

# Study and assessment of sexual and reproductive health in women in Spanish penitentiary institutions

## Estudio y valoración de la salud sexual y reproductiva en mujeres ingresadas en instituciones penitenciarias españolas

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### Abstract

In this article, we evaluated the awareness and use of contraceptive methods and abortion in a sample of 528 female inmates in various Spanish penal institutions. We found that the vast majority of inmates had adequate knowledge of these methods, and that approximately 90% had used them at some time. We also evaluated the relationship between their use and various social and demographic parameters, as well as the reasons for using a certain contraceptive method. We found that approximately 75% of inmates used these methods on the prescription of a physician.

Only 21% of women had experienced a negative side effect after using contraceptives, generally moderate.

As regards the perception of the safety of the method used, almost 79% said that it was safe.

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In relation to the morning after pill, 75% of women were aware of it, considering that it should only be used after casual sex and not as a routine contraceptive method.

In relation to abortion, 60% said that they had never had an abortion. Those who had done so preferred surgical abortion; only 7.2% had used the abortion pill.

To the best of our knowledge, this is the first time that a comprehensive assessment of the knowledge and use of contraceptive methods and abortion in Spanish penal institutions has been performed.

*Keywords:* Spanish penitentiary centers. Women imprisoned. Contraceptive methods. Morning after pill. Abortion

## 1. Introduction

The number of inmate women entered into Spanish penal institutions (hereafter IIPP), has increased progressively in the last 20 years, although in the last three, a slight decrease has been produced. The weekly statistics issued by the General Secretariat IIPP were reviewed, and after checking three dates randomly, we have been able to affirm that on December 31, 2003, 3,899 women users of the Spanish penal centers (hereafter PC) (1), were accounted for, that in December of 2014 the total amount of women entered, was of 4,977, (which means that it is 7.65% of the total of entered women), and, in February of 2017, it was of 4,470. As far as the number of foreign women, in December of 2014 it was of 1527, and in December of 2016, of 1289, the majority of them belonging to Latin American countries followed by the ones born in countries of the European East and Morocco.

### *1.1 Legal Framework. Laws that regulate it*

1. The General Penal Organic Law (GPOL) 1/1979 of September 26, states in its Preliminary title Art. 3. Section 2 (2) that: «The ne-

cessary measures for inmates and their relatives to preserve their rights to the Social Security benefits, acquired before their entering to prison, will be adopted». This Law has been developed in the Penal Regulations included in the Royal Decree 190/1996, of February 9 (3).

2. The 14/1986 Law General Sanitary (4), of April 25, regulates the actions aimed to the protection of Health, established in article 43 of the Spanish Constitution.

3. The 13/1995 (5) Organic Law, of December 18, about the modification of the General Penal Organic Law, modifies the age limit of permanence in prison of the inmates children, going from the 6 years to 3 years, as a limit age.

4. The 10/1995 Organic Law, of November 23, of the Penal Code (6).

5. General Regulations Law of the educational system 7). Organic Law of Education, 2/2006 of May 3.

### *1.2 Sanitary Attention Model in the Spanish Penal Centers*

The sanitary attention is foreseen in Chapter III of the GPOL (2), in which are reflected all the situations and illnesses that might have the inmate users of PC, as well as the departments that have to prepare those centers to provide the best attention possible, especially in those where there are mothers with children and also pregnant women, being such modules specially prepared for the fact that the mothers who are deprived of their liberty, should not impact in the wellbeing of their children, and that these children be provided with the necessary social, medical and educational attention they need.

### *1.3 Sanitary Benefits*

The GPOL was developed and executed in the Royal Decree 190/1996, of February 9, by which the Penal Regulation (3) is approved, legal text that develops a complete reform of the penal regulatory standards of 1981. The spirit with which this reform was ca-

ried out was, to develop the most innovative potentials of GPOL. Title IX deals with the provisions of the Penal Administration, and within this Title in Chapter I, refers to the Sanitary Assistance and Hygiene, developing in its article 207, an integral Assistance, which is specified in the following points:

1. The sanitary assistance shall have an integral character, and will be oriented both to the prevention as well as the healing and the rehabilitation. Special attention deserve the prevention of the sexual transmission diseases.

2. For that purpose, the Penal Administration and the Sanitary Administrations will formalize the corresponding covenants of collaboration in subject matters such as public health and sanitary assistance, in which the general coordination criteria will be defined, together with protocols, plans and procedures.

3. All the inmates without exception will be guaranteed a medical-sanitary attention, equivalent to the one provided to the rest of the population. Also they will have a right to pharmaceutical benefits, and the basic supplementary benefits that will be derived from this attention.

4. The sanitary benefits will be guaranteed by own and external means, arranged by the Penal Administration and the corresponding Sanitary Administration.

5. The specialized assistance in a hospitalization situation, will be performed in the hospitals that the sanitary authority will designate, except in the cases of justified emergency, which will be carried out at the hospital closest to the PC.

6. The agreements and protocols which will be formalized, according to what is foreseen in article 207,2, will establish, at least, the access conditions to the external consulting assistance, hospitalization and emergency, reflecting the programming of days and schedules of ambulatory attention and the procedures to follow for the diagnostic test.

7. The pharmaceutical dispensing system and the supplementary basic provision benefits, will be made effective by the Primary

Attention (PA), except in whatever is related to medication of hospital use, and to pharmaceutical products which are not commercialized in Spain.

#### *1.4 Prevention of Sexual Transmission Diseases (henceforth STD)*

There exist a series of programs designed by the area of Sanitary Coordination, of the General Secretariat, for the prevention of STD and sexual education matters, that are given in workshops, seminars, courses, etc., and also with the participation of NGOs and/organisms dependent from autonomous governments. For this purpose, programs are carried out about violence against women, the prevention of sexual transmission diseases, the use of contraceptive methods, the learning of self-esteem reinforcement techniques, of relaxation and facing situations of violence, etc. These programs are performed from a gender perspective, related to the program «Being a Woman», approved by the General Secretariat, to be given at the PC within the performing of education and prevention of STD, advising to women about how to face the problems of abuse and violence against them. Such programs are taught by the center professionals, prepared for that effect, and also by NGOs collaborators. The women usually participate actively, because participating in these courses means a «positive» attitude, which is reflected in their files and records, and that it is taken into account at the time of receiving penal benefits.

#### *1.5 Contraceptive methods used in the Spanish prisons*

The women inmates in the Spanish prisons, have the right to use any available contraceptive methods, freely and without charge.

The prescription system is the one described in the chapter of «Sanitary Benefits» of the Penal Regulation (3), in a way that the physician of the PPII is the one that directly describes, even though occasionally the inmate can be sent to the gynecologist who finally prescribes and/or performs the tests which he deems

proper, in order to easily deliver the type of contraceptive that better suits the user.

The contraceptive methods available in the Spanish prisons are: hormonal contraception, via orally, transdermally with patches or injectable, caps or vaginal rings, condoms, definite sterilization (tubal ligation) and abortion.

The use of contraceptive methods is usual practice and is accepted by women as something natural, being requested to the physician by the women themselves.

### *1.6 Targets Set*

In as much as our knowledge can reach, the studies about the knowledge and use of contraceptive methods in Spanish prisons are very scarce, for not to say null, and therefore it seems to us that it is of interest to perform an assessment on them related to: a) the available methods in Spanish prisons; b) the number and percentage of women that use contraceptive methods, or the emergency contraception and the reasons of why motivate their use; c) the assessment of their efficacy during the confinement period, making an explicit reference to the index of pregnancies produced and its possible cause; d) to determine the negative secondary effects for women that use contraceptive methods if they exist; e) to verify the number and percentage of pregnancies that end up in abortion and if these are repetitive; and f) to check the reasons that could justify the inmates would accept the reasons for decriminalization of abortion in force today.

## **2. Materials and methods**

*2.1 Design:* A transversal descriptive study with analytical components.

*2.2 Population of Study:* Women users of contraceptive methods in Spanish PCs, with ages ranging between 18 and 60 years, that is to

say, in fertile, menopause and post-menopause ages. Women up to 60 years old are included in the sample size, from considering that, at a certain point in time within their fertility period, they could have been contraceptive users.

*2.3 Sample size:* In order to reach a confidence of 95%, and a difference of 5%, the sample size must be, as a minimum, of 384 women, made with the computing program Epidat. In the study 528 women were included.

*2.4 Type of sampling:* consecutive.

*2.5 Study variables:* There are two types of variables: the ones that are referred to personal data, and the ones that exclusively ask about the use of contraceptives of all kinds, abortion included.

The ones related to personal data are: age; study level (illiterate, primary, high school, college, etc.); socioeconomic level (low, medium, high); nationality (Spanish, Eastern Europe, Arab countries, Latin American, African, and Asian); civil status (married, separated/widow, living with a partner, single); race/ethnicity (white, gipsy, Arab/Muslim, Latin American, white/gipsy mixture, others: black, mestizo, Asian); religion/faith (Atheist, Catholic, Evangelist, Orthodox, Islamic/Muslim, Buddhist); type of offense (robbery and its variables, against public health/drug trafficking, murder/homicide, sexual aggression, fines/non-payments/against transportation safety, others: theft, misappropriation, document forgery, fraud, arson, organized crime, terrorism, disruption of public order, human trafficking, money laundry, recurrence in the commission of a felony and serving time in prison; total time in prison in one or more re-entries (from zero to two years, from two to five years, from five to ten years, more than ten years).

The section corresponding to the use of contraceptives, efficacy of the same, number of abortions, number of pregnancies, total

number of women who use any of the described methods, it is structured as a survey, also with alternative answers YES, NO and multiple options.

The socio-demographic variables of the study are detailed in Attachment I, and the variables corresponding to family planning and contraception, in Attachment II.

As in the previous paragraph, to each question corresponds one or more answers detailed in the same; the survey is designed in such a way that the questions can be understood without difficulty, and could be answered with the utmost sincerity, taking into account that the cultural level of many of these inmates is basic, and that they refer to confidential events and, sometimes very painful. Following these guidelines, the survey has been validated to check their understanding by the inmates. After its validation, various changes were performed in the primitive design, because it could be proved that there had to be a change in the statement of some questions to make them more understandable, and also the form, because some of them were repeated, and could lead to a certain confusion. Due to these variations, the results of these surveys were not processed. As a consequence of all that, a definite survey was written. Another datum that the validation process provided, was the inclusion of questions that emerged from the inmates themselves, some of which would not have been included from the beginning (for example: at the time of being questioned if they had aborted sometime, some of them answered yes, but we checked that they had been natural abortions, for what it had to be specified if the abortion had been voluntary).

### *2.6 Data collection*

All data was collected in specific forms, configuring with them an Excel 2013 data base, in which the variables to be studied were encoded, enabling the statistical analysis as an export application of data to the statistical package SPSS v23.



**Attachment 1. Sociodemographic variables to study**

<b>Variable</b>	<b>Type of variable</b>	<b>Values</b>
<b>Code of intern</b>	Qualitative nominal	Identification anonymized
<b>Module</b>	Quantitative discreet	1. M14 Valencia 2. M18 Valencia 3. M20 Valencia 4. M22 Valencia 5. Madrid 2 6. Dones 1 Brians-Barcelona 7. Dones 2 Brians-Barcelona 8. Wad-Ras Barcelona
<b>Age(years)</b>	Quantitative, discreet	Years
<b>Nationality</b>	Qualitative nominal polytomous	1. Spanish 2. East of Europe 3. Arab 4. Latin American 5. African
<b>Civil status</b>	Qualitative nominal polytomous	1. Married 2. Separated/widow 3. Lives with couple 4. Single
<b>Level of education</b>	Qualitative nominal polytomous	1. Illiterate 2. Primary 3. Highschool 4. College
<b>Socioeconomic level</b>	Qualitative nominal polytomous	1. Low 2. Medium 3. High
<b>Race</b>	qualitative nominal polytomous	1. White 2. Gipsy 3. Arab 4. Latin American 5. Gipsy-White 6. Others
<b>Religion</b>	Qualitative nominal polytomous	1. Atheist 2. Catholic/Christian 3. Evangelist 4. Orthodox/Coptic 5. Muslim 6. Buddhist 7. Others

**Attachment II: Variables related to family planning and contraception**

<b>Variable</b>	<b>Type of variable</b>	<b>Values</b>
<b>Knows what family planning is?</b>	Qualitative nominal dichotomy	1. Yes 2. No
<b>Knows about contraceptive methods?</b>	Qualitative nominal dichotomy	1. Yes 2. No
<b>Uses or has used any contraceptive method?</b>	Qualitative nominal Dichotomy	1. Yes 2. No
<b>Which contraceptive has used?</b>	Qualitative nominal polytomous	1. Male condom 2. Female condom 3. Oral contraceptives 4. Injected contraceptives 5. Skin patches 6. IUD 7. Tubal ligation 8. Dermal implants
<b>The contraceptive that is being using or has been used, Is it prescribed or was it prescribed by the gynecologist?</b>	Qualitative nominal polytomous	1. Never used 2. Yes 3. No
<b>Did it produce, or is it producing side effect?</b>	Qualitative nominal polytomous	1. Never used any side effects? 2. Yes 3. No
<b>What side effect?</b>	Qualitative nominal polytomous	1. Facial hair/ spots 2. Fluid retention 3. Increase in breast size/ bleeding 4. Others (weight gain, renal problems...)
<b>During the period of usage or that has been used, has it been safe to you?</b>	Qualitative nominal polytomous	1. Never used 2. Yes 3. No
<b>Do you think that the male condom is a safe method for you not to become pregnant?</b>	Qualitative nominal polytomous	1. Never used 2. Yes 3. No
<b>Do you think that the male condom also helps to prevent illnesses?</b>	Qualitative nominal polytomous	1. Never used 2. Yes 3. No

<b>Your husband/ couple agrees with the use of the male condom?</b>	Qualitative nominal polytomous	1. Never used 2. Yes 3. No
<b>Why didn't your husband agree to use the male condom?</b>	Qualitative nominal polytomous	1. Never used 2. Yes 3. No
<b>Do you know what the morning after pill is?</b>	Qualitative nominal dichotomy	1. Yes 2. No
<b>Do you think that the morning after pill can be used as a habitual method to avoid a pregnancy?</b>	Qualitative nominal polytomous	1. Doesn't know what the PDD is 2. No, never 3. No, only as an emergency 4. Yes, I don't have any problem to use it as another method
<b>Do you know about the side effects and inconveniencies of the morning after pill?</b>	Qualitative nominal polytomous	1. Doesn't know what the PDD is 2. Yes 3. No

### 2.7 Statistical evaluation of the results:

Data was presented using statistical values of the central trend and of dispersion: arithmetic media and standard deviation (TD), or the median and the interquartile range (IQR). The variables that followed a normal distribution were described as the arithmetic media  $\pm$  TD, while in the opposite case they were presented as the median (interquartile amplitude or range). The corresponding data to the qualitative variables, are stated as an absolute value of cases and or in percentage (%).

For the distribution normality study the Kolmogorov-Smirnov well fitness test was used. The comparison between the values of the continuous variables analysis was performed by means of the t of Student test, for independent data in the case of showing normality. The variance analysis (ANOVA), was used to compare 3 or more media. The Mann-Whitney non-parametric test was used when the hypothesis of normality in the comparison of two samples, and the Kruskal-Wallis Test in the comparison of two or more samples, were used when there was a rejection of such hypo-

thesis. The relationship among the continuous variables was established by means of the Pearson correlation coefficient, and the Spearman's non-parametric. The contrast among the categorical variables was performed by means of the Chi<sup>2</sup> test, or the Yates corrected Chi<sup>2</sup> test in cases we had bins with expected frequencies of less than 5.

For all tests, a significance level of less than 0.05, in bilateral contrast, was accepted. Data analysis was performed by means of the statistical program SPSS v23.0.

### 3. Results and discussion

#### *3.1 Sociodemographic Variables*

The average age of the interns is of 37.14 years (TD=9.64). Half of the women have an age lower than 37 years, being the maximum age of 60 years and the minimum of 19.

As for the location of the penal center is, 147 (27.84%) women are inmates in the one of Valencia, 186 (35.94%) of Madrid and 196 (37.12%) of Barcelona.

Most of the inmates (84.47%) are of Spanish or Latin American nationality. 13.26% comes from Eastern Europe, and the 2.27% remaining are Arabs or African. 77.09% are whites or from Latin American race, 15.91% are gypsies and the remaining 7.01% are from Arabic, Gypsy/White, black or Mestizo races.

21.59% of the women, claims not to be a part of any religion. From the rest, the 47.35% is catholic, 19.51% evangelists, and the remaining 11.56% is divided in more minority religions.

A large part of the inmates (33.52%) is of a medium socio economical level, 65.15% comes from a low level. Very few (1.33%) comes from a high level. 88.83% have high school or primary studies, and only 7.77% higher education. 3.41% declares to be illiterate. Almost one half of them (45.45%) are single. The rest are either married, separated, widows or live with a couple.

**Table I. Relationship between the knowledge of the contraceptive methods and the sociodemographic variables**

Category	Knowledge of the contraceptive methods	SE*(p)		
		YES	NO	
Nationality	Spanish	285	2	0,069
	East of Europe	66	4	
	Arab	3	0	
	Latin America	156	3	
	African	9	0	
	<b>TOTAL</b>	519	9	
Civil Status	Married	115	3	0,608
	Separated/Widow	125	3	
	Lives with a couple	42	0	
	Single	237	9	
	<b>TOTAL</b>	519	9	
Education Level	Illiterate	18	0	0,745
	Primary	276	5	
	Highschool	184	4	
	College	41	0	
	<b>TOTAL</b>	519	9	
Socioeconomic Level	Low	335	9	0,086
	Medium	177	0	
	High	7	0	
	<b>TOTAL</b>	519	9	
Race	White	247	6	0,727
	Gipsy	84	0	
	Arab	5	0	
	Latin American	151	3	
	Gipsy-White	18	0	
	Others	14	0	
	<b>TOTAL</b>	519	9	
Religion	Atheist	112	2	0,994
	Catholic/Christian	246	4	
	Evangelist	101	2	
	Orthodox/Coptic	35	1	
	Muslim	14	0	
	Buddhist	3	0	
	Others	8	0	
	<b>TOTAL</b>	519	9	
*SE: Statistical Significance Source: Own elaboration				

**Table II. Relationship between the use of contraceptive methods and the sociodemographic variable**

Category	Use of contraceptive methods	SE*(p)		
		YES	NO	
<b>Nationality</b>	Spanish	261	26	0,072
	East de Europe	57	13	
	Arab	3	0	
	Latin American	147	12	
	African	9	0	
	<b>TOTAL</b>	477	51	
<b>Civil Status</b>	Married	103	15	0,647
	Separated/widow	117	11	
	Lives with couple	38	4	
	Single	219	21	
	<b>TOTAL</b>	477	51	
<b>Level of Education</b>	Illiterate	16	2	<b>0,010</b>
	Primary	243	38	
	Highschool	178	10	
	College	40	1	
	<b>TOTAL</b>	477	51	
<b>Socioeconomical Level</b>	Low	306	38	0,273
	Medium	164	13	
	High	7	0	
	<b>TOTAL</b>	477	51	
<b>Race</b>	White	231	22	<b>0,003</b>
	Gipsy	66	18	
	Arab	5	0	
	LATIN AMERICAN	144	10	
	Gipsy-White	18	0	
	Others	13	1	
	<b>TOTAL</b>	477	51	
<b>Religion</b>	Atheist	104	10	<b>0,002</b>
	Catholic/Christian	235	15	
	Evangelist	85	18	
	Orthodox/Coptic	28	8	
	Muslim	14	0	
	Buddhist	3	0	
	Others	8	0	
	<b>TOTAL</b>	477	51	
*SE: Statistical Meaning Source: Own development				

### *3.2 Type of felony, recurrence and serving time in prison*

The principal crimes are against public security (48.30%), robbery (21.02%) and others such as theft, misappropriation, forgery or fraud (16.10%). In a lesser quantity murders and homicides (5.87%), membership of gangs, terrorism, human trafficking (2.84%) and finally 3.41% in fines. 76.70% declares not to be recurrent, facing a 23.30% that it is. Felonies with a prison time of less than 5 years are the majority (83.15%), to a 12.5% go from 5 to 10 years and only 4.36% have penalties above 10 years.

### *3.3 Contraceptive methods knowledge*

Data about contraceptive methods knowledge, and their relationship with the socio-demographic variables are included in Table I. The great majority of the inmates knows about contraceptive methods. Only 1.7% declares not knowing them. The fact that the percentage of inmates who know about the methods is so high, could be due to that in the last five or six years in the Spanish PC programs about education on these subject matters within the plans of prevention of sexual transmission diseases and of non-desired pregnancies are given.

### *3.4 Contraceptive methods used by the inmates*

#### *3.4.1 Use of contraceptive methods*

90.34% of the inmates have at a certain point in time used some contraceptive method. The most widely used are: the male condom, 317 (60.22%), and the oral contraceptive 247 (46.78%), followed by the intrauterine device, 104 (19.7%) and, in a lesser amount, tubal ligation, 70 (13.26%), the female condom, 45 (8.52%) and the dermic patches 25 (4.73%). Only one inmate had used dermal implants.

There is no significant statistical association between the use of contraceptives and the nationality, the civil status or the socioeconomic level. Nevertheless, there is indeed an association with the

level of studies, race and religion (Table II). In the North American population also, an association between the use of contraceptive methods and the race is found, because the black women use less the contraception than the white ones (8), (9), (10), (11), being the blacks and Hispanic more favorable to the use of a condom than the white ones. The youngest prefer to use the condom (12). According to Dehlendorf (13), this is the first time that the relationship between races and the use of contraceptives in that country in particular, is analyzed, assigning the discrepancy to the different knowledge about the contraceptive methods, and to the concern about the efficacy of such methods, by those populations (14), (15), (16), (17); also to differences in the possibilities to have access to public medicine (18), and much more difficulties of racial minorities to access public health systems (19), to family and/or relatives support (20), (21), and lastly, to the pressure posed on them by the commercial firms that manufacture the contraceptives (20), (22). That is to say that, it looks like ethnic and racial differences, do indeed, influence in the use of the different types of contraceptives, a fact that also exists in our inmates.

#### *3.4.2 The efficacy of the contraceptive methods*

The efficacy in the use of a contraceptive method, can also influence in the election in the contraceptive to be used. In this line of thinking, the hormonal contraceptives, are safer than those of a barrier, but sterilization, the IUDs (Intra uterine devices), and implants are more effective, being the injectable contraceptives the ones which seem to be the most effective (23), (24), (25), (26), (27). But, regardless of their efficacy, The American Society for Gynecology and Obstetrics (28), (29), recommends the use of IUDs as the first option of contraceptives for the vast majority of women, including teenagers and nulliparous women, which is also shared by other authors (30).

Another interesting piece of information, is to determine to what extent, the contraceptives used, are or not prescribed by a



physician. It is shown that, among our inmates, 75.19% use them by medical prescription, whereas 15.53% use them under their own initiative. Many women stop using the contraceptives, or change methods without consulting a physician (31), (32).

### *3.4.3 Possible Adverse Defects*

Another medical issue of interest, is to know the possible adverse effects of the use of contraceptives, what indeed constitutes an objective social worry.

But the negative secondary effect of greatest significance, is to favor the development of thrombo-embolic problems (33), (34). As a matter of fact, there exists abundant literature (35), (36), (37), (38), (39), (40), (41), (42), (43) in which the combined hormonal contraceptives are specified, which include estrogens and progestogens, which increase about 4 times the risk of thrombo-embolic problems, with respect to women which do not used them (44), being fundamentally the estrogens the ones who favor such risk, but furthermore, we have been able to show that such risk also varies according to the progestogens used (42), (45), (46).

Nonetheless, it has to be made clear that the quantitative incidence of thrombo-embolic accidents as a consequence of the use of hormonal contraceptives is very low, for an accident can be produced for each 7000/10,000 for women years that use them (47). In a study performed by one of us, in a population of 318,000 that our hospital attended, 47 thrombo-embolic accidents were detected during a period of 5 years (48). Even though this type of adverse effects can happen in any woman, certain medical circumstances that favor them happen, circumstances that can happen in the 2% to 16% of the women that use them (49), (50), (51). There are also other risk factors such as being older than 35 years of age, an habitual smoker, an hypertensive woman, or having a previous history of thrombo-embolism. Regarding to the above, also, an alteration of coagulation of the blood factors can

also happen, that, when it is present, increases the risk of thrombosis if hormonal contraceptives are used (52).

By assessing the thromboembolic risk of the hormonal contraceptives, we have to take into consideration that many times these are used for purposes different from contraception, as can be to treat polycystic ovaries, menstrual disorders (specially amenorrhea or dysmenorrhea), and even for esthetic treatments (53), for in these cases it will have to be evaluated with much more care, the risks-benefits of its use.

To warn about the use of hormonal contraceptives and the risk they have to promote thromboembolic problems, The World Health Organization and the American College of Gynecologists and Obstetricians (54) have issued guidelines in which they specify the cases for which the contraception is contraindicated, for what it would have to be taken into account when the contraceptive practices are initiated in any woman, and of course in our inmates.

Regarding them, in 126 (21.21%) adverse secondary effects have been detected, such as facial hair growth (24%), fluid retention (43%), an increase in the size of the breasts or bleeding (47%) and other lesser effects (12%), but serious adverse effects have not been observed, as thrombo embolic accidents can be.

#### *3.4.4 Inmates perception regarding the safety of the contraceptive methods and other social variables*

Another piece of information that can be of interest to know about, is the inmate's perception regarding the contraceptive efficacy of the method they use. In our inmates it is stated that 78.79% of them declare that the contraceptive method they have used has been safe. Regarding the perception of safety about the male condoms, 62.69% declares to believe affirmatively, whereas 35.61% thinks that it is not safe, having not found any significant statistical association between the perception of safety on the male condom, and the civil status and the level of education. Neverthe-

less, an association between the perception of safety on the male condom and the nationality, the socio-economic level, the ethnic and the religion are found. It draws our attention the high percentage of users that believe that the male condom is safe, when we have already stated before, that it is the contraceptive method which fails the most (10), (25).

On the other hand, 494 (93.56%) of the interviewed women, considers that the male condom is safe facing the contagion of sexual transmission diseases.

Another aspect to take into consideration, is if the husbands/ couple of the inmates agree to use condoms, finding that 121 of them (22.9%) do not agree.

### *3.5 The morning after pill*

Even though the morning after pill is used basically after sporadic sexual intercourse, situation that seems unfavorable to happen in the penal centers, nevertheless, in can also happen in them, so that similarly the knowledge and use of the pill the inmates have, has been evaluated. Just only 79 of them (14.96%) do not know about the morning after pill. On the other hand, it is confirmed that there exists a relationship between knowing about the morning after pill, and all the socio demographic variables assessed, except the civil status and ethnic. (Table III)

As far as when it is to be used, the majority of the women believe that it should only be used after a sporadic sexual intercourse, and not as an habitual contraceptive method, for only 44 (8,3%) have the opinion that it can also be used for this purpose.

In the same way, an important lack of knowledge of the side effects of the morning after pill usage is observed, because 251 inmates (47.54%) declare not knowing about them.

### *3.6 Abortion*

Abortion can be performed in two ways: surgically or using a drug.

**Table III: Knowledge of the PDD and the sociodemographic variables**

Category	Knowledge of the morning after pill	Knowledge of the morning after pill		SE*(p)
		YES	NO	
<b>Nationality</b>	Spanish	260	27	<b>0,000</b>
	East of Europe	49	21	
	Arab	2	1	
	Latin American	131	28	
	African	449	2	
	<b>TOTAL</b>	477	79	
<b>Civil Status</b>	Married	92	26	0,089
	Separated/Widow	109	19	
	Lives with couple	37	5	
	Single	211	29	
	<b>TOTAL</b>	449	79	
<b>Level of Education</b>	Illiterate	13	5	<b>0,006</b>
	Primary	228	53	
	Highschool	169	19	
	College	39	2	
	<b>TOTAL</b>	449	79	
<b>Socioeconomic Level</b>	Low	283	61	<b>0,039</b>
	Medium	159	18	
	High	7	0	
	<b>TOTAL</b>	449	79	
<b>Race</b>	White	224	29	0,322
	Gipsy	67	17	
	Arab	4	1	
	Latin American	127	27	
	Gipsy-White	16	2	
	Others	11	3	
	<b>TOTAL</b>	449	79	
<b>Religion</b>	Atheist	100	14	<b>0,010</b>
	Catholic/Christian	220	30	
	Evangelist	86	17	
	Ortodox/Coptic	23	13	
	Muslim	11	3	
	Buddhist	3	0	
	Others	6	2	
	<b>TOTAL</b>	449	79	
*SE: Statistical Meaning Source: Own development				

### *3.6.1 Surgical abortion*

From all the group of inmates, 319(60.42%) declare never have aborted intentionally, versus 209 that they have indeed performed it. As far as the number of times: 103 (19.51%) they have done it once; 55 (10.42%) twice, 26 (4.92%) three times, and 25 (4.73%) more than three times.

Regarding the motives for which they have aborted, 37 inmates (7%) aborted because

the contraceptive method failed; 79 (14.96%) due to not programmed sexual intercourse;

44 (8.52%) because they thought they had already enough children; 74 (14.02%) because of economic difficulties and 61 (11.55%) due to other causes, such as malformation of the fetus, rape, etc.

### *3.6.2 Chemical abortion (RU-486 abortive pill)*

The chemical abortion is the one that is carried out using a drug, usually mifepristone (RU-486), associated to a synthetic analogue of the E1 prostaglandin, the misoprostol. The drug is given to a woman in a hospital, and the abortion is produced afterwards in her domicile. For some people, the use of mifepristone is presented as a form of abortion less traumatic for a woman (55), but we are of the opinion that it is not so, opinion shared by other authors, for the surgical method seems to be safer, effective and cheap (56), (57), (58), (59), (60).

As far as knowledge of the abortive pill by the inmates surveyed, 233 (44.19%) declared not knowing it, versus 295(55.87%) that they do know it.

Regarding its use, only 39 inmates (7.2%) declare having used it sometime, percentage that looks very much alike to that of women that use it within the general population, that in Spain in 2008 was of 4.2%; nonetheless, its use in other countries is much way higher: 76% in Finland and Scotland; 72% in Sweden; 67% in Portugal; 49% in France; 40% in England and Wales; and 14% in Ger-

many (61), (62), (63), (64), (65). In 2008 in Europe more than one and a half million women, use the abortive pill (66).

An important aspect related to this pill, is to determine which ones are its possible side effects that can be mild: nauseous, vomit, diarrhea, headache, chills or fever (67) or serious: hemorrhage, infections or the need for a surgical reoperation (68). These complications usually arise between the 30% and the 50% of the cases (69). In our inmates, from 38 that have used the pill 7 have suffered hemorrhages and 3 incomplete abortions that have required a surgical curettage afterwards.

Even though not directly do to an action by the mifepristone but for an action of the misoprostol, the abortive pill can produce malformations in born children (70), that can be located in the bones of the frontal area (88), and in the limbs or other organs (70), (71), (72), (73), (74), (75). In the children of our inmates never has been detected this type of physical anomalies.

Even though very seldom, there have been described also at least six fatalities, after using the abortive pill (76) (77). Neither in our case there has been any fatality of the inmates that have used the pill.

## Conclusion

83% of the inmates have proper knowledge of the contraceptive methods, and 90% of them have them used sometime. 75% of the inmates use them by medical prescription.

Only 21% of the women have suffered some negative medical side effects, usually of a mild type. 79% declare that the method they are using is safe.

75% of the women know what the morning after pill is, and think that only it has to be used in a sporadic form, after a non-programmed sexual intercourse and not as a habitual contraceptive method.

60% declares have never aborted before. As far as the method used, 92.8 % are in favor of the surgical method.

As far as our knowledge reaches, it is the first time that a wide assessment of the knowledge and use of contraceptive methods and of abortion in Spanish penal centers, is made.

## Bibliography

1. GENERAL SECRETARIAT OF PENITENTIARY INSTITUTIONS. Prison population distribution by gender...
2. STATE OFFICIAL NEWSLETTER. Organic Law 1/1979, September 26, General Penitentiary. October 5, 1979, nº 239.
3. GENERAL SECRETARIAT OF PENITENTIARY INSTITUTIONS. Prison regulations.
4. STATE OFFICIAL NEWSLETTER. Organic Law 14/1986, of April 25, General Health. April 29, 1986, nº 102.
5. STATE OFFICIAL NEWSLETTER. Organic Law 13/1995, of December 18 about the modification of the General Penitentiary Organic Law. December 19, 1995, nº 302.
6. STATE OFFICIAL NEWSLETTER. Organic Law 10/1995, November 23, of the Penal Code. November 24, 1995, nº 281.
7. STATE OFICIAL NEWSLETTER. 2/2006, of May 3, of Education. May 4, 2006, nº 106.
8. RAINE T, MINNIS AM, PADIAN NS. Determinants of contraceptive method among Young women at risk for unintended pregnancy and sexually transmitted infections. *Contraception*. 2003; 68: p. 19-25.
9. FROST JJ, SINGH S, FINER LB. Factors associated with contraceptive use and nonuse, United States, 2004. *Perspect Sex Reprod Health*. 2007; 39: p. 90-9.
10. JONES J, MOSHER W, DANIELS K. Current contraceptive use in the United States, 2006-2010, and changes in patterns of use since 1995. *National health statistics reports*. 2012; 18: p. 1-25.
11. WU J, MELDRUM S, DOZIER A, STANWOOD N, FISCELLA K. Contraceptive nonuse among US women at risk for unplanned pregnancy. *Contraception*. 2008; 78: p. 284-9.
12. DEHLENDORF C, PARK SY, EMEREMNI CA, COMER D, VINCETT K, BORRERO S. Racial/ethnic disparities in contraceptive use: variation by age and women's reproductive experiences. *Am J Obstet Gynecol*. 2014; 210: p. 526.e1-e.9.
13. DEHLENDORF C, RODRÍGUEZ MI, LEVY K, BORRERO S, STEINAUER J. Disparities in family planning. *Am J of Obstet Gynecol*. 2010; 202: p. 214-20.
14. KAYE K, SUELLENTROP K, SLOUP C. The Fog Zone: how misperceptions, magical thinking, and ambivalence put young adults at risk for unplanned preg-

nancy. Washington DC: National campaign to prevent teen and unintended pregnancy; 2009.

15. GUENDELMAN S, DENNY C, MAULDON J, CHETKOVICH C. Perceptions of hormonal contraceptive safety and side effects among low-income Latina and non-Latina women. *Mater child health J.* 2000; 4: p. 233-9.

16. SANGI-HAGHPEYKAR H, ALI N, POSNER S, POINDEXTER AN. Disparities in contraceptive knowledge, attitude and use between Hispanic and non-Hispanic whites. *Contraception.* 2006; 74: p. 125-32.

17. UNDERSTAND, INSTITUTE OF MEDICINE (US) COMMITTEE ON; STITH, A Y; NELSON, AR; EDS. *Unequal treatment: confronting racial and ethnic disparities in health.* 2003.

18. TODD S, SOMMERS B. Overview of the uninsured in the United States: a summary of the 2012 current population survey report. ASPE. Office of the assistant secretary for planning and evaluation, Department of health and human services; 2012.

19. ARMSTRONG K, RAVENELL KL, MCMURPHY S, PUTT M. Racial/ethnic differences in physician distrust in the United States. *Am J Public Health.* 2007; 97: p. 1283-9.

20. BECKER D, TSUI AO. Reproductive health service preferences and perceptions of quality among low-income women: racial, ethnic and language group differences. *Perspectives on Sex Reprod Health.* 2008; 40: p. 202-11.

21. FORREST JD, FROST JJ. The family planning attitudes and experiences of low-income women. *Fam Plann Perspec.* 1996; 28: p. 246-55, 77.

22. DOWNING RA, LAVEIST TA, BULLOCK HE. Intersections of ethnicity and social class in provider advice regarding reproductive health. *Am J Publ Health.* 2007; 97: p. 1803-7.

23. WINNER B, PEIPERT JF, ZHAO Q, ET AL. Effectiveness of long-acting reversible contraception. *N Engl J Med.* 2012; 366: p. 1998-2007.

24. HATCHER RA TJNACWSFKD. *Contraceptive technology.* 19th ed. New York: Ardent Media; 2007.

25. KAUNITZ AM, DARNEY PD, ROSS D, WOLTER KD, SPEROFF L. Subcutaneous DMPA vs intramuscular DMPA: a 2-year randomized study of contraceptive efficacy and bone mineral density. *Contraception.* 2009; 80: p. 7-17.

26. TRUSSELL J. Contraceptive failure in the United States. *Contraception.* 2011; 83: p. 397-404.

27. KOST K, SINGH S, VAUGHAN B, TRUSSELL J, BANKOLE A. Estimates of contraceptive failure from the 2002 National survey of family growth. *Contraception.* 2008; 77: p. 10-21.

28. AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS. Increasing use of contraceptive implants and intrauterine devices to reduce unintended pregnancy. ACOG Committee Opinion no. 450. *Obstet Gynecol.* 2009; 114: p. 1434-8.

29. AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS. Adolescents and long-acting reversible contraception: implants and intrauterine devices. ACOG Committee Opinion no. 539. *Obstet Gynecol.* 2012; 120: p. 938-8.

30. CHAMPION CB, BEHLIOVIC B, AROSEMENA JM, RANDIC L, COLE LP, WILKENS LR.



- A three-year evaluation of TCU 380 Ag and multiload Cu 375 intrauterine devices. *Contraception*. 1988; 38: p. 631-9.
31. ROSENBERG MJ, WAUGH MS. Oral contraceptive discontinuation: a prospective evaluation of frequency and reasons. *American J Obstet Gynecol*. 1998; 179: p. 577-82.
32. VAUGHAN B, TRUSSELL J, KOST K, SINGH S, JONES R. Discontinuation and resumption of contraceptive use: results from the 2002 National survey of family growth. *Contraception*. 2008; 78: p. 271-83.
33. NAESS IA, CHRISTIANSEN SC, ROMUNDSTAD P, CANNegiETER SC, ROSENDAAL FR, HAMMERSTROM J. Incidence and mortality of venous thrombosis: a population-based study. *J Thromb Haemos*. 2007; 5: p. 692-9.
34. VANDENBROUCKE JP, KOSTER T, BRIËT E, REITSMA PH, BERTINA RM, ROSENDAAL FR. Increased risk of venous thrombosis in oral-contraceptive users who are carriers of factor V Leiden mutation. *Lancet*. 1994; 344: p. 1453-7.
35. VAN HYLCKAMA Vlieg A, HELMERHORST FM, VANDENBROUCKE JP, DOGGEN CJ, ROSENDAAL FR. The venous thrombotic risk of oral contraceptives, effects of oestrogen dose and progestogen type: results of the MEGA case-control study. *Brit Med J*. 2009; 339: p. b2921.
36. LIDEGAARD Ø, LØKKEGAARD E, SVENDSEN AL, AGGER C. Hormonal contraception and risk of venous thromboembolism: national follow-up study. *Brit Med J*. 2009; 339: p. b2890.
37. PARKIN L, SHARPLES K, HERNANDEZ RK, JICK SS. Risk of venous thromboembolism in users of oral contraceptives containing drospirenone or levonorgestrel: nested case-control study based on UK General Practice Research Database. *Brit Med J*. 2011; 342: p. d2139.
38. JICK SS, HERNANDEZ RK. Risk of non-fatal venous thromboembolism in women using oral contraceptives containing drospirenone compared with women using oral contraceptives containing levonorgestrel: case-control study using United States claims data. *Brit Med J*. 2011; 342: p. d2151.
39. LIDEGAARD Ø, NIELSEN LH, SKOVLUND CW, SKJELDESTAD FE, LØKKEGAARD E. Risk of venous thromboembolism from use of oral contraceptives containing different progestogens and oestrogen doses: Danish cohort study, 2001-9. *Brit Med J*. 2011; 343: p. d6423.
40. STEGEMAN BH, DE BASTOS M, ROSENDAAL FR, ET AL. Different combined oral contraceptives and the risk of venous thrombosis: systematic review and network meta-analysis. *Brit Med J*. 2013; 347: p. f5298.
41. VINOGRADOVA Y, COUPLAND C, HIPPISELEY-COX J. Use of combined oral contraceptives and risk of venous thromboembolism: nested case-control studies using the QResearch and CPRD databases. *Brit Med J*. 2015; 350: p. h2135.
42. PERAGALLO URRUTIA R, COEYTAUX RR, MCBROOM AJ, GIERISCH JM, HAVRILESKY LJ, MOORMAN PG, ET AL. Risk of acute thromboembolic events with oral contraceptive use: a systematic review and meta-analysis. *Obstet Gynecol*. 2013; 122: p. 380-9.

43. SITRUK-WARE R. Hormonal contraception and thrombosis. *Fertil Steril*. 2016; 106: p. 1289-1294.
44. VAN HYLCKAMA Vlieg A, HELMERHORST FM, VANDENBROUKE JP, DOGGEN CJ, ROSENDAAL FR. The venous thrombotic risk of oral contraceptives, effects of oestrogen dose and progestogen type: results of the MEGA case-control study. *Brit Med J*. 2009; 339: p. b2921.
45. VINOGRADOVA Y, COUPLAND C, HIPPISELEY-COX J. Use of combined oral contraceptives and risk of venous thromboembolism: nested case-control studies using the QResearch and CPRD databases. *Brit Med J*. 2015; 350: p. h2135.
46. WEILL A, DALICHAMPT M, RAGUIDEAU F, RICORDEAU P, BLOTIÈRE PO, RUDANT J, ET AL. Low dose oestrogen combined oral contraception and risk of pulmonary embolism, stroke, and myocardial infarction in five million French women: cohort study. *Brit Med J*. 2016; 353: p. i2002.
47. HEIT JA, SPENCER FA, WHITE RH. The epidemiology of venous thromboembolism. *J Thromb Thrombolysis*. 2016; 41: p. 3-14.
48. AZNAR J, MIRA Y, VAYÁ A. Oral contraceptives and thrombosis. *Clin Appl Thromb Haemost*. 2004; 10: p. 189-190.
49. SHORTRIDGE E, MILLER K. Contraindications to oral contraceptive use among women in the United States, 1999-2001. *Contraception*. 2007; 75: p. 355-60.
50. XU H, EISENBERG DL, MADDEN T, SECURA GM, PEIPERT JF. Medical contraindications in women seeking combined hormonal contraception. *Am J of Obstet Gynecol*. 2014; 210: p. 210.e1-5.
51. AZNAR J, VAYÁ A, ESTELLÉS A, MIRA Y, SEGUÍ R, VILLA P, ET AL. Risk of venous thrombosis in carriers of the prothrombin G20210A variant and factor V Leiden and their interaction with oral contraceptives. *Haematologica*. 2000; 85: p. 1271-1276.
52. BELLER JP, MCCARTNEY CR. Cardiovascular risk and combined oral contraceptives: clinical decisions in settings of uncertainty. *Am J Obstet Gynecol*. 2013; 208: p. 39- 41.
53. WORLD HEALTH ORGANIZATION. Medical eligibility for contraceptive use. In 3rd , editor. ; 2004; Geneva.
54. AMERICAN COLLEGE OF OBSTETRICIANS AND GYNECOLOGISTS. ACOG practice bulletin no.73: use of hormonal contraception in women with coexisting medical conditions. *Obstet Gynecol*. 2006; 107: p. 1453-72.
55. KELLY T, SUDDER J, HOWEL D, HEWISON J, ROBSON S. Comparing medical versus surgical termination of pregnancy at 13-20 weeks of gestation: a randomised controlled trial. *Brit J Obstet Gynecol*. 2010; 117: p. 1512-20
56. COWETT AA, GOLUB RM, GROBMAN WA. Cost-effectiveness of dilation and evacuation versus the induction of labor for second-trimester pregnancy termination. *Am J Obstet Gynecol*. 2006; 194: p. 768-73.
57. WHITLEY KA, TRINCHERE K, PRUTSMAN W, QUIÑONES JN, ROCHON ML. Midtrimester dilation and evacuation versus prostaglandin induction: a comparison of composite outcomes. *Am J Obstet Gynecol*. 2011; 205: p. 386.

58. BRYANT AG, GRIMES DA, GARRETT JM, STUART GS. Second-trimester abortion for fetal anomalies or fetal death: labor induction compared with dilation and evacuation. *Obstet Gynecol.* 2011; 117: p. 788-92.
59. GROSSMAN D, BLANCHARD K, BLUMENTHAL P. Complications after second trimester surgical and medical abortion. *Reprod Health Matt.* 2008; 16 (31 Suppl): p. 173-82.
60. GRIMES DA, SMITH MS, WHITAM AD. Mifepristone and misoprostol versus dilation and evacuation for midtrimester abortion: a pilot randomised controlled trial. *Brit J Obstet Gynecol.* 2004; 111: p. 148-53.
61. NIINIMÄKI M, SUHONEN S, MENTULA M, HEMMINKI E, HEIKINHEIMO O, GISSLER M. Comparison of rates of adverse events in adolescent and adult women undergoing medical abortion: population register based study. *Brit Med J.* 2011; 342: p. d2111.
62. DEPARTMENT OF HEALTH. Abortion statistics, England and Wales: 2009-2010. 2009-2010.
63. SOCIALSTYRELSEN. Statistics.2010. ; 2010.
64. NATIONAL INSTITUTE FOR HEALTH AND WELFARE. Induced abortions. 2010.
65. GOMPERTS RJ, JELINSKA K, DAVIES S, GEMZELL-DANIELSSON K, KLEIVERDA G. Using telemedicine for termination of pregnancy with mifepristone and misoprostol in settings where there is no access to safe services. *Brit J Obstet Gynecol.* 2008; 115: p. 1171-1178.
66. VON HERTZEN H, PIAGGIO G, WOJDYLA D, HUONG NTM, MARIONS L, OKOEV G, ET AL. Comparison of vaginal and sublingual misoprostol for second trimester abortion: randomized controlled equivalence trial. *Hum Reprod.* 2009; 24: p. 106-112.
67. GARY MM, HARRISON DJ. Analysis of Severe Adverse Events Related to the Use of Mifepristone as an Abortifacient. *Ann Pharmacoth.* 2006; 40: p. 191-197.
68. BORGATTA L, KAPP N. Society of family planning. Clinical guidelines. Labor induction abortion in the second trimester. *Contraception.* 2011; 84: p. 4-18.
69. HOLMES LB. Teratogen-induced limb defects. *Am J Med Genet.* 2002; 112: p. 297-303.
70. FONSECA W, ALENCAR AJC, MOTA FSB, COELHO HLL. Misoprostol and congenital malformations. *Lancet.* 1991; 338: p. 56.
71. GONZALEZ CH, MARQUES-DIAS MJ, KIM CA, SUGAYAMA SMM, DA PAZ JA, HUSON SM, ET AL. Congenital abnormalities in Brazilian children associated with misoprostol misuse in first trimester of pregnancy. *Lancet.* 1998; 351: p. 1624.
72. BARNETT AA. Mifepristone clears US regulatory hurdle. *Lancet.* 1996; 348: p. 256.
73. BOS-THOMPSON MA, HILLAIRE-BUYS D, ROUX C, FAILLIE JL, AMRAM D. Möbius Syndrome in a Neonate After Mifepristone and Misoprostol Elective Abortion Failure. *Ann Pharmacoth.* 2008; 42: p. 888-892.
74. COELHO KE, SARMENTO M, VEIGA CM, SPECK-MARTINS CE, SAFATLE HPN, CASTRO CV, ET AL. Misoprostol embryotoxicity: Clinical evaluation of fifteen patients with arthrogryposis. *Am J of Med Genet.* 2000; 95: p. 297-301.

75. BLANCHARD K, WINIKOFF B, ELLERTSON C. Use of Misoprostol during Pregnancy and Möbius' Syndrome in Infants. *N England J Med.* 1998; 339: p. 1553-1554.
76. FISCHER M, BHATNAGAR J, GUARNER J, REAGAN S, HACKER JK, VAN METER SH, ET AL. Fatal Toxic Shock Syndrome Associated with *Clostridium sordellii* after Medical Abortion. *N England J Med.* 2005; 353: p. 2352-2360.
77. IN BRIEF. FDA reports that two US women died after abortion pill regimen. *Brit Med J.* 2006; 332: p. 684.

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