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Factors of Non-Use of Modern Contraception from 2006 to 2017 among Married or Cohabiting Women in Benin

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Abstract

Index terms—

Results: Fear of side effects and opposition from women or partners were the main reasons given by women in a union in 2006 (21.0%; 11.4%) and 2017-2018 (18.4%; 35.5%) for refusing to use modern contraceptives. At the bivariate level, except for the variable information received on family planning in 2017 and the number of child deaths, a significant association at the 1% level was established between the non-use of modern methods and the independent variables. However, a decrease in proportion was recorded in the different subgroups of variables and especially in contraceptive decision-making.

With a difference of 51 points, 70.8% of women reported not deciding to use contraceptives within the couple in 2006 versus 19.5% in 2017.

The Oaxaca-Blinder multivariate decomposition revealed that 87.5% of the observed changes in contraceptive use were due to differences in coefficients and 12.4% to differences in characteristics. Family planning information, religion, department of residence, household standard of living, number of deceased children, contraceptive decision, and husband's desire to have children were significantly associated with the non-use of modern contraceptives between 2006 and 2017.

Recommendations: Family planning programs and policies should be strengthened in all departments by involving spouses and partners more. Lifestyle improvement measures should be encouraged to ensure equitable access to contraceptives. **INTRODUCTION** After the 1994 Cairo conference, international support for family planning impacted millions of people through its role in reducing poverty, improving health and human development. Benin has not remained on the sidelines of these changes and in its commitment to controlling its population growth. It has undertaken a series of reforms to its health system to promote reproductive health through the Ministry of Health by offering family planning services in all London Journal of Medical and Health Research health facilities (Ministry of Health, 2012). These actions are reinforced by the remarkable support and intervention of several Technical and Financial Partners (TFPs) and Civil Society Organisations (CSOs). In 2020, the additional number of Beninese women using modern contraception was estimated at 204,000, the modern contraceptive prevalence rate at 13.0%, and the unmet need for modern contraception at 35.3% (Scoggins S and al, 2020).

In addition, it is estimated that 131,000 unintended pregnancies, 46,000 unsafe abortions and 340 maternal deaths will be averted by modern contraception in 2019. Therefore, women's use of contraceptive methods has economic, health, and social benefits for the community. Despite these efforts, the contraceptive security index in Benin remains relatively low, calling for additional initiatives to achieve the goals related to new aspirations in reproductive health and contraceptive practice (USAID, 2012). Today, opposition to the use of modern contraceptive methods, particularly among women in union, is perceptible in Beninese society, with disparities between regions. Hence the importance of understanding the obstacles to the utilization of modern contraceptives within couples. This study aims to analyze the evolution of the determinant factors of the non-use of modern contraception among women in a union in Benin between 2006 and 2017.

1 Literature Review

Several research studies have explored the different facets of family planning (FP), of which contraceptive practice is one of the topics of interest in demographic research (Ngo Mayack and al., 2019). Women's FP behaviors are

analyzed under the prism of service supply and demand. According to Morhason-Bello IO and al (2022), the low level of family planning uptake in Nigeria is due to demand and supply side factors.

2 Service delivery approach

According to this approach, the decision to use contraception depends on the availability and accessibility of services, which consider several dimensions. Availability refers to the existence of suitable FP service centers and, above all, the availability to the population of a variety of modern contraceptive methods capable of stimulating the use of family planning services.

The accessibility of services, it refers to geographical, economic, administrative, cognitive, and psychosocial accessibility (Bertrand JT et al, 1995).

Geographical accessibility indicates the physical location of services in relation to the place of residence of households and the obstacles encountered by the latter to access the products made available. Indeed, the further away the health facility offering FP services is, the fewer women use it (Moussa Z, 2011). Accessibility to family planning services improves women's knowledge and practice of contraception.

Economic accessibility relates to the affordability of the direct and indirect costs of contraception, which are the unit selling prices of contraceptive products, the expenses related to consultation and travel as well as the waiting time in health centers influence the use of FP services (Rwenge M., and al, 2019) and therefore the choice of contraceptive method. Indeed, the high cost of modern contraception and the quality of services offered are constraints for economically disadvantaged women to use traditional methods more than modern ones. Administrative accessibility refers to the institutional and legal framework that can influence contraceptive practices. The policy context is the normative framework for FP intervention, where laws and regulations, as well as strategies and programmes that govern contraceptive behavior, are defined. For example, some laws that require a woman to have her husband's permission to use contraception restrict women's access to family planning services (Lenan G., 2009). Cognitive accessibility provides information on individuals' knowledge of contraceptive methods and FP centers. A study conducted in the Mumbunda health zone in Lubumbashi, DRC, showed that women with a high level of knowledge about contraceptive methods were twice as likely to be users of contraceptive methods as those with a low level of knowledge (Charles M., and al, 2015).

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Psychosocial accessibility addresses social factors that may prevent a woman from comfortably adopting better contraceptive practices. These include beliefs and stereotypes about contraception etc.

4 Demand Approach

This approach encompasses three dimensions that are decisive in the decision to use or not to use contraception. These are the economic, socio-cultural, and socio-demographic dimensions.

5 Economic dimensions of demand

Low-income households are facing financial challenges in terms of the cost of counseling, contraceptive supplies and transportation which limit their access to family planning services. According to the results of the fifth Benin Demographic and Health Survey, the percentage of women in union with a high quintile of economic well-being who use modern contraception is double their counterparts with the lowest level of economic well-being (INSAE, 2017). Furthermore, occupation (type of economic activity) is also likely to influence contraceptive practices among women. In this context, Nounké K. (2011) notes that women in the modern sector, due to specific difficulties linked to their activity, including those of reconciling the function of mother and professional, tend to control their birth by resorting to the use of contraceptives.

6 Socio-cultural dimensions of demand

Cultural factors are equally important in understanding couples' choice of family planning and contraception (Mbarambara P. and al, 2016). Several authors have highlighted the central role of elements of tradition in explaining reproductive behavior in families. According to Nounbissi A. and al (2000), the low prevalence of modern contraception is due to the pro-natalist mentality maintained by the norms and values of the culture that values high fertility. Indeed, the perception of children in traditional African societies reflects a preference for high fertility among couples. This does not encourage a strong demand for contraceptive methods. In Africa, not only is the child considered a gift from God that perpetuates the family lineage, it is also a gain (or wealth) for the parents and therefore supposed to ensure their economic and social development (Kouadio A and al, 2015). These social representations of the child justify couples' reluctance to regulate births through modern contraception.

Furthermore, the social environment characterized by ethnicity, place of residence during childhood and religion influences women's contraceptive practices as well as the environment in which fertility is achieved and whether or not they live with their spouse (Mayack J., and al 2017).

7 Socio-demographic dimensions of demand

Age appears to be one of the reasons for contraceptive failure, the immediate consequences of unwanted pregnancies and sexually transmitted infections and diseases (STIs). In Brazil, the work of Da Costa Leite, I. and al (2007) has shown that the risk of contraceptive failure decreases at older ages in women and this may be due to the decline in their fertility. The relationship between women's marital status and contraceptive use is established in the African context. Thus, sexually active women who are single or in a broken union (divorced, widowed) are more predisposed to the use of modern contraceptive methods than those in a conjugal union for economic and social reasons at times (Fassassi R., 2006). Women's fertility plans, which are reflected in their desire or refusal to have additional children, may lead them to adopt specific contraceptive behaviors. In this case, contraception represents a strategy for stopping births. The risk of not using contraception increases with the occurrence of childbirth and the desire of women to have both sexes in their offspring. The results of the study by Vignikin K. (2004) go to the same direction. Among other things, the gender relationship, which is illustrated by the man's involvement in favor of contraception, his opinion and the dialogue within the couple on family planning issues, was recognised as influencing the woman's contraceptive behavior. Regarding spousal exchanges, the study conducted by Charles M. and al (2015) discussed with their partners were 6 times more likely to use modern contraceptives than those who never discussed. On the other hand, the spouse's profile, such as education level and occupation, was also admitted as a factor that may affect a woman's decision whether or not to use contraception for the total satisfaction of her FP needs.

8 II. METHODS

9 Data sources

The data for this survey comes from the Benin Demographic and Health Surveys (BDHS) conducted in 2006 and 2017-2018. Their sampling is based on a two-stage stratified cluster survey. In the first stage, clusters were chosen proportionally to their size from the list of DZs. In the second stage, households in which women were surveyed were selected randomly with equal probability from each cluster. This is a quantitative study with an analytical focus.

Married or cohabiting women aged 15-49 are the study population. According to the two survey rounds, there is a nationally representative sample of 13403 and 11169 women in a union in 2006 and 2017-2018 respectively. This data source is appropriate due to the good quality of contraception data collected.

10 Variables

11 Dependent variable

Information on contraceptive means or methods was collected from women in both DHS (2006 and 2017-2018). The variable to be explained is the non-use of modern contraceptive methods.

The study focuses on women in unions consisting of women aged 15-49 who are married or cohabiting at the time of the survey. The dependent variable is dichotomous, taking the value of 1 if the woman is not currently using any modern contraceptive method and 0 if she is using a modern method of contraception.

12 Independent Variables

The explanatory variables of the study take into account the supply and demand dimensions.

These include: information received by the respondent on FP from community health workers, exposure to the mass media, place of residence, department of residence, religious affiliation, the woman's level of education, age, number of living children (parity), number of deceased children, the woman's professional occupation, the household's standard of living, the contraceptive decision and the husband's desire to have children

13 Analysis

Analysis process followed three steps. First, we describe the variation in the non-use of modern contraception according to the different characteristics. We evaluate the association between the dependent variable and each of the independent variables using the chi-square test at the 5% threshold ($p < 0.05$). In the second step, we looked for the determinants of the non-use of modern contraceptive methods between 2006 and 2017 using a binary logistic estimation. We then applied the Oaxaca-Blinder multivariate decomposition method to analyze the changes observed in the evolution of modern contraceptive practice over the last eleven (11) years.

14 Oaxaca-Blinder Multivariate Decomposition Method

The Oaxaca-Blinder decomposition was used to identify and quantify the variables that contributed most to the decline in the proportion of women not using modern contraception between 2006 and 2017. In addition, the Oaxaca-Blinder decomposition technique generally describes the average difference in the variable of interest between two groups. This difference is comprised in two effects or components. First, the characteristics (or endowment) effect explains the difference between groups by the different levels of the observed characteristics.

Second, the coefficient effect, again defined by the unexplained component, is closely associated with differences in the coefficients attributable to unobservable variables.

In this study, we opted for the Oaxaca-Blinder decomposition based on logistic regression. The general expression of the non-linear London Journal of Medical and Health Research decomposition of which the Oaxaca-Blinder decomposition is a part is written as ? 1 -? 2 = 1 ? 1 ?=1 ? 1 ? ? ? 1 ? ? 1 () -1 ? 2 ?=1 ? 2 ? ? ? 1 ? ? 2 () ? ? ? ? ? ? ? ? + 1 ? 2 ?=1 ? 2 ? ? ? 1 ? ? 2 () -

15 III. RESULTS

16 Changes in non-use of modern contraception by characteristics

The proportion of married or cohabiting women who do not use modern contraceptive methods fell between 2006 and 2017 from 93.9% to 87.6% respectively, a decrease of 6.3%.

The proportion of women not exposed to the mass media who do not use modern contraception has decreased by 7.2 percentage points between 2006 and 2017. The same is true for women in union who have not received information on FP from community health workers (6.2%). Analysis by area of residence shows that the percentage gap of married or cohabiting women in rural areas not using modern contraceptive methods is decreasing (6.2%) compared to women in urban areas (1.1%). At the departmental level, Mono experienced the greatest decline in the number of women in union who do not use modern contraception, followed by Alibori and Zou, with a 13.7%, 9.5% and 9.3% difference, respectively. On the other hand, the proportion remained unchanged among women in Couffo, with a 0-point difference. Concerning religion, the drop in the proportion of women who do not use modern contraceptive methods is high among women who practice Christianity (6.7%) between 2006 and 2017. In the same period, there was a decrease of women not using modern contraception who had no education, a reduction of 6.4 percentage points. We also note that adolescents aged 15-19 years use modern contraception less, even if their proportion fell slightly from 2006 to 2017 (2.3%). On the other hand, contraceptive prevalence is increasing among women farmers (5.3%) and in other sectors (6.5%) as well as among women from poorer (7.0%) and middle-income households (6.9%). In the same way, we record a low prevalence of non-use of

17 Explanatory factors for non-use of Modern Contraception among Women in Union between 2006 and 2017

According to the logistic estimation results presented in Table It is also noted that when the woman or the spouse/partner decides to use contraception alone, the probability of the woman using it within the couple were lower than if the decision was made by mutual agreement. This probability is estimated at 2.03 in 2006 and 2.12 in 2017 respectively. On the other hand, women whose husbands are undecided about their desire to have more children are 1.38 times more likely not to use modern contraceptive methods in 2006. Still, the effect of this variable was not significant in 2017.

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19 Analysis of differences due to characteristics

The result of the multivariate decomposition analysis showed that the composition effect accounts for 12.4% of the total difference in contraceptive prevalence. In other words, 12.4% of the difference in the proportion of women not using modern contraception is explained by differences in the characteristics of respondents between the 2006 and 2017 periods. In addition, the decrease in the proportion of women in union who do not use modern contraceptive methods is attributable to compositional factors such as: religion, department of residence, household standard of living, number of deceased children, and the person responsible for making decisions on contraceptive use within the couple. In addition, we note that a positive change in the behavior of women in union with regard to contraceptive methods residing in the departments of northern Benin (Alibori: 5.21%, Borgou: 2.52%, Atacora: 1.29%) has strongly contributed to the decrease in contraceptive prevalence among women who do not use modern methods. Women in the southern departments (Atlantique: 0.48977 and Zou: 0.54476) also contributed to this decline, but only slightly.

Similarly, women in endogenous religious unions (1.17%), women of wealthy economic class (0.64%) and women whose spouses adhere to contraceptive use (1.06%) contributed positively to the evolution of contraceptive practices between 2006 and 2017. Furthermore, although women from poorer households and those with one (01) child influence the upward trend in contraceptive practices, their effects are less noticeable with negative contributions of 1.29% (poorer) and 0.14% (1 child) respectively.

20 Analysis of differences due to coefficients

The analysis reveals that 87.5% of the total differences in contraceptive prevalence are due to coefficient differences. Of this, for an identical characteristic composition between the two periods, differences in the

proportion of women not using modern contraceptive methods decreased by 35.82 percentage points. The coefficient difference reflects the effects associated with unobserved factors that could be the improvement over time of FP service offerings and reproductive behaviors of the population.

With regard to the observed variables, information on FP, religion, department of residence, standard of living and the couple's decision to use contraception are the factors significantly associated with the positive change observed in the use of modern contraceptive methods. Women in the department of Collines (8.70%) and those who take the lead in the couple (7.01%) in terms of contraceptive use have a preponderant share in the decline in the proportion of women not using FP over the periods 2006 and 2017. Women in a union who do not receive information on FP (9.97%) and who belong to poorer households (3.97%) show negative contributions to the observed percentage decline in non-users of modern contraceptive methods. These researchers showed that most women who had discussed family planning issues with their husbands or partners were in favor of contraceptive use, in contrast to women who had never discussed these topics with their spouses. It is therefore clear that the involvement of men in FP policies and programmes is necessary for their success and therefore actions should be taken to encourage couples to discuss FP more. This highlights, on the one hand, the importance and social representation of the child in African society as mentioned in the literature review and the need to provide the couple in general with information on FP for behavioral change to improve their sexual and reproductive health on the other hand.

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22 V. CONCLUSIONS

This study found that over the period 2006-2017, there is a downward trend in the proportion of married or cohabiting women who are not using modern contraceptives. This decrease of 6.3% is attributable to changes in characteristics and coefficients. In this regard, women in a union who have received information on FP, of endogenous religion or no religion, residing in the northern departments, economically poorer or richer, having a deceased child and whose decision to use contraceptives within the couple emanates from the woman or her partner are groups that have contributed overall to the positive evolution observed in the use of modern contraceptive methods between 2006 and 2017. On the other hand, despite this modest progress, the proportion of women who do not adopt modern contraceptives is still high. Fear of side effects and opposition from wives or husbands are the main reasons cited by women who refuse contraceptive methods. Among others, information on FP, religion, department of residence, household standard of living, number of deceased children, contraceptive decision and husband's desire to have children are the main factors of resistance to contraceptive use among married or cohabiting women in 2006 and 2017 respectively.

In light of these results, three actions can be taken. First, it is strongly recommended that development actors and the public authorities strengthen the various components of FP programmes throughout the country. Secondly, it is necessary to develop information and communication strategies directed mainly towards religious elites and disadvantaged populations for a positive change in behavior related to contraception and fertility. Finally, policies aimed at promoting reproductive health and the socio-economic conditions of women should be improved.



Figure 1:

¹ Factors of non-use of Modern Contraception from 2006 to 2017 among Married or Cohabiting Women in Benin © 2023 Great] Britain Journals Press

² Volume 23 | Issue 3 | Compilation 1.0 Factors of non-use of Modern Contraception from 2006 to 2017 among Married or Cohabiting Women in Benin © 2023 Great] Britain Journals Press



Figure 2:



Figure 3:



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Figure 4: Figure 1 :



Figure 5:

Independent variables	selected characteristics EDSB 2006		EDSB 2017-2018		Difference
	%	N	%	N	
Exposure to mass media					
Yes	91,4	6296	85,6	4409	-5,8
No	96,5	6283	89,3	5373	-7,2
Pearson chi2	p=0,000		p=0,000		
Information on FP for community health workers					
No	93,9	4200	87,7	2912	-6,2
Yes	87,5	1244	86,4	1790	-1,1
Pearson chi2	p=0,000		p=0,153		
Place of residence					
Urban	91,0	4434	85,5	3787	-5,5
Rural	95,5	8144	89,0	5995	-6,5
Pearson chi2	p=0,000		p=0,000		
Department					
Alibori	96,0	1097	86,5	1340	-9,5
Atacora	94,9	819	90,0	803	-4,8
Atlantic	94,8	1462	86,3	1131	-8,6
Borgou	93,3	1190	88,0	1215	-5,4
Hills	89,7	873	81,9	604	-7,9
Couffo	95,5	1074	95,5	710	0,1
Donga	96,1	515	94,1	674	-2,0
Coastal	89,2	925	80,8	445	-8,4
Mono	95,7	776	82,0	421	-13,7
Ouémé	91,0	1684	84,8	835	-6,2
Tray	96,6	697	94,3	668	-2,3
Zou	96,0	1466	86,7	936	-9,3
Pearson chi2	p=0,000		p=0,000		
Religion					
Endogenous	96,7	2505	91,4	1038	-5,3
Muslim	94,6	2948	89,4	3279	-5,3
Christian	92,2	6409	85,6	4937	-6,7
Without religion	95,6	683	89,0	529	-6,6
Pearson chi2	p=0,000		p=0,000		
Woman's level of education					
No	95,6	9425	89,2	6612	-6,4
Primary	91,2	2175	85,2	1689	-6,0
Secondary and above	84,3	979	83,4	1481	-0,9
Pearson chi2	p=0,000		p=0,000		
Age group					
15-19 years	97,1	648	94,8	586	-2,3
20-29 years	94,9	5272	88,8	4107	-6,1
30-39 years	92,5%	4271	84,7%	3168	-7,9%
40-49 years	93,1%	2388	87,9	1922	-5,1
Pearson chi2	p=0,000		p=0,000		
Occupation Woman					
Inactive	94,8	1565	90,9	1585	-4,0
Administration	82,2	203	80,1	293	-2,1
Agriculture	96,2	4519	90,9	2255	-5,3
Other sector	92,4	6233	85,9	5650	-6,5
Pearson chi2	p=0,000		p=0,000		
Household standard of living					
poorer	97,6	2576	90,6	1962	-7,0

2017	EDSB-2006	EDSB-2017
Independent variable	Model 1	Model 2
Exposure to mass media (Ref=Yes)		
No	0,859 ns	0,916 ns
Information on FP for community health workers (Ref=Yes)		
No	2,014 ***	0,996 ns
Religion (Ref=Christian)		
Endogenous	1,149 ns	2,052 **
Muslim	1,015 ns	0,861 ns
Without religion	0,446 **	1,290 ns
Place of residence (Ref=Urban)		
Rural	0,819 ns	1,027 ns
Department of residence (Ref=Coastal)		
Alibori	0,020 ***	0,364 **
Atacora	0,098 ***	0,176 ***
Atlantic	1,884 **	1,234 ns
Borgou	0,222 ***	0,131 ***
Hills	0,586 *	0,147 ***
Couffo	0,354 ***	0,810 ns
Donga	0,328 **	0,185 **
Mono	0,436 **	0,667 ns
Ouémé	0,839 ns	1,126 ns
Tray	0,188 **	0,519 ns
Zou	1,094 ns	0,421 **
Woman's level of education (Ref= Secondary and above)		
No	1,108 ns	0,804 ns
Primary	1,341 ns	0,860 ns
Age group (Ref=15-19yrs)		
20-29 years	1,310 ns	1,267 ns
30-39 years	1,478 ns	1,243 ns
40-49 years	0,922 ns	1,312 ns
Occupation of the woman (Ref=Administrative)		
Inactive	0,841 ns	0,746 ns
Farmer	1,380 ns	0,822 ns
Other sector	0,965 ns	0,871 ns
Household standard of living (Ref=Highest)		
poorer	1,035 ns	2,510 **
Poor	1,277 ns	0,861 ns
Medium	1,300 ns	1,184 ns
Rich	1,027 ns	2,041 ***
Number of living children (Ref=0 child)		
1	0,861 ns	0,749 ns
2	0,747 ns	0,612 ns
3	0,615 ns	0,647 ns
4 or more	0,388 ns	0,315 ns
Number of children who died (Ref=0 child) ⁹		
1	1,273 ns	1,666 **
2	1,049 ns	1,498 ns
3	0,875 ns	0,513 ns

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Features	Effect of characteristics (E)		Effect of coefficients (C)
	Coefficient	Share (%)	Coefficient
Aggregate effects	-0,050221	12,4	- 0,35382
Constant			- 0,25534
No	Information on FP for community health workers (Ref=Yes)		
	7,7336E-05	0,019141	0,040272**
Endogenous	Religion (Ref=Christian)		
	-0,0047382**	1,1727	0,012256
Muslim	-0,003239	0,80165	- 0,0043047
Without religion	0,00069595	-0,17225	0,0077251*
	Department (Ref=Coastal)		
Alibori	-0,021063**	5,2132	0,0092831**
Atacora	-0,0052091***	1,2892	0,0034626
Atlantic	-0,0019789	0,48977	- 0,01662
Borgou	-0,010164***	2,5156	- 0,0066568
Hills	0,0091662***	-2,2686	- 0,035148**
Couffo	0,00040829	-0,101 05	0,0067433
Donga	-0,0000018788**	0,000465	- 0,0034446
Mono Ouémé Tray	-0,0019886	-0,001716	-0,0025104
Zou poorer Poor			-0,0022011**
Medium Rich 1			Household standard of living (Ref=Hig
child 2 children			
3 children >=			
4children Woman			
Male			

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.2 Data Availability Statement

The data used in this paper is fully available and can be accessed upon request.

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.4 Conflict of Interest Statement

The authors state that there is no conflict of interest.

.5 Ethical Approval

The data used for the estimates do not include confidential information about individuals or animals that may raise ethical concerns.

.6 Consent for Publication

The authors grant his consent for publication of this paper.

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