

## Contraception among Medical and Paramedical Students in Cotonou, Benin in 2016: Knowledge and Practices

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### Abstract

**Introduction:** Contraception is a mean of preventing unwanted pregnancies and thus prevents induced abortions and its complications.

**Objective:** To assess the knowledge and practices of future health workers on contraception.

**Methods:** This was a survey carried out in Cotonou (Benin) by the students of the Medical Training and Research Unit at the Faculty of Health Sciences (FSS) and the Institut Médico-Sanitaire (INMeS).

**Results:** The survey involved 525 students, including 259 males and 266 females. The average age of students was  $21 \pm 2$  years (15-31 years). Almost all students (9/10) had at least one contraceptive method. The rate of contraceptive use was 86.5%. The contraceptive method used by males students was the male condom, unlike females students who used natural methods and emergency contraception. The age, religion and marital status of the students had no influence on the use of contraception. The reasons for non-use of contraceptive methods were mainly the lack of knowledge about contraception (62.5%) and fear of side effects (20.0%).

**Conclusion:** Knowledge and practice of contraception are appreciable in medical and paramedical training in Cotonou.

**Keywords:** Contraception; Student; Knowledge; Practice

### Introduction

Sexual experience is generally experienced for the first time during youth. Great risks are taken and lead to unintended pregnancies and STIs (sexually transmitted infections). Contraception is a mean of preventing these unwanted pregnancies which often result in induced clandestine abortions with complications. According to the data of the World Health Organization (WHO), in 2013 [1], 22 million abortions were still practiced in the world in unsafe conditions, especially in Africa. Contraceptive prevalence remains very low in our developing countries, 16% in West Africa [2] and 14% in Benin [3]. We will be interested in a particular group of young people, health students who will become the future health educators of young people.

### Objective

The study aims at assessing the knowledge and practices of future health workers in Cotonou as far as contraception is concerned.

### Framework and Method

The survey has been carried out from March to September 2016 in two universities: one for medical training (Medical Training and

Research Unit of the Faculty of Health Sciences) and the other for paramedical training (State Midwives High School and the High School of Infirmary at the National Medical-Sanitary Institute). The study population was represented by students of both sexes enrolled in the two target institutions for the 2015-2016 academic year. The sample size was obtained by this formula:  $n = t^2 p (1-p) / i^2$  (where  $t$  is the confidence level, 1.96 at 95%,  $p$  the contraceptive prevalence in Benin which was 13% in 2012 [3],  $i$  is the desired precision set at 0.03). This size was increased by 10% and we obtained a population of 531 students. The survey involved thus 531 students and 6 were eliminated for inaccurate completion of data sheets. A stratified sampling has allowed determining the number of students by year of study in each institution. The Sampling is systematic. Prior to the data collection, our questionnaire was tested in a small randomly selected student population to identify and correct deficiencies.

### Ethics

The collection started after authorization of the managers of the two institutions and has been carried out according to a program jointly established with the pedagogical managers. The informed consent of each student has been obtained after awareness. Anonymity and confidentiality have been respected. We had had the authorization of the ethics committee.

## Results

### Characteristics of the sample

Our results concern 525 students, including 266 females and 259 males. The average age of students was  $21 \pm 2$  years (15-31 years). Almost all students (95.0%) were single, the others (5.0%) were in common-law relationships. The Christian religion was the most practiced (84.4%) and the others were either in the Muslim religion (13.3%), the traditional religion (0.8%) or no religion (1.5%).

### Student knowledge about contraception

Approximately 9 students out of 10 know at least one contraceptive method and the most common contraceptive methods were the male condom (81.5%), the birth control pill (74.9%) and the intrauterine device (56.2%) (Figure 1).

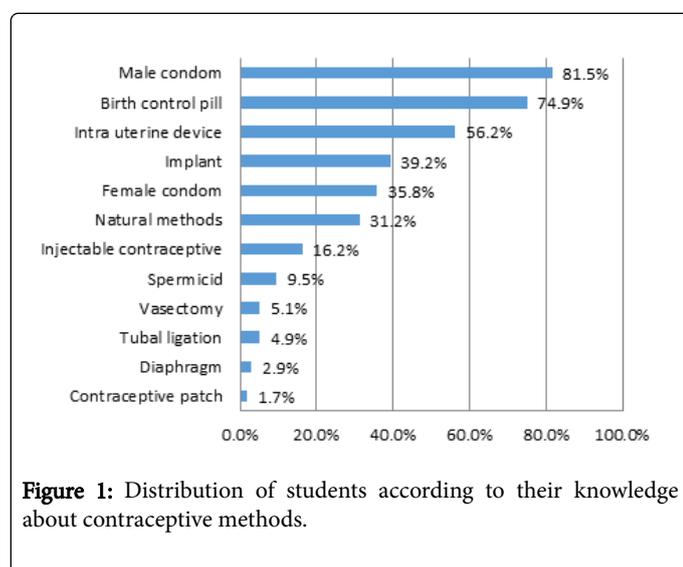


Figure 1: Distribution of students according to their knowledge about contraceptive methods.

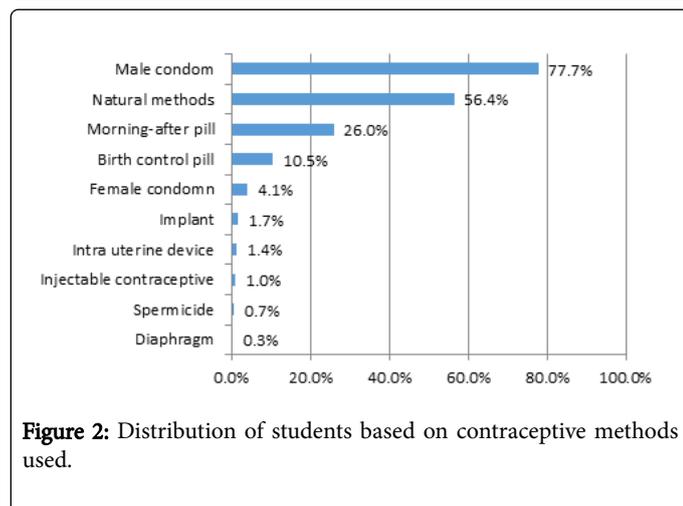


Figure 2: Distribution of students based on contraceptive methods used.

A student has several sources of information on contraception. Media (9 out of 10 students) and teacher courses (6 out of 10 students) were main sources of information for these students. One out of 10 students got informed from friends, relatives or during awareness-raising sessions. Most students knew that contraception helps prevent unwanted pregnancy (91.2%) and birth spacing (87.4%). Only 5.7% of

the students knew that some contraceptive methods can prevent sexually transmitted infections.

### Student contraceptive practices

296 students out of the 525 were sexually active that's 86.5% and they used at least one contraceptive method (Table 1). The majority of contraceptive users (71.1%) did so occasionally. The most common method used by students was the male condom (8/10), followed by natural methods (6/10), emergency contraception (3/10) and birth control pill (1/10) (Figure 2). Male students used male condoms more than female students who had gone through natural methods (calendar method; withdrawal) and emergency contraception (Table 2).

On the 296 sexually active students, 40 didn't use contraceptive methods for reasons related to the lack of knowledge (26/40), fear of side effects (8/40), religion (1/40), refusal of the partner (1/40) and supply difficulties (1/40). In our series, 37.1% of users of contraceptive methods reported that they had experienced side effects after use. The prevalence of sexually transmitted infections in our sample was 3.1%. The unwanted pregnancy rate was 6.5% and most of these pregnancies (66.7%) resulted in induced abortion.

Parameters	Total	Use of contraceptive methods		p value
		Yes (%)	No (%)	
Gender				
Male	155	140 (90.3)	15 (9.7)	0.043
Female	141	116 (82.3)	25 (17.7)	
Age (in years)				
15-19	58	45 (77.6)	13 (22.4)	0.402
20-24	206	181 (87.9)	25 (12.1)	
25-31	32	30 (93.8)	2 (6.2)	
Religion				
Catholic	180	158 (87.8)	22 (12.2)	0.344
Evangelical	56	46 (82.1)	10 (17.9)	
Muslim	38	36 (94.7)	2 (5.3)	
Protestant	8	7 (87.5)	1 (12.5)	
Without religion	6	3 (50.0)	3 (50.0)	
Celestial Church of Christ member	5	4 (80.0)	1 (20.0)	
Animist	3	2 (66.7)	1 (33.3)	
Marital Status				
Single	272	236 (86.8)	36 (13.2)	0.634
Common-law relationship	24	20 (83.3)	4 (16.7)	

Table 1: Contraceptive prevalence based on socio-demographic characteristics.

Methods	n (%)	p
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	Male (140)	Female (116)	
Male condom	134 (95.7)	96 (82.8)	0.001
Natural methods	74 (52.9)	86 (74.1)	0
Morning-after pill	32 (22.9)	45 (38.8)	0.005
Contraceptive pills	13 (9.3)	18 (15.5)	0.128
Female condom	5 (3.6)	7 (6.0)	0.353

**Table 2:** Prevalence of different contraceptive methods used based on sex.

## Discussion

### Knowledge about contraception

In African countries, particularly in Benin, the high rate of population growth is an impediment to socio-economic development efforts. For example, health programs and projects have been implemented, including those related to family planning. The use of a family planning method requires prior knowledge of at least one contraceptive method. According to the results of the 2012 Demographic Health Survey in Benin [3], more than 8 out of 10 women (85%) and about 9 out of 10 men (92.0%) knew at least one contraceptive method. This knowledge, according to the same survey, was slightly higher (97.3% for women and 99.0% for men) for an education level that is greater than or equal to the second cycle. In the literature, the level of contraceptive knowledge varies from country to country: 99% in Togo, 63% in Burkina Faso [4] and 34% in Senegal [5].

Our study carried out in a university environment in Cotonou, Benin, found a knowledge level of at least one contraceptive method of 97.0% for female students and 94.2% for students. The most common contraceptive methods are the male condom (81.5%), the birth control pill (74.9%) and the intrauterine device (56.2%). The main sources of information in our sample are the media (49.6%) and the school (30.1%).

In 2007, in the Congolese general population [6], the level of knowledge of modern contraceptive methods was 59.1% for females and 65.6% for males and the best known method for teenagers was the male condom (94.2%). The school was the main source of information (46.3%), followed by the media (13.9%).

In our series, parental involvement was only 5.2%, unlike the data found by Drago in Italian schools (37%) in 2014 [7]. However, the rate of parents' involvement in our series is five times higher than that found in 2013 in Tanzanian universities (less than 1%) [8]. This variance is justified by the nature of our education in Africa, in a context where sex has been and continues sometimes to be regarded as a taboo subject in family discussions.

### Contraceptive practices

The use level of contraception is one of the indicators which allow assessing the success of family planning programs. According to the results of the Demographic Health Survey in Benin in 2012 [3], the usage rate of contraceptive methods in the general population was 14% (9% for modern method and 5% for natural method). Women use essentially three modern methods: male condom (3.2%), injectable contraceptives (1.7%) and the birth control pill (1.3%). Contraceptive

prevalence varies according to age and marital status. It's higher among sexually active non-union women (39% between 15-19 years and 42.5% between 25-29 years of age) than among sexually active women in union (8.2% between 15- 19 years and 12.9% between 25-29 years). Sexually active non-union women aged between 15-29 years increasingly make use of the male condom, while their counterparts who are in a union, increasingly rely on natural methods.

In our study carried out among young students of the medical and paramedical education aged 15 to 31, the usage rate of contraceptive method was 86.5%. This rate is influenced by the sex of the students (90.3% for male students and 82.3% for female students,  $p=0.043$ ). Age, religion and marital status have no influence on the use of contraceptive methods. The male condom is the most used method (77.7%) followed by natural methods (56.4%). In the literature, the usage rate of contraceptive methods in a student environment varies from 34.2% to 96.3% [9-13].

Generally, the contraceptive prevalence is lower in the general population than in the student environment. This is the case of the demographic health survey in Benin in 2012 [3] and the survey in Senegal urban area in 2011 [14]. That study revealed that 20.4% of women used at least one contraceptive method. The reasons given in our study for the non-use of contraceptive methods were mainly the lack of knowledge about contraception and fear of side effects. In a survey carried out in Madagascar, the opposition of the spouse was the main obstacle to the use of contraceptive methods [15].

In our study as in most studies, the male condom has been the most widely used contraceptive method [7,11,13]. This important use of condoms at the expense of other methods could be explained by the fact that it lends itself fairly well to the conditions of the practice of sexuality at the beginning of affective life. It's easy to access, designed for a one-time use and does not require prior medical consultation. Finally, its potential twofold purpose (contraceptive and preventive) proves to be an asset for its use.

In our study, natural methods, emergency contraception and the birth control pill respectively occupied the 2<sup>nd</sup>, 3<sup>rd</sup> and 4<sup>th</sup> places of contraceptive methods used by the students. According to Somba et al. in Tanzania in 2013 [8], the birth control pill also held the 4<sup>th</sup> position. The position of the birth control pill's use in our investigation could be explained by the constraints related to its use. Indeed, it's not easy to include the regular intake of birth control pill in a program already loaded with courses, internships and on-call duty at the hospital. The existence of side effects would also explain this low prevalence because 37.1% of users reported having experienced side effects after the use of birth control pill. As for natural methods, they often require knowledge of the menstrual cycle that is more taught to our interviewed.

In our series, males students make more use of the male condom whereas girls have recourse to the natural methods and sometimes to morning-after pills. The same observation is made in the literature [4,9,11,13]. The usage rate of emergency contraception among female students of the University of Parakou in Benin in 2014 was 18% [16].

This tendency could be explain by the fact that the male condom is often regarded as a male object and under the control of man. Women in our societies sometimes do not have the right to speak and issues related to sexuality are considered to be male.

Despite the high contraceptive prevalence in our study, we recorded some cases of unwanted pregnancies (6.5%), which led in most cases to

illegal induced abortions (66.7%). According to Wang et al., the risk of unintended pregnancy is most often high in the non-medical student population [12].

The high rate of induced abortion in our study could be explained by the long years of medical studies and the constraints linked to health studies (courses, internships, guards) which would be very difficult to manage with a pregnancy. In their series, Wang et al., found a higher prevalence of induced abortions than in our study (84%) [12]. These authors explained this high prevalence by the requirements of the Chinese culture and the socio-economic impacts of pregnancy. Indeed, pregnancy would upset the normal course of the student life, would be a stress factor and sometimes a school drop-out factor.

The incidence of sexually transmitted infection in our series is low (3.1%) compared to the national incidence (9%) [3]. This may be related to the high usage rate of condom by our interviewed.

## Conclusion

The level of knowledge and contraceptive prevalence remain high within medical and paramedical training. These future health workers can serve as a relay for the promotion of contraceptive methods. There is still a need for further improvement in the practice of these contraceptives.

## References

1. Organisation Mondiale de la Santé (2013) Avortement sécurisé: Directives techniques et stratégiques à l'intention des systèmes de santé. Deuxième édition, OMS.
2. Kaneda T, Bietsch K (2015) World population data sheet. Population Reference Bureau, Washington DC.
3. Institut National de la Statistique et de l'Analyse Économique (2013) Enquête Démographique et de Santé du Bénin 2011-2012. Cotonou, Bénin: INSAE.
4. Djangone M, Akoto E, Amouzou A, Kassegne S, Ngondo A, et al. (2005) Sexualité Fécondité et pratique contraceptive chez les jeunes en Côte d'Ivoire, au Cameroun, au Togo et au Burkina Faso. *FNUAP/CI* 15.
5. Delaunay V, Becker C (2000) Vers une demande réelle de contrôle de la fécondité en milieu rural sénégalais. In: Pilon M, Guillaume A. *Maîtrise de la fécondité et planification familiale au Sud*. Paris: IRD 127-146.
6. UNICEF (2007) Etude sur les connaissances, attitudes, pratiques et comportements des adolescents en matière de sexualité, procréation et VIH/SIDA. Rapport d'étude Congo, Brazzaville 10-11.
7. Drago F, Ciccarese G, Zangrillo F, Gasparini G, Cogorno L, et al. (2016) A survey of current knowledge on sexually transmitted diseases and sexual behaviour in Italian adolescents. *Int J Environ Res Public Health* 13: 422-432.
8. Somba MJ, Mbonile M, Obure J, Mahande MJ (2014) Sexual behaviour, contraceptive knowledge and use among female undergraduates' students of Muhimbili and Dar Es Salaam universities, Tanzania: a cross-sectional study. *BMC Women's Health* 14: 94-102.
9. Arowojolu AO, Ilesanmi AO, Roberts OA, Okunola MA (2002) Sexuality, contraceptive choice and AIDS awareness among Nigerian undergraduates. *Afr J Repro Health* 6: 60-70.
10. Beliard C (2015) Choix de la première contraception. *Réalités en gynécologies obstétriques* 176 : 9-13.
11. Mehra D, Agardh A, Petterson KO, Ostergren P (2012) Non-use of contraception: determinants among Ugandan university students. *Glob Health Action* 5: 1-10.
12. Wang H, Long L, Cai H, Wu Y, Xu J, et al. (2015) Contraception and unintended pregnancy among unmarried female university students: A Cross-sectional Study from China. *PLOS ONE* 1-11.
13. Rowen T, Smitha J, Eisenberg M, Breyer B, Drey E, et al. (2011) Contraceptive usage patterns in North American medical students. *Nat Inst Health Contracep* 83: 459-65.
14. Sidze E, Lardoux S, Faye C, Mutua M, Badji F (2015) Accès et recours des jeunes femmes à la contraception: rôle des restrictions imposées en milieu urbain sénégalais. *Perspectives internationales sur la santé sexuelle et génésique* 20-28.
15. Gastineau B, Rajaonarisoa S (2010) Santé de la reproduction et avortement à Antananarivo (MADAGASCAR): Résultats d'une recherche originale. *Afr J Reprod Health* 14: 223-232.
16. Fourn N, Agumon B, Kabibou S, Hounkponou F, Lafia I, et al. (2014) Connaissances, attitudes et pratiques de la contraception d'urgence chez les étudiantes à l'Université de Parakou (Bénin). *Santé Publique* 4: 541-546.