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Contraception: from accessibility to efficiency

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BACKGROUND: Despite the widespread use of medical contraception in France, the prevalence of abortion remains stable. A cross-sectional population-based survey was designed to study the characteristics of current contraceptive use in France, the different types of contraceptive failure, and the reasons reported for not using contraception. METHODS: A representative sample of 14 704 French households was randomly selected from the telephone directory. All women who in the last 5 years had had an abortion or whose last pregnancy was unintended were selected (n = 1034), whilst a fraction (n = 1829) of the other women were randomly selected. Altogether, 2863 women answered the questionnaire. RESULTS: Only 2.7% of the women aged 18–44 years who did not wish to conceive and were sexually active did not use any contraception. However, 33% of pregnancies were estimated to be unplanned, of which 50% ended in an abortion. A total of 65% of the reported unplanned pregnancies occurred among women using contraception (21% the pill, 9% IUD, 12% condoms, 23% other method). The main reasons given for these contraceptive failures were the misuse of the methods or the failure of the partner to withdraw. Reasons for not using any contraception go beyond a simple lack of information. CONCLUSIONS: The importance of—and the reasons mentioned for—contraceptive failure show a misadaptation between women's contraceptive needs and the method they use. Improving the training of family planning providers remains a major goal to ensure that women use a contraceptive method that fits their social and sexual lifestyle.

Key words: accessibility/contraception failure/contraceptive method/efficiency

Introduction

The use of medical contraception, either the pill or the intrauterine device (IUD), has become increasingly common over the last few decades in France. A study conducted in the general population in 1994 showed that 68% of women aged 20–44 years declared using a reversible method of contraception; of these, 59% used the pill and 23% used an IUD. Less than 3% of the women who were not trying to conceive declared not using any contraception during sexual intercourse (de Guibert-Lantoine and Leridon, 1999). At the same time, the incidence of abortion remains rather stable, at a rate hovering around 15/1000 women aged 18–44 years. About 200 000 abortions are carried out every year (Le Corre and Thomson, 2000), and nearly 20% of the 760 000 annual births are unplanned (Toulemon and Leridon, 1992). Not all of these contraceptive failures can be due to the 3% of women who are not using contraception. They must also be the consequence of a misuse of contraceptive methods (Trussell and Vaugham, 1999), including hormonal ones. This fact reflects the difficulties women face in their day-to-day management of contraception.

The goal of this article is to identify the characteristics of current contraceptive use in France, the different types of contraceptive failure, and the reasons reported for not using contraception. The results could be used in the realm of policy making to reduce the number of contraceptive failures.

Materials and methods

Sample

We report, in the present paper, results from data collected during the first stage of a prospective cohort study aimed at increasing knowledge about life-course contraceptive practices, and about circumstances surrounding contraceptive failure and abortion in France. The first wave was conducted in the year 2000; the selected women will be interviewed each year for 5 years.

A representative random sample of 14 704 households including at least one eligible French-speaking woman aged 18–44 years was randomly selected from the telephone directory, which was first stratified by region. To minimize the number of refusals, a letter was sent to each of the selected households before telephone calls were made (ACSF Group, 1992). If more than one eligible woman lived in a

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Table I. Distribution of the main contraceptive method (per 100 women of each age group) in the year 2000 in France[a]

	Age on January 1, 2001 (years)						
	18–19	20–24	25–29	30–34	35–39	40–44	18–44
Year of Birth	'81–82	'76–80	'71–75	'66–70	'61–65	'56–60	1956–82
Contraception used							
Pill	53.9	68.3	56.7	43.8	33.2	28.0	45.8
IUD	0.0	0.9	7.5	18.3	27.6	29.6	16.1
Condom	9.2	8.6	7.7	8.0	6.2	6.7	7.5
Vaginal contraception (spermicides and others)	0.2	0.0	0.1	0.4	0.5	0.9	0.4
Periodic abstinence	0.0	0.8	0.8	0.4	2.9	1.7	1.3
Withdrawal method	0.0	0.2	3.2	1.4	3.5	2.6	2.1
Other method	0.0	0.4	0.1	0.2	0.7	1.1	0.5
All reversible methods (2000)	63.3	79.2	76.1	72.5	74.6	70.6	73.7
Sterilisation[b]	0.0	0.0	0.3	0.9	5.7	16.3	4.5
No contraception							
Sterile	0.0	0.0	0.6	0.5	1.7	4.2	1.4
Pregnant	1.5	1.8	7.1	6.9	3.3	0.4	3.8
Not in a sexual relationship	33.3	17.1	6.6	8.4	6.5	3.4	10.0
Trying to conceive	0.0	1.4	7.0	6.9	4.5	1.9	4.1
Other	1 .9	0.4	2.3	4.0	3.7	3.1	2.7
Total	100%	100%	100%	100%	100%	100%	100%

[a]Each woman appears only once in the Table. The methods are listed in order of theoretical success rate.
[b]For contraceptive or other purposes.

given household, one of them was randomly selected. A total of 3162 women refused to participate and 567 were otherwise excluded (unreachable, incomplete questionnaires). The response rate among eligible women was 74.6%. Interviews were conducted by telephone (CATI, converso®) between September 2000 and January 2001 by trained interviewers. To ensure anonymity, contact information was automatically erased from the files in which the responses were recorded after the woman had answered the first question.

Sample weighting

Women, who in the last 5 years had had an abortion or whose last pregnancy was unintended, were all selected (sampling fraction 100%, $n = 1034$), whilst only a fraction of the other women were randomly selected (sampling fraction = 19%, $n = 1829$). Altogether, 2863 women answered the questionnaire. In order to take the sampling design into account in the analysis, each woman was given a sampling weight, equal to the product of the number of eligible women times the inverse of the sampling fraction. Furthermore, in order to get representative estimates for the whole French population, the weighting of each woman was modified according to the under-representation (or over-representation) of the categories to which she belonged compared with the structure of the general population (Leridon, 1994). The individual weightings were adjusted in such a way that the marginal distributions for some important characteristics (age, marital status, occupation and level of education) were identical in the sample (with the final weightings) and in the French population. This process is based on the hypothesis that the 'missing women' in a category (such as '20–24 years old', 'single') behave in a way that is closer to the average of respondents of the same category than to the average of the whole sample.

The STATA software was used to calculate representative estimates for the general population and to perform statistical tests, which take into account the complex sampling procedure and the unequal selection probabilities. The total numbers reported in the Tables are gross values, i.e. the number of women actually interviewed. The percentages are weighted percentages taking into account the sampling design.

Questionnaire

We explored the women's contraceptive and reproductive histories, and collected their sociodemographic characteristics. The last pregnancy, regardless of its outcome, was explored in detail, with special attention to the relationship in which the women was engaged at that time.

Analysis

We first describe current contraceptive use by age. We then analyse the reasons given for not using contraception, and the factors contributing to contraceptive failure, for all women who had not planned their last pregnancy. Measuring the 'wantedness' status of a pregnancy is fraught with well-known methodological problems (Kaufmann *et al*., 1997; Fischer *et al*., 1999; Stanford *et al*., 2000; Barett and Wellings, 2002). We constructed an 'unplanned pregnancy, yes/no' variable using women's answer to the question: 'Did you intend to get pregnant (then)? Earlier/at that moment/later/not at all/you have never thought about it', and their answer to the question: 'Did you want (then) to have a child?: no/now/in the year/later' (see below).

Results

Current contraceptive use

Table I shows the distribution of current contraceptive practice by method and age in France: a total of 74% of women aged 18–44 years declared using a reversible method of contraception. The pill is the most widely used contraceptive method: 46% of women aged 18–44 use it, that is 62% of all women using a reversible method. French women >40 years were slightly more likely to use an IUD than the pill. IUDs are mainly prescribed to women who have already had children: only 0.7% of the women aged 18–44 years who had no children were IUD users, whereas 21.1% of those who already had one child and 34.7% of those who had two or more children use IUDs. Younger women tended to use condoms.

The percentage of women who state they use no contraception even though they do not wish to conceive and are having sexual intercourse is very low: 2.7% in our sample.

The pregnancy's 'wantedness' status

Despite this high level of contraception use, the control of fertility seems to remain problematic: although most pregnancies in the last 5 years were reported to be 'wanted at the time of conception' (59%) or 'earlier' (12%), nearly one in five women did 'not want to be pregnant at all' (20%) at the time of conception, 6% wanted to become pregnant 'later', and 3% 'had not even thought about the possibility of becoming pregnant' at the time of the pregnancy. When taking only into account the last pregnancy, we find the same distribution by 'wantedness' status (respectively 57, 12, 22, 6 and 3%).

The group of women who had a pregnancy and said they 'would have wanted to become pregnant later' or 'had not even thought about a pregnancy' (n = 248) need to be carefully examined (Barett and Wellings, 2002). Some of these women might have answered that they wanted to become pregnant later because they did not think they would get pregnant so quickly; others may not have thought about the possibility of becoming pregnant because they were using contraception. The socio-demographic profiles of these two groups of women are distinctively different from the profile of the women who intended to get pregnant at the time of conception and from the profile of those who became pregnant although they did not want to (data not shown). Thus, the first two groups of women cannot be attributed either to the wanted pregnancy or the unwanted pregnancy groups.

Some of these 248 women claimed that they were not using any contraception when they became pregnant and did report later in the questionnaire that they wanted to have a child at that time or later in the year. These women (n = 95) were grouped with the women who said that their pregnancy was wanted 'at that time' or 'earlier'. This group was called the 'planned pregnancy' group (73% of women). The other 153 women were included in the 'unplanned pregnancy' group, with the women who claimed that they did not want to get pregnant at all (27% of women in total).

Contraceptive failures: methods and reasons

Of the reported unplanned pregnancies, 32.4% resulted in an abortion (whereas 1.8% of the women who planned to get pregnant had an abortion) and 65% of the unplanned pregnancies happened to women who reported using a contraceptive method at the time of the pregnancy. Most of them were using the pill (20.9%) or a natural method based on the woman's knowledge of her cycle (21.8%: Ogino method, temperature, withdrawal) (Table II), when the contraceptive failure occurred. The distribution of contraceptive use by method differs slightly, depending on the issue of the unplanned pregnancy: women who used condoms and became pregnant were more likely to have an abortion (Table II).

The main reasons given to explain the contraceptive failures (Table III) were the 'misuse of the method': 60% of the women taking the pill cited this reason, 53% of the women using a condom, 32% of the women using local methods and 26% of those using a natural method who got dates wrong. One specific reason for misuse was the fact that the woman had been ill (8% of women using a pill had vomited). Other reasons given to explain the failures refer to relational issues: the inability of the partner to withdraw (67%) for those women using a natural method can be categorized as such, and probably part of the failure to use condoms consistently (28% of women using condoms) as well. Finally, some failures appear to be out of the control of the users: a number of women had no idea of what happened (58% of IUD users, 21% of pill users, 19% of

Table II. Contraceptive situation when the last unplanned pregnancy occurred

Contraceptive situation	All last unplanned pregnancies (n = 897)	Unplanned pregnancy ended by an abortion (n = 349)
No contraception	34.9	28.1
Pill	20.9	23.1
IUD	8.7	7.0
Condom	11.8	19.3
Natural method*	21.8	19.1
Local method	1.4	2.8
Other method	0.6	0.6
Total	100%	100%

*Methods based on woman's knowledge of her cycle including withdrawal.

Table III. Distribution of the reasons for contraceptive failure given by women with unplanned pregnancies according to the method used at the time of becoming pregnant (n = 423)

Pill	n = 176
Took tablets late/forgot to take tablets	60.3
Illness, medication	10.6
Vomiting	7.7
No explanation, do not know	21.4
Total	100%
IUD	n = 62
IUD in wrong position or fell out	31.1
Illness, medication	11.3
No explanation, do not know	57.6
Total	100%
Condoms	n = 116
Condom tore or slipped off	52.9
No contraception used this time	28.1
No explanation, do not know	19.0
Total	100%
Natural methods	n = 48
Got dates wrong	26.2
Partner withdrew too late	67.1
No explanation, do not know	6.7
Total	100%
Local methods	n = 21
Incorrect use	32.0
No contraception used this time	51.9
No explanation, do not know	16.1
Total	100%

Table IV. Reasons for not using contraception, given by women who had an unplanned pregnancy (women not using any contraception when they became pregnant; several answers are possible)

Reasons for not using contraception	%
Thought there was no risk of getting pregnant	63.6
Not worried about contraception	58.6
Thought 'we'll see'	38.9
Unplanned/undesired intercourse	34.5
Stopped using method because it was not suitable	33.0
Did not have contraception available	29.7
Too many problems to think about contraception	28.0
Thought about AIDS but not pregnancy	16.8
Being careful not to become pregnant	15.8
Did not really know where to go	12.5
Numbers	253

condom users), some users of the IUD blamed the failure on the fact that the IUD was expelled (31%), others refer more generally to a failure of the medication they took (~10% of all women using a medical method of contraception, i.e. the pill or the IUD).

Non-contraceptive use

The reasons given for not using any contraceptive methods at all were varied and often multiple (Table IV); women cited three reasons on average. Some answers refer to a problem of access to contraceptive methods: 'did not know where to go' (12%), 'had no contraception available' (30%) or 'sexual intercourse was unplanned' (34%). Other reasons mentioned for the non-use of contraception refer to the issue of information: 64% reported that they did not consider themselves 'at risk of becoming pregnant'. Another important issue is that some women reported that they were not worried about contraception (59%), because they were thinking of preventing AIDS but not a pregnancy (17%), or because they were having too many problems in their life to be thinking about contraception (28%). Finally, fatalistic attitudes ('we'll see') were observed in one woman out of three (39%).

Discussion

The percentage of women using a contraceptive method, and especially the percentage using medical contraception (pill or IUD), has increased since 1994 in France. This last trend fits in with a general movement towards the medicalization of contraception, a phenomenon that is particularly significant in France (Leridon and Toulemon, 2003). According to Tiefer, medicalization means defining a problem in medical terms, using medical language to describe it, and adopting a medical framework to understand it (Tiefer, 1996). Despite this high prevalence of medical contraceptive use, unplanned pregnancies remain frequent. As in almost all surveys (Fisher *et al*., 1999), unwanted pregnancies and abortions are under-reported in our study. Comparing our results with national abortion statistics (Le Corre and Thomson, 2000) we estimate that 33% of pregnancies are unplanned (instead of 27%, as reported in our data), and that one out of two unplanned pregnancies end in abortion (instead of 33%, as reported in our data). Despite these corrections, unplanned pregnancies remain less frequent in France than in some other countries such as the USA (Trussell and Vaugham, 1999). The percentage of unplanned pregnancies preceded by contraceptive use is high in our data (65%); a Swedish study found a proportion similar to ours for unplanned pregnancies ended by an abortion (Larsson *et al*., 2002). These proportions are greater than those observed in the USA which are ~50% (Trussell and Vaugham, 1999).

Various issues are raised by the increased recourse to medical contraceptive methods. Our data on contraceptive use by methods, on the methods used at the time of the unplanned pregnancies, and on the reasons given by the women themselves for their contraceptive failure, give some insights into the difficulties associated with the regular use of contraceptives.

In fact, most women knew the reason why they had a contraceptive failure and got pregnant. We found that many unplanned pregnancies were associated with forgetting to take the pill. A Norwegian survey showed that some women, although they had in fact stopped using their pill before their last menstrual period, reported the use of this contraceptive method at the time of conception (Skjeldestad, 2000). The same phenomenon, which overestimates the failure rate of the pill, may be at work in our study, and this may explain some part of the observed contraceptive failures linked to pill use. But beyond this methodological issue, and in addition to the woman's or couple's possible ambivalence towards a desire for children and to the usual problems of compliance associated with all medical treatments, one could think that the pill is not necessarily the best method for women having irregular sexual intercourse or for women whose lifestyle does not make it easy for them to take their pill regularly. For instance, the high prevalence of pill use among the youngest women raises the question of the suitability of this method of contraception for young women who often have short relationships and long periods without partners (Lagrange and Lhomond, 1997).

In the same vein, we found that the IUD is almost never prescribed to childless women as if they were assumed to be necessarily at risk of sexually-transmitted infection (STI). Yet the IUD is a highly satisfactory method for women who are not exposed to the risks of STI, that is those with stable partners, regardless of the number of children they have.

The non-use of condoms is often due to the refusal of the male partner to use a method which some feel restricts their sexual pleasure. This is also true of the withdrawal method, which furthermore requires the man to exercise self-control, and this may be problematic particularly at the beginning of a relationship. The need for the participation of the partner raises issues of power relationships between the couple (Holland *et al*., 1992). Those methods of contraception which rely on the partner are not necessarily suitable in every socio-relational context.

The question of whether the method used is appropriate in the context of women's social and affective lives has been underlined by several authors (Tafelski and Boehm, 1995; Sundby *et al*., 1999; Rivera *et al*., 2001; Stevens-Simon *et al*., 2001). Beyond the lack of information, which may explain part

of the so-called 'misuse' of contraception, methods which are better suited to women's sexual and social lifestyle could help reduce some of these contraceptive failures due to misuse and relational issues.

One unplanned pregnancy out of three is due to non-use of contraception. The women's answers on the reasons for this non-use show that, beyond a lack of information on their fecundity, there still exists a problem of accessibility to contraception (some women answered that they 'did not know where to go', that they had 'no contraception available'), even in a country where the global prevalence of contraceptive use is very high. Problems of accessibility are also linked to the social acceptance of women's sexuality. A recent international study has shown that contraceptive use among adolescents was higher in those countries where their sexual life were socially more accepted (Singh *et al*., 2001), because they felt 'socially allowed' to use contraception.

Many women reported that they did not use any contraception because the sexual intercourse was not planned. This issue is connected to what has been underlined above on the need for women to have a contraceptive method fitting their sexual lifestyle.

For those who had no contraception because they stopped using their previous method, which was no longer suitable, the prescription context is under question. The 'unsuitable' issue being related to the women's sexual lifestyle or to perceived secondary effects raises the question of whether the prescribing doctors are good listeners, whether the woman is able to express herself when she consults for contraception, and whether the woman is willing to take the advice of the doctor in relation to the most suitable method of contraception.

Whatever the case, the contraceptive relay has neither been carried out, nor thought through. This point is important as rates of method-related discontinuation probably reflect dissatisfaction with available methods (Trussell and Vaugham, 1999).

Finally, some unplanned pregnancies occurred because women were not aware of their need for contraception. As shown in a recent qualitative study (Bajos *et al*., 2002) the fact that some women do not make active contraceptive plans does not necessarily mean that they have a careless attitude: the social, family, professional and affective problems that confront women at times can lead them sometimes to relegate the question of contraception, or even to obscure it, if the problems are very severe.

A more frequent recourse to emergency contraception, which has been available over the counter since June 1999 in France, could reduce some unplanned pregnancies that result in an abortion i.e., those resulting from situations where the women knew they were at risk of becoming pregnant. It is nevertheless essential that women are given better control over their contraceptive choice, and are well informed on known or suspected failure risk factors (Sparrow, 1998; Dominik *et al*., 1999) and on AIDS issues (Stigum *et al*., 1995; Narring *et al*., 2000; Crosby *et al*., 2001). A recent study shows that contraceptive failures are less frequent when the doctor takes time to talk extensively with the consulting woman and addresses all their questions, doubts and expectations (Rosenberg and Waught, 1999). However, the woman and her doctor do not occupy the same social position, and prescribers should therefore both make particular efforts to allow women to express their wishes (Ranjit *et al*., 2001) and be attentive to their affective and sexual situation (Bender, 1999). Given the widespread use of medical contraception in countries like France, a better training of family planning providers remains a major goal.

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