1 year; having a partner who has been pregnant at least once; be present on the day of the survey and able to answer us in French or Lingala; agree to participate in the study voluntarily. We preferred to take men who have been legally married or have been living in a common-law union for at least a year, because a union that has already lasted a year is likely to produce a pregnancy if ever there is no obstacle to conception. Having a partner who has been pregnant at least once can make it possible to check whether the husband accompanies his partner to the prenatal consultation. Being present on the day of the survey, being able to answer us in French or Lingala and agreeing to participate in the study voluntarily are criteria for respecting the ethical conditions.

Males in this population are 15303.49. In the context of the DHS-DRC II, all legally married women and men as well as all people living in a consensual union were considered to be in a union. The results presented Among the men, four out of ten were single (42%) and more than one out of two (55%) were in union, of which 43% were married and 12% lived in a consensual union EDS (2014). The 55% of 15303.49 gives 8417 married.

Referring to the table of Morgan *et al.* (1979), saying on a population of 8417 people, the sample must be 357 people. The sample size is 357 men.

2.4. Data Collection Method, Technique and Instrument

To carry out this study, we used the questionnaire survey method and the questionnaire-interview technique. Given the divergence of understandings between individuals on the theme, we required that the interviewer alone complete the instrument to ensure the concordance of the answers and to elucidate the confusing ideas, but with the free will of the participant.

2.5. Data Analysis Plan

Thus the data from the collection sites, recorded on the collection tools by the investigators were compiled, cleaned and then codified by creating new variables

by the analyst. These data were entered using EXCEL 2010 software to create the database and then analyzed on SPSS Version 20 software.

First we made a description of the data by presenting the proportions in percentage and the average of certain variables. Second, we crossed the independent variables with the dependent variable using Pearson's chi-square test to determine the relationship between them. The results of this study are estimated at a confidence interval (CI) of 95% with the risk of alpha error set at 5% ($p = 0.05$). And finally, the introduction into the multivariate model (logistic regression) to bring out the really determining factors of the low involvement of husbands in the ANC.

2.6. Ethical Considerations

As any research that relates to humans, mainly in the field of health, brings ethical considerations into play from the start of the research, we have in our approach, beforehand soliciting the voluntary participation of the subjects after having informed them of the nature, purpose, duration, and methods used during the research. Confidentiality principles were required to respect the privacy and personality of respondents. The survey questionnaires were kept in one place accessible only to the principal investigator. The investigator is committed to respecting the principles of confidentiality of the information that will be delivered to them and the anonymity of the subjects.

3. Results

The results presented in this part are generally divided into three main parts: the first part devoted to the description of the different characteristics of husbands and the determinants which are likely to influence the involvement of husbands in their ANC support, the second is applies to bivariate analysis, demonstrating the links between different characteristics and the involvement of husbands and then the third part fits with multivariate analysis (logistic regression).

3.1. Results of Descriptive Analyzes

In Table 1, we see that the age group of 32 - 41 years is more represented with 40.1%, followed by that of 21 - 31 years with 38.1% but overall, the average age is 34.7 years; compared to the number of years in the marriage the 2 - 5 year bracket represents 65.0%, most husbands had a higher level of education (47.1%) and 41.5% who finished the cycle secondary education; The majority of people interviewed were Catholic (53.5%). The majority of the husbands worked in the private sector of activity (36.4%), with fairly sufficient remuneration (42.6%), most of the husbands had an average social status (73.4%). Moreover, in the majority of cases, the participants were legally and customarily married (72.5%). Table 2 shows that the majority of male respondents had already heard of the CPN (93.0%), 53.8% of the husbands accompanied their wives to the CPN and 20.7% had already made at least one CPN visit. In view of Table 3, we notice

Table 1. Distribution of respondents according to their socio-demographic characteristics.

Features	Terms	Effective (n = 357)	%
Age range	21 - 31 years old	136	38.1
	32 - 41 years old	143	40.1
	42 - 52 years old	69	19.3
	53 years and over	9	2.5
Average age 34.7 years			
Number of years of marriage	1 year	5	1.4
	2 - 5 years	232	65.0
	More than 5 years	120	33.6
Study level	Without level	3	0.01
	Primary	38	10.6
	Secondary	148	41.4
	Higher and university	168	47.0
Religion	Catholic	191	53.5
	Protestant	51	14.3
	Awakening	73	20.4
	Kimbanguist	29	8.1
	Islam	13	3.6
Activity area	Public	103	28.9
	Private	130	36.4
	Independent	124	34.7
Remuneration	Sufficient	82	23.0
	Fairly sufficient	152	42.6
	Insufficient	123	34.5
Social status	Very poor	5	1.4
	Poor	90	25.2
	Mean	262	73.4
Marital status	Civilly married (customary)	259	72.5
	Free union	98	27.5

Table 2. Distribution of respondents according to their knowledge of the ANC and its involvement.

Features	Terms	Workforce (n = 357)	%
Have heard about the CPN	Yes	332	93.0
	No	25	7.0

Continued

Accompaniment	Yes	192	53.8
	No	165	46.2
Number of times of ANC	Once (CPN1)	74	20.7
	Twice (CPN2)	62	17.4
	Three Times (CPN3)	44	12.3
	Four Times (CPN4)	12	3.4

Table 3. Sociocultural factors that can influence low involvement in prenatal consultation.

Features	Terms	Workforce (n = 357)	%
Men's lack of knowledge about the importance of ANC	Yes	92	25.8
	No	265	74.2
Shame to be in the middle of women (it's the activity of women)	Yes	189	52.9
	No	168	47.1
Negative perception (feeling of embarrassment to)	Yes	31	8.7
	No	326	91.3
Lack of communication within the couple	Yes	11	3.1
	No	346	96.9
The tradition or custom	Yes	02	0.6
	No	355	99.4
Refusal of women to be accompanied	Yes	32	9.0
	No	325	91.0

that in general husbands knew the importance of ANC (74.2%), on the other hand, ANC was considered as an activity of women (91.3%). 96.9% not experienced any Difficulty in communication within couples, 91.1% said that women do not refuse to be accompanied and 99.4% had also indicated that their traditions or customs do not prevent the accompaniment of theirwives to the CPN if one feels love for her. By analyzing Table 4, it informs us about the economic factors that are linked to the low involvement of husbands in the CPN, 83.2% said that the origin of the non-accompaniment is the demands of the work.

With regard to Table 5, we note that in general the husbands had appreciated that the reception was Satisfactory at 80.1%, 52.3% were mobilized at the CPN, 93.3% had appreciated the distance from the structures that their women attend, on the other hand, the consultation lasted less for 76.8%, and they appreciate that the infrastructures were adapted to also accommodate men (99.7%).

3.2. Bivariate Analysis

The bivariate analysis shows us that the association of socio-demographic

Table 4. Economic factors that can influence the low involvement of husbands in ANC.

Economic factors	Terms	Effective (n = 357)	%
Financial difficulties	Yes	60	16.8
	No	297	83.2
Job requirements	Yes	296	82.9
	No	61	17.1

Table 5. Organizational factors (services) that can influence the involvement of husbands in the prenatal consultation.

Features	Terms	Workforce (n = 357)	%
Poor reception from service providers	Yes	71	19.9
	No	286	80.1
Low mobilization of men at the CPN	Yes	174	48.7
	No	183	51.3
Unsuitable infrastructure	Yes	01	0.3
	No	356	99.7
Structure distance	Yes	24	6.7
	No	333	93.3
ANC time or duration	Yes	83	23.2
	no	274	76.8

characteristics and involvement. In Table 6, it reveals a significant difference with all these characteristics. Considering Table 7, the association of knowledge about prenatal consultation and the support of husbands associated with it (χ^2 31.281; p 0.000).

The bivariate analysis revealed that the sociocultural factors that are associated with the low involvement of husbands in the prenatal consultation are men's lack of knowledge about the importance of ANC (χ^2, 102.300; p 0.000), shame of being in the midst of women (it is a female activity) (χ^2 53.380; p 0.000), negative perception (feeling of embarrassment at finding himself among women while being alone (χ^2 18, 236; p 0.000) (Table 8). In Table 9, both economic factors are associated with the low involvement of husbands in prenatal consultation. In Table 10, the association between the factors related to the service organizers reveals that the distance from the structure (χ^2 17.640; p 0.000) and the time or durations of the CPN (χ^2 11.274; p 0.001) are associated with the low involvement of husbands in ANC.

With regard to Table 11, the logistic regression shows that the involvement of men in ANC is determined by age (OR = 8.498; 95% CI 3.913 - 18.452; p = 0.000); religion (OR = 5.978; 95% CI 2.282 - 15.657; p = 0.000); Negative perception or feeling of embarrassment (OR = 5.836; 95% CI 1.275 - 26.725; p = 0.023); marital status (OR = 10.995; 95% CI 4.231 - 28.575; p = 0.000).

Table 6. Association between socio-demographic characteristics of husbands and support.

Characteristic	Accompaniment		χ^2	p (value)	S
	Yes (n = 192)	No (n = 165)			
Age					
1) 21 - 41	164	114	13,726	0.000	S
2) 42 and above	28	51			
Level of study					
1) Without level and Primary	3	37	38,818	0.000	S
2) Secondary, Higher and University	189	128			
Number of years in marriage					
1) 1 year	2	3	8686	0.013	S
2) 2 - 5 years old	138	94			
3) More than 5 years	52	68			
Religion					
1) Catholic	131	60	53,726	0.000	S
2) Protestant	31	20			
3) Alarm clock	18	55			
4) Kimbanguist	9	20			
5) Islam	3	10			
Sector of professional activity					
1) Public	71	32	25,919	0.000	S
2) Private	76	54			
3) Independent	45	79			
Labor Remuneration					
Sufficient	60	22	39,864	0.000	S
Fairly sufficient	93	59			
Insufficient	39	84			
Social status					
Very poor and poor	17	77	65,409	0.000	S
Medium, Rich and Very Rich	175	88			
Marital status					
Married civilly	180	79	93,753	0.000	S
Free union	12	86			

Table 7. Association between having heard of prenatal consultation and support.

Characteristic	Accompaniment		χ^2	p (value)	S
	Yes (n = 192)	No (n = 165)			
Have heard of the CPN					
Yes	192	140	31,281	0.000	S
No	0	25			

Table 8. Association between socio-cultural factors that are linked to the low involvement of husbands in prenatal consultation and support.

Sociocultural characteristics that may influence the low involvement in the prenatal consultation	Accompaniment		χ^2	p (value)	S
	Yes (n = 192)	No (n = 165)			
Lack of knowledge of men on the importance of ANC					
Yes	7	85	106,300	0.000	S
No	185	80			
Shame to be in the middle of women (It's a women's activity)					
Yes	136	53	53,380	0.000	S
No	56	112			
Negative perception (Feeling of embarrassment to)					
Yes	28	3	18,236	0.000	S
No	164	162			
Lack of communication within the couple					
Yes	6	5	0.003	0.959	NS
No	186	160			
Refusal of women to be accompanied by men					
Yes	15	17	0.675	0.411	NS
No	177	148			

Table 9. Association between economic characteristics that are linked to the low involvement of husbands in prenatal consultation and support.

Economic characteristics that may influence the low involvement in the prenatal consultation	Accompaniment		χ^2	p (Value)	S
	Yes (n = 192)	No (n = 192)			
Financial difficulties					
Yes	11	49	36,459	0.000	S
No	181	116			

Continued

Job requirement					
Yes	181	115	37,825	0.000	S
No	11	50			

Table 10. Association between factors related to the organizing service of the ANC that can influence low involvement in the prenatal consultation and support.

Characteristics linked to the CPN's organizing service that may influence its low involvement	Accompaniment		χ^2	p (value)	S
	Yes (n = 192)	No (n = 165)			
Poor reception from service providers					
Yes	41	30	0.561	0.454	NS
No	151	135			
Low mobilization of men at the CPN					
Yes	89	85	0.946	0.331	NS
No	103	80			
The distance from the structure					
Yes	3	21	17,640	0.000	S
No	189	144			
ANC time or duration					
Yes	58	25	11,274	0.001	S
No	134	140			

Table 11. Logistic regression.

VARIABLES	B	SE	Wald	Sig.	EXP (B)	95% CI for EXP (B)	
						Lower	Upper
Age	2140	0.396	29,255	**0.000**	**8498**	3913	18,452
Study level	−0.503	0.964	0.272	0.602	0.605	0.091	4001
Marriage year	0.116	0.364	0.102	0.750	1123	0.550	2291
Religion	1788	0.491	13,246	**0.000**	**5.978**	2282	15,657
Activity area	0.426	0.361	1396	0.237	1532	0.755	3107
Remuneration	0.179	0.468	0.146	0.703	1195	0.478	2989
Perception of social status	−0.069	0.554	0.016	0.900	0.933	0.315	2762
Marital status	2397	0.487	24,208	**0.000**	**10.995**	4231	28,575
Heard speaking about the NPC	18,530	6971.554	0.000	0.998	111505746.3	0.000	.
Lack of knowledge of men on the importance of ANC	−2.317	0.619	13,993	0.000	0.099	0.029	0.332
Shame to be in the middle of a woman	0.659	0.433	2318	0.128	1933	0.827	4517

Continued

Negative perception (feeling of embarrassment)	1764	0.776	5164	**0.023**	**5836**	1275	26,725
Financial difficulty	20,699	40193.483	0.000	1.000	976422792.8	0.000	.
Labor requirement	20,489	40193.483	0.000	1.000	791244977.2	0.000	.
Structure distance	−1.644	0.895	3377	0.066	0.193	0.033	1116
Duration of ANC	0.164	0.369	0.198	0.656	1178	0.572	2429

4. Discussion

Considering the characteristics of the men surveyed in our study, the average age is 34.7 years; compared to the number of years in the marriage the 2 - 5 year bracket represents 65.0%, most husbands had a higher level of education (47.1%) and 41.5% who finished the cycle secondary education; the majority of people interviewed were Catholic (53.5%); the majority of the husbands worked in the private sector of activity (36.4%) and had fairly sufficient remuneration (42.6%), most of the husbands had an average social status (73.4%). In addition, in the majority of cases, the participants were legally and customarily married (72.5%). These results remain very similar to those found in Bukavu in the study conducted by Faraja Lydia (2019) on Involvement of men in the prenatal consultation at the Chahi hospital center. He had shown that the age group of 24 - 35 years is more represented, *i.e.* 40%, 50% of the people interviewed were Catholic, 60% of the husbands had reached the level of university education and 40% declared that they had a paid job. In addition, in the majority of cases, the participants are civilly married, *i.e.* 65% [9].

Looking at the results on the frequency of husbands at the CPN shows that 93.1% of the subjects have already heard of the CPN. This result is in line with the results of a study that was conducted by the Project for the Application of Science for Strengthening and Improving Systems (ASSIST) in 2016. 75.5% of male respondents have heard of the CPN with their wives as a source of information, 80% of partners claim to have already accompanied their wives to the CPN.

Limete health zone in the DRC is low. Although men perceive antenatal care as important for pregnant women, notes that most husbands have a passive attitude regarding their own involvement. This is what our results show that despite this knowledge, 53.8% of the husbands accompanied their wives to the CPN but 20.7% for the first visit to the CPN [11]. These results are the same as those found in the Dodoma region of Tanzania by Gibore *et al.* (2019) [12], the level of involvement of men in prenatal care was high (53.9%). Ganle & Dery (2015) added that in their study, less than a quarter of male participants had ever accompanied their wives for antenatal care or postnatal care at a health facility [13]. On the other hand, in the study by Mapunda *et al.* (2022), the prevalence of male involvement in antenatal care was 69%. More than two-thirds of breastfeeding mothers received physical, psychological and financial support from

their partners (76%) and attended four or more antenatal visits (85%) [14].

These results suggest that although many men recognize the importance of skilled care during pregnancy and childbirth, and the benefits of their involvement, most have not become actively involved in maternal health issues unless complications arise. Davis *et al.* (2016) said that policymakers and practitioners have indicated that greater male involvement will result in a range of maternal and child health benefits, primarily through improved access to services and interventions for women and children [15].

In health institutions, the people who play the role of support are generally women.

They most often come from the husband's family and are engaged in a role that can be assimilated to "*care*". In most cases, the involvement of the husbands concerns the transport of the parturient to the health center, the transport of food, the administrative procedures, and the payment of prescriptions [16]. But then, women prefer to be accompanied by their partner to clinics, especially during the first antenatal care visit. Men did not want to be more actively involved in prenatal care and childbirth. This is seen as breadwinners and their primary role during pregnancy and childbirth was to support their partner financially [17].

Expressing their opinion on the socio-cultural factors influencing the low involvement of husbands in ANC, the results indicate that 74.2% of the subjects showed that the lack of knowledge of men on the importance of ANC does not influence the low involvement. of husbands at the CPN, 52.9% said that the low involvement of husbands in the CPN is the shame of being in women's circles (feminine activity), 91.3% of the husbands affirmed that having the feeling of embarrassment do not influence the low involvement, 96.9% of the subjects said that the low involvement of the husbands is not due to insufficient communication within the couple, 96% of the husbands said that the custom cannot influence the low involvement and 91.0% of the subjects showed that the refusal of women is not a factor in the low involvement of husbands in ANC.). Okafor *et al.* (2022) demonstrate in their study that the predictors of good involvement in Maternal and Child Health (MCH) include the spouse's higher level of education: secondary (AOR 2.852, 95% CI 1.214-6.699), post-secondary (AOR 2.270, 95% CI 1.000 - 5.161) and having a good knowledge of MCH (AOR 2.518, 95% CI 1.587 - 3.994) [18], including traditional gender roles, lack of knowledge, perceived low accessibility to participate in antenatal care visits, and previous negative experiences at health facilities [11]; traditional gender roles at home, fear of screening of HIV and the unfavorable environment in health facilities [17].

Some factors related to the organizing service which influence the low involvement of husbands in the CPN were cited by the investigators, 80.1% of the subjects showed that the bad reception does not influence the low involvement of husbands in the CPN, 51.3% said that the low involvement of husbands in the CPN is not the cause of the low mobilization of men in the CPN, 99.7% of the

subjects said that the infrastructures could not be a factor of the low involvement at the ANC, 93.3% of the men showed that the distance from the structure does not influence the low involvement of the husbands in the ANC but as much as 76.8% of the husbands affirmed that the time or duration of the ANC is the factor of the low involvement of husbands in the ANC. Compared to Rwanda All informants were aware of the recommendations for men's participation in HIV testing at the first antenatal care visit. However, this recommendation was seen as an obvious link in the chain of delays and had serious consequences, especially for women without committed partners. The overall quality of antenatal services was perceived as suboptimal, potentially missing the opportunity to provide preventive measures and essential health education for both parents. This seemed to contribute to dissuading women from making the recommended four visits and men's interest in visiting to ensure their partners received care. However, participants experienced restricted male access during subsequent antenatal visits, which resulted in men feeling deprived of their increased involvement during pregnancy [19].

By analyzing their opinions on the socio-economic factors influencing the low involvement of husbands in CPN, the results show that 16.8% of the subjects showed that financial difficulties influence the low involvement of husbands in CPN, 83.2% said that the low involvement of husbands in the CPN is due to work requirements. A quantitative study conducted on the Factors Associated with the Involvement of Partners of Pregnant Women received in Prenatal Consultation in Burundi by Coly, Rwantabagu, Niyomwungere, Matituye, Iriwacu, and Kamyo (2016) [20] showed that 67% of partners stated that the main reasons were men's lack of knowledge about the importance of accompanying their wife to ANC. On the other hand, 94.5% of the partners showed that the reception does not influence the involvement of men. 73.3% of the partners affirmed that the weak mobilization does not influence the implication and 73.3% underlines the lack of time like a barrier with the implication of the men. In southwestern Nigeria, a study also found that men's attendance at antenatal care was related to traditional/cultural orientation, time constraints, and finances, among others [18].

The bivariate analysis showed that all socio-demographic characteristics and involvement revealed a significant difference: age (χ^2 13.726; p = 0.000), level of education (χ^2 38.818; p = 0.000), Number of years in marriage (χ^2 8.686; p = 0.013), Religion (χ^2 53.726; p = 0.000), Sector of activity (χ^2 25.919; p = 0.000), Remuneration employment status (χ^2 38.864; p = 0.001), social status (χ^2 65.409; p = 0.001), marital status (χ^2 93.753; p = 0.001), he also notes that the level of education was associated with monitoring the pregnancy by the spouse (p = 0.015) and with a positive attitude towards her interest (p = 0.011), and ignorance of the possibility of complications (35.1% of respondents) was a factor in non-use of postnatal consultation by the spouse (p = 0.021).

But after the multivariate analysis by logistic regression, four determinants are the basis of men's low involvement in ANC: age (OR = 8.498; 95% CI 3.913 -

18.452; p = 0.000); religion (OR = 5.978; 95% CI 2.282 - 15.657; p = 0.000); Negative perception or feeling of embarrassment (OR = 5.836; 95% CI 1.275 - 26.725; p = 0.023); marital status (OR = 10.995; 95% CI 4.231 - 28.575; p = 0.000).

Several studies support our results. In Ghana Four main barriers to men's involvement have been identified: perceptions that care during pregnancy is a female role while men are the care givers of the family; negative cultural beliefs such as the belief that men who accompany their wives to receive antenatal care services are dominated by their wives; health service factors such as unfavorable opening hours of services, poor attitudes of health care providers such as abuse of women and their spouses, and lack of space to accommodate male partners in facilities health; and the high cost associated with supporting women to obtain maternity care [13].

In addition, another study shows that attendance at health facilities for antenatal visits by men with their pregnant partners was challenged by structural and local cultural norms. In the facility, men were not comfortable sitting with women due to the lack of a specific waiting room for men, which they perceived as neglected [21]. Local cultural norms required women to maintain secrecy during pregnancy, while men perceived it was not their role to be with their partners during antenatal visits [22]. It is the same with the results found by [12], factors influencing men's participation in antenatal care were occupation (OR = 0.692, 95% CI = 0.511 - 0.936), ethnicity (OR = 1.495, 95% CI = 1.066 - 2.097), religion (OR = 1.826, 95% CI = 1.245 - 2.677), waiting time (OR = 1.444, 95% CI = 1.094 - 1.906), information about male involvement in antenatal care (OR = 3.077, 95% CI = 2.076 - 4).

5. Conclusions

The level of male involvement in prenatal care in Quartier Mombele in the Limete health zone is 53.8%. The determinants underlying this low involvement in these services are: age (OR = 8.498; 95% CI 3.913 - 18.452; p = 0.000); religion (OR = 5.978; 95% CI 2.282 - 15.657; p = 0.000); negative perception or feeling of embarrassment (OR = 5.836; 95% CI 1.275 - 26.725; p = 0.023); marital status (OR = 10.995; 95% CI 4.231 - 28.575; p = 0.000).

The involvement of men can have an impact on delays in the decision to seek health care and to reach a health facility, which contributes to the increase in maternal mortality. Despite the call to involve men in antenatal care, their participation remains low. Hence, it incorporates a component of community participation in health programs for greater involvement of partners in order to contribute to improving the use of ANC services. This community component would involve religious leaders in particular would aim to improve men's understanding of the importance of the involvement of partners of pregnant women in ANC visits and lead the man to pay greater attention to the health of the woman and of the child and to feel comfortable at the ANC.

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Conflicts of Interest

The authors declare no conflicts of interest.

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