

## General Section

# Attitudes towards contraception in three different populations

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## Summary

**Objective:** To investigate contraceptive behavior of women belonging to three different ethnic and/or socioeconomic populations as well as to evaluate the main sources of information concerning contraception in each population. **Methods:** 150 Muslim women living in Germany (group A), 120 Muslim women living in Thrace, Greece (group B) and 140 Christian Orthodox women living in Thrace, Greece were enrolled in the study. Attitudes concerning contraceptive practices were assessed by means of a questionnaire. Demographic and socioeconomic characteristics of each group were compared with the method of contraception used. Statistical analysis was performed using one-way analysis of variance (ANOVA), followed by Turkey's test, chi-square test and multiple logistic regression analysis. **Results:** The contraceptive pill (41.7%), the condom (35.1%), periodic abstinence (24.4%) and interrupted coitus were the most common methods of contraception. The gynecologist (23.4%), the family consultant (12.0%) and the sexual partner (10.2%) were the most usual sources of information. The use of contraceptive pills was more frequent among Muslims from Germany and Christians from Greece ( $p < 0.001$ ), while the use of condoms was more frequent among Christians from Greece ( $p = 0.019$ ). The use of IUDs was more frequent among Muslims from Germany and Greece ( $p = 0.039$ ). **Conclusions:** Our study results reveal that there are behavioral differences between race/ethnic groups and minorities regarding contraceptive practices, probably due to different cultural, socioeconomic and educational factors.

**Key words:** Contraceptive behavior; Different populations; Demographic characteristics; Socioeconomic status; Religion.

## Introduction

Worldwide, an immense amount of time, energy and money is being spent on the prevention of unwanted pregnancies. Since use of contraception is crucial in this endeavor, various studies have looked at the determinants of effective contraceptive behavior [1-5]. From these studies it is clear that contraceptive practice is influenced by a number of determinants. Some of them can be located at the individual level, such as demographic characteristics, psychological factors, attitude towards sexuality, sexual experience, knowledge and attitudes towards contraception. Some determinants are located at the interpersonal level, such as communication and interaction skills. But other determinants of effective contraceptive behavior are situated outside the two persons involved, in society at large. The organization of contraceptive health care and sex education in a country, the quality of the information and care given by family planning professionals, the influence of mass media: all these variables influence individual contraceptive choices and decisions. Effective contraceptive behavior is not an individual achievement, just as ineffective contraceptive behavior should not be dismissed as an individual failure [1].

Consistent use of effective birth-control methods is the primary strategy for preventing unintended pregnancies. However, population-based information about contraceptive use patterns are limited in the international literature. Information about contraceptive use in sub populations can be used to guide the development of state programs and policies regarding unintended pregnancy and the

spread of sexually transmitted infections, as well as to further refine state efforts to improve contraceptive use in groups with special demographic, social, educational, economic, and religious characteristics.

The aim of the present study was to investigate contraceptive behavior of women belonging to three different ethnic and/or socioeconomic populations. We also intended to draw conclusions on social and economic parameters influencing female attitude towards contraception as well as to evaluate the main sources of information concerning contraception in each population.

## Method

To investigate the differences in attitudes towards contraception, representatives of three female subgroups were studied: 150 Muslim women living in Germany (group A), 120 Muslim women living in Thrace, Greece (group B) and 140 Christian Orthodox women living in Thrace, Greece. All respondents were of reproductive age (from 16 to 41 years) and each group was reasonably representative of the corresponding reproductive-aged female population in terms of education, marital status and professional life. Attitudes concerning contraceptive practices were assessed by means of a questionnaire. All women included in the study were very cooperative in answering the questions. Each question was explained to the participants, who subsequently completed the questionnaire in private and finally sent it back by post. Women gave detailed answers regarding their age, place of residence, religion, economic, social, marital and professional status, as well as the main source of information offered to them about contraception. The above-mentioned characteristics of each group were compared with the method of contraception used. Statistical analysis was performed using one-way analysis of variance (ANOVA), followed by Turkey's test, chi-square test and multiple logistic regression analysis.

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## Results

The three groups were compared in terms of age ( $p = 0.904$ ) and residence ( $p = 0.499$ ) but not in terms of social status ( $p < 0.001$ ), permanent partner ( $p = 0.012$ ) and occupation ( $p < 0.001$ ) (Table 1). The contraceptive pill (41.7%), condom (35.1%), periodic abstinence (24.4%)

Table 1. — *Epidemiologic data of the study populations.*

	No. of women (%)	p
<i>Group</i>		
Muslims/Germany	36.6	
Muslims/Thrace	29.3	
Christian Orthodox	34.1	
<i>Place of residence</i>		
Greece	63.4	
Germany	36.6	
<i>Religion</i>		
Christian	34.1	
Muslim	65.9	
<i>Way of living</i>		0.499
Urban	40.7	
Semi-urban	40.0	
Rural	19.3	
<i>Age</i>		0.904
≤ 20	9.0	
21-25	43.2	
26-30	25.9	
31-35	19.8	
≥ 36	2.2	
<i>Social status*</i>		< 0.001
Married	31.7	
Unmarried	19.8	
Divorced/Widow	12.0	
Unmarried with partner	36.6	
<i>Permanent partner**</i>		0.012
No	32.3	
Yes	67.8	
<i>Occupation***</i>		< 0.001
Student	11.0	
Homemaker	24.6	
Unemployed	21.7	
Part-time employment	22.4	
Full-time employment	20.2	

\* Low percentage of married and unmarried Muslim women in Germany. High percentage of unmarried Muslims with a partner in Germany. Low percentage of divorced Muslims in Thrace.

\*\* High percentage of permanent partner in Muslims/Thrace.

\*\*\* Low percentage of students and high percentage of homemakers in Muslims/Thrace.

Table 2. — *Method of contraception in the study population.*

Contraception method	No. of women (%)
Oral contraceptives	41.7
Condoms	35.1
Periodic abstinence	24.4
Interrupted coitus	21.5
Injectable contraception	1.0
IUD	3.9
Spermicides	2.9
Diaphragm	2.2
Tubal ligation	—
Vasectomy	0.2
None	2.7

and interrupted coitus were the most common methods of contraception (Table 2). The gynecologist (23.4%), family consultant (12.0%) and sexual partner (10.2%) were the most usual sources of information (Table 3).

Table 3. — *Source of information regarding contraception.*

Source of information	No. of women (%)
Parents	7.8
Partner	10.2
Insurance doctor	7.3
Gynecologist	23.4
Doctor of Family Planning Services	12.0
Female group	7.3
Friends	6.8
School	7.3
Books	7.1
Newspapers	1.7
Magazines	1.7
Brochure	3.7
Radio	2.0
Television	1.7

Table 4. — *Use of oral contraceptives according to women's characteristics.*

	No. of women using OCs (%)	p
<i>Group</i>		< 0.001
Muslims/Germany	50.0	
Muslims/Thrace	15.8	
Christian Orthodox	54.3	
<i>Residence place</i>		0.008
Greece	36.5	
Germany	50.0	
<i>Religion</i>		< 0.001
Christian	54.3	
Muslim	34.8	
<i>Way of living</i>		0.511
Urban	41.3	
Semi-Urban	39.0	
Rural	46.8	
<i>Age</i>		0.410
≤ 20	37.8	
21-25	38.4	
26-30	47.2	
31-35	44.4	
≥ 36	22.2	
<i>Social status*</i>		0.021
Married	38.5	
Unmarried	29.6	
Divorced/Widow	42.9	
Unmarried with partner	50	
<i>Permanent partner**</i>		0.954
No	41.7	
Yes	41.4	
<i>Occupation***</i>		0.698
Student	40.0	
Homemaker	36.6	
Unemployed	47.2	
Part-time employment	42.4	
Full-time employment	41.0	

\* Low percentage of married and unmarried Muslim women in Germany. High percentage of unmarried Muslims with a partner in Germany. Low percentage of divorced Muslims in Thrace.

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\*\*\* Low percentage of students and high percentage of homemakers in Muslims/Thrace.

Use of contraceptive pills was more frequent among Muslims from Germany and Christians from Greece ( $p < 0.001$ ) as well as among unmarried women with a partner ( $p = 0.021$ ) (Table 4), while the use of condoms was more frequent among Christians from Greece ( $p = 0.019$ ) and women living in rural areas ( $p = 0.038$ ) and less frequent among unmarried women with a partner ( $p = 0.022$ ) (Table 5).

Muslims from Thrace were more likely to practice periodic abstinence (Table 6) and interrupted coitus (both  $p < 0.001$ ) (Table 7). Interrupted coitus was also frequent among unemployed women ( $p = 0.009$ ) (Table 7). Use of IUDs was more frequent among Muslims from Germany or Greece ( $p = 0.039$ ) (Table 8), while spermicides were more frequent among women younger than 25 years ( $p = 0.028$ ), unmarried women with or without a partner ( $p = 0.012$ ) and students ( $p = 0.012$ ) (Table 9).

Table 5. — *Use of condoms according to women's characteristics.*

	Use of condom (%)	p
<i>Group</i>		0.019
Muslims/Germany	31.3	
Muslims/Thrace	29.2	
Christian Orthodox	44.3	
<i>Place of residence</i>		0.008
Greece	37.3	
Germany	31.3	
<i>Religion</i>		0.005
Christian	44.3	
Muslim	30.4	
<i>Way of living</i>		0.038
Urban	38.3	
Semi-Urban	37.8	
Rural	22.8	
<i>Age</i>		0.392
≤ 20	29.7	
21-25	38.4	
26-30	30.2	
31-35	34.6	
≥ 36	55.6	
<i>Social status*</i>		0.148
Married	38.5	
Unmarried	39.5	
Divorced/Widow	40.8	
Unmarried with partner	28.0	
<i>Permanent partner**</i>		0.142
No	40.2	
Yes	32.7	
<i>Occupation***</i>		0.238
Student	28.9	
Homemaker	43.6	
Unemployed	31.5	
Part-time employment	30.4	
Full-time employment	37.3	

\* Low percentage of married and unmarried Muslim women in Germany. High percentage of unmarried Muslim with a partner in Germany. Low percentage of divorced Muslims in Thrace.

\*\* High percentage of permanent partners in Muslims/Thrace.

\*\*\* Low percentage of students and high percentage of homemakers in Muslims/Thrace.

Table 6. — *Use of periodic abstinence according to women's characteristics.*

	Use of periodic abstinence (%)	p
<i>Group</i>		< 0.001
Muslims/Germany	12.7	
Muslims/Thrace	39.2	
Christian Orthodox	24.3	
<i>Place of residence</i>		< 0.001
Greece	31.2	
Germany	12.7	
<i>Religion</i>		0.972
Christian	24.3	
Muslim	24.4	
<i>Way of living</i>		0.634
Urban	26.3	
Semi-Urban	22.0	
Rural	25.3	
<i>Age</i>		0.368
≤ 20	29.7	
21-25	22.6	
26-30	27.4	
31-35	19.8	
≥ 36	44.4	
<i>Social status*</i>		0.202
Married	26.9	
Unmarried	29.6	
Divorced/Widow	14.3	
Unmarried with partner	22.7	
<i>Permanent partner**</i>		0.237
No	28.0	
Yes	22.7	
<i>Occupation***</i>		0.516
Student	22.2	
Homemaker	29.7	
Unemployed	19.1	
Part-time employment	26.1	
Full-time employment	22.9	

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\*\* High percentage of permanent partners in Muslims/Thrace.

\*\*\* Low percentage of students and high percentage of homemakers in Muslims/Thrace.

## Discussion

Comparable population-based information on contraceptive use for certain subpopulations can be used to guide the development of state programs and policies to decrease unintended pregnancies and the spread of sexually transmitted diseases. These data can identify groups within a state who are experiencing a greater unmet need for birth control and who might have barriers to birth control use. Low contraceptive prevalence within subgroups might suggest reduced access to birth control services or other barriers to contraceptive use. Data also might indicate gaps in contraceptive methods offered by providers. An analysis of the prevalence of birth control use by selected population characteristics can help target contraceptive programs to best meet the population. This information can be used to gain a better understanding of contraceptive use patterns among different sociodemographic groups [6].

Our study results reveal that there are behavioral differences between race/ethnic groups and minorities

Table 7. — Use of interrupted coitus according to women's characteristics.

	Use of interrupted coitus (%)	p
<i>Group</i>		< 0.001
Muslims/Germany	11.3	
Muslims/Thrace	31.7	
Christian Orthodox	23.6	
<i>Residence place</i>		0.001
Greece	27.3	
Germany	11.3	
<i>Religion</i>		0.454
Christian	23.6	
Muslim	20.4	
<i>Way of living</i>		0.804
Urban	20.4	
Semi-Urban	21.3	
Rural	24.1	
<i>Age</i>		0.456
≤ 20	24.3	
21-25	21.5	
26-30	24.5	
31-35	18.5	
≥ 36	—	
<i>Social status*</i>		0.623
Married	20.8	
Unmarried	25.9	
Divorced/Widow	16.3	
Unmarried with partner	21.3	
<i>Permanent partner**</i>		0.863
No	22.0	
Yes	21.2	
<i>Occupation***</i>		0.058
Student	22.2	
Homemaker	17.8	
Unemployed	31.5	
Part-time employment	14.1	
Full-time employment	22.9	

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regarding contraceptive practices which are probably due to different cultural, socioeconomic and educational factors. Similar data have been ascertained in other studies indicating that populations of women differ tremendously and patterns of sexual experience and contraception use, although modified by national trends, can differ extensively and widely from the national averages [5, 7]. It is well known that studies involving a large number of important variables categorized suitably combined with the appropriate analytical procedure will provide more valid and stable results [4]. The results of our study, based on small but representative samples, confirm that the use of contraceptives is affected by a host of individual and community characteristics.

Accurate knowledge is the key to making good decisions about one's reproductive health. Studies show that women are able to make the right decisions and safe contraceptive choices as long as they are given and understand the necessary information [8-11]. A lack of knowledge of contraceptive methods or a source of supply, cost

Table 8. — Use of IUD according to women's characteristics.

	Use of IUD (%)	p
<i>Group</i>		0.039
Muslims/Germany	4.7	
Muslims/Thrace	6.7	
Christian Orthodox	0.7	
<i>Residence place</i>		0.544
Greece	3.5	
Germany	4.7	
<i>Religion</i>		0.016
Christian	0.7	
Muslim	5.6	
<i>Way of living</i>		0.675
Urban	3.0	
Semi-Urban	4.9	
Rural	3.8	
<i>Age</i>		0.446
≤ 20	2.7	
21-25	2.8	
26-30	3.8	
31-35	7.4	
≥ 36	—	
<i>Social status*</i>		0.316
Married	3.1	
Unmarried	1.2	
Divorced/Widow	4.1	
Unmarried with partner	6.0	
<i>Permanent partner**</i>		0.240
No	2.3	
Yes	4.7	
<i>Occupation***</i>		0.291
Student	4.4	
Homemaker	2.0	
Unemployed	3.4	
Part-time employment	7.6	
Full-time employment	2.4	

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\*\* High percentage of permanent partners in Muslims/Thrace.

\*\*\* Low percentage of students and high percentage of homemakers in Muslims/Thrace.

and poor accessibility are the barriers that exist mainly in populations of rural economy. The health concerns of these individuals also stop a lot of women and men from using modern contraceptive methods. Periodic abstinence and interrupted intercourse have the least health concerns but have frequent contraceptive failures. All these facts have been confirmed in studies performed on subpopulations of different demographic and socio-economic backgrounds in various countries or even in the same country [12-19]. In our study, modern contraceptive methods like the pill, the diaphragm or spermicides were used by women in urban areas, younger women and students or employed women. On the other hand, women in rural areas preferred old contraceptive methods like periodic abstinence and withdrawal.

The more information and counseling women receive on contraception, the more effectively they perform contraceptive practices. One way to inform women and their partners about family planning is through the mass media, including radio, TV, video and newspapers [20-



Table 9. — Use of spermicides according to women's characteristics.

	Use of spermicides (%)	p
<i>Group</i>		0.264
Muslims/Germany	4.0	
Muslims/Thrace	0.8	
Christian Orthodox	3.6	
<i>Residence place</i>		0.327
Greece	2.3	
Germany	4.0	
<i>Religion</i>		0.577
Christian	3.6	
Muslim	2.6	
<i>Way of living</i>		0.839
Urban	3.0	
Semi-Urban	2.4	
Rural	3.8	
<i>Age</i>		0.243
≤ 20	2.7	
21-25	5.1	
26-30	0.9	
31-35	1.2	
≥ 36	—	
<i>Social status*</i>		0.077
Married	0.8	
Unmarried	3.7	
Divorced/Widow	—	
Unmarried with partner	5.3	
<i>Permanent partner**</i>		0.243
No	1.5	
Yes	3.6	
<i>Occupation***</i>		0.063
Student	8.9	
Homemaker	1.0	
Unemployed	4.5	
Part-time employment	1.1	
Full-time employment	2.4	

\* Low percentage of married and unmarried Muslim women in Germany. High percentage of unmarried Muslim with partner in Germany. Low percentage of divorced in Muslims/Thrace.

\*\* High percentage of permanent partner in Muslims/Thrace.

\*\*\* Low percentage of students and high percentage of homemakers in Muslims/Thrace.

22] which reaches many different groups, thus influencing family planning use among the married and unmarried, the literate and nonliterate, men as well as women. Reaching large and diverse audiences, the mass media is a valuable tool for family planning programs to improve the use of modern contraceptive methods. Typically, however, information in the mass media is not detailed enough to help people choose a specific family planning method and use it effectively. It seems that in our study the mass media did not play a crucial role in promoting family planning since the main source of information regarding contraception was the gynecologist. This should be seriously kept in mind in family planning programs and services organized by the state to improve contraceptive practices in these subpopulations. Attitudes toward contraception reflect the time and society in which individuals live. Actual and continuing efforts are needed to keep society informed and to plan for current and future family planning services.

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