

# Unwanted pregnancy and induced abortion among young women 16-22 years old in Greece: a retrospective study of the risk factors

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## Summary

Unwanted pregnancies and the subsequent induced abortions are common problems of our youths in modern Greece. The aim of this study was to recognize the risk factors of the problem in an effort to find the best possible solution out of this social dead end. *Materials and Method:* We interviewed 1,320 young female individuals and analyzed their answers using statistical analysis. *Results:* Several useful conclusions were reached concerning the forces that are involved in unwanted pregnancy/induced abortions. *Discussion:* We have tried to underline the strategy to combat the problem. *Conclusion:* Sexual education and the proper use of contraception remain the essential tools in this effort.

**Key words:** Unwanted pregnancies; Induced abortions; Risk factors; Contraception; Sexual education.

## Introduction

Unwanted pregnancy, defined as a pregnancy occurring accidentally and against the individual's will and decision, is a public problem with severe health and socioeconomic consequences. Unfortunately, its effects and the subsequent induced abortions are quite enlarged in youths. There is evidence that, compared to women who abort at an older age, women who abort as teens are significantly more likely to report more severe emotional and medical complications related to their abortions; a finding which is supported by the fact that women, who aborted as teens, participate in disproportionately large numbers in post-abortion counseling programs [1]. On the other hand, if an unintended, and most of the times unwanted pregnancy of a young individual ends up in a live birth, the future is rarely optimistic, since such pregnancies are frequently associated with a number of adverse circumstances, like low academic and professional achievements, single parenthood and child abuse [2]. Moreover, giving birth while still a teenager is strongly associated with disadvantages in later life. On average, according to UNICEF, across 13 countries of the European Union, women who gave birth as teenagers are twice as likely to be living in poverty. In other words, reducing teenage births offers an opportunity to reduce the likelihood of poverty and of its perpetuation from one generation to the next [3]. However, most adolescents choose to have an abortion because they have concerns about how a baby would change their lives (e.g., completing their education), they worry about financial problems, or they feel that they are not mature enough to become a parent [4]. Although, according to the official recorded evidence

of UNICEF, adolescent birth rates in Greece have fallen more than three times in the last 30 years, we still have one of the highest rates of abortions in Europe [3]; a reality showing at large that more action has to be taken to reduce these numbers and ameliorate the lives of thousands of young people. In our country, there were two remarkable events that took place in the 1980s and contributed to the limitation of unwanted pregnancy: the development of family planning clinics in 1980, which aimed at a higher level of sex education provided in our population, and the legislation of abortion in 1986, for the struggle against unsafe abortions and their complications, like infection, sepsis, perforation of the uterus, subfertility, upcoming psychological problems, troubled relationships and, even worse, maternal death. Despite the efforts that have already been performed by the state, preventive policies are still weak in Greece, making women rely on abortion to control births [5]. These policies must be directly derived from studying the risk factors for the persistence of this situation in youths: Low level of sex education? Low use of safe-reliable methods of contraception? Low level of consultation before or after the abortion by gynecologists? High number of lifetime sexual partners? Self-destructive behaviors (alcohol or drug abuse, smoking, suicidal ideation, etc.)? Others? Furthermore, we have to wonder deeply who is really responsible for this social abnormality; our schools, our families, the media, the doctors, the state or, just the young people themselves?

It is an extremely disheartening fact that there is almost complete lack of evidence in the field of induced abortions in Greece, especially in youths, since the existence of any official records would indeed promote the understanding of the possible risk factors which are involved in the phenomenon, and would underline the best strategy that could be followed towards the elimination of this social scourge. The main reason for this deficiency of

Table 1. — *Questionnaire on sexual health.*

Measure	Question	Categories <sup>a</sup>
Education (e)	How many years have you studied?	"e < 6 years" (less than 6: rudimentary school, now working or unemployed)? "> 6 e < 9 years" (more than 6 but less than 9: gymnasium or working unemployed)? "> 9 e < 12 years" (more than 9 but less than 12: high school or working unemployed)? "> 12 years e" (more than 12 university or working unemployed)? "yes", "no"
Habits	Have you ever used or been addicted to any kind of substance? (Alcohol? Drugs? Smoking?)	"yes", "no"
Medical history	Have you ever been diagnosed to suffer from any psychological conditions? (Official diagnosis of stress, depression, self-destructive behavior, suicidal attempts, suicidal ideation?)	"yes", "no"
Age at first intercourse	How old were you at your first coitus?	"< 15", "15", "16", "17", "18", "19", "> 19" years-old
Number of pregnancies	How many times have you been pregnant?	"0", "1", "> 1"
Number of children	How many children do you have?	"0", "1", "> 1"
Miscarriages	Did you ever have at least 1 miscarriage in the past?	"yes", "no" If "yes": "1?" , "> 1?"
Number of induced abortions	Have you ever had an induced abortion? If "yes", how many times have you experienced that?	"yes", "no" If "yes", "1?" / "2?" / "> 2?"
Time of abortion(s)	If you have children and you have also undergone abortion(s), could you describe the sequence of these events?	e.g. abortion – birth - abortion
Quality of information (consultation) given by the specialist before and after the abortion	How well do you feel that you have been informed by the specialist on the field of induced abortion before or after having one? (only for those who had an abortion in the past)	"satisfying" , "not satisfying"
Sources of sexual education	Pick up the main and the secondary source of your sexual education	"school", "family", "friends", "media", "doctors"
Use and type of contraception	What contraceptive methods do you usually use? (pick up to two)	"withdrawal", "condom", "IUD", "pill/OCs", "abstinence", "emergency contraception", "other" (like the rhythm method), "no/none"
Number of lifetime sexual partners	How many sexual partners have you had in your life?	"1", "2" , "> 2"

recorded evidence is that induced abortions are often under-reported in national surveys, since they are still considered to be a social taboo and the majority, which are mainly carried out in the private sector (94%), remain unregistered [6]. Of course, the problem is maximized when, in an effort to clarify the correlation between the factors of unwanted pregnancy and its further socioeconomic results, we try to make records of the total percentage of unintended pregnancy among young people, not only those which end up in abortion but also those which are carried out to term. Nevertheless, we have to realize that the matter in question is multidimensional, concerning both its causes and its results, and from this point of view we have to search in many fields in an attempt to detect the factors which enhance the disease, and to point out the several repercussions in our lives. The purpose of this study was to investigate a complex interplay of forces which are supposed to present the risk factors for unwanted pregnancy and induced abortions among women 16-22 years-old within the Greek society and, finally to reach a strategy that could be followed in order to confront this major social problem.

## Materials and Methods

Data were gathered from a population-based survey which was conducted among women in the late and post adolescence years (16-22 years-old) who reported that they had already experienced sex. We approached by interviewing them through anonymous questionnaires and studied the experience and opinions of each of 1,320 young women on certain issues concerning sexual health, unwanted pregnancies and induced abortions. Recruitment was performed by approaching the youths in many areas throughout the country – urban or rural –, like high schools and universities (during sexual education programmes), homes and several working places (through invitation letters), giving information about the study. An interview was arranged with each potential participant to administer the questionnaire. The interviews were conducted in a variety of places (at home, in the work place, at schools or in the universities of the interviewees) and sensitive questions, like those on abortion, were answered in a self-completed questionnaire. Finally, we gathered data from 730 pupils in high school, 400 students in several universities and 190 female individuals (either employees or unemployed). Permission to use this sensitive data was obtained from each participant through the Ministry of Health and the Ministry of Education. The questionnaires used were plain and

simple to comprehend and the key questions and measures derived from them are given in Table 1. We obtained information on nationality, age, religion, education, habits, medical history, marital status and number of children, age at first intercourse, number of abortions in the past, sources of sexual education, use and type of contraception, and number of lifetime sexual partners.

Age, nationality, and religion were the information needed to confirm that the interviewees were 16-22 years-old, Greeks, and Orthodox Christians. In this way, we prevented any differences in the participants' opinions to be attributed to nationality or religious influences and consequently, we tried to present the stance and experience of the average young individual with an active sexual life in the Greek society; a reality for which this survey was conducted. Statistical analysis of the data was done with SPSS (Statistical Package for Social Sciences). The chi-square criterion was used to investigate whether distributions of several categorical variables differ from one another (significance level of our study = 0.01, meaning that when  $p$  (probability) > 0.01 in certain df – degrees of freedom – (which means that  $p$  value in the  $\chi^2$  test is < 0.01), the results are statistically significant and the null hypothesis of independence is rejected).

## Results

The results of the above questionnaire are cited below in Table 2, and the analysis of each potential risk factor follows next.

Table 2. — *Answers to the sexual health questionnaire.*

Measure	Number of individuals/interviewees
Education (e)	"e < 6 years": 41, "> 6 e < 9 years": 110, "> 9 e < 12 years": 752, "> 12 years e": 417
Habits	"yes": 468, "no": 852
Medical history	"yes": 149, "no": 1171
Age at first intercourse	Mean age: 17.56 years old
Number of pregnancies	"0": 804, "1": 251, "> 1": 265
Number of children	"0": 1175, "1": 122, "> 1": 23
Miscarriage(-s)	"yes": 90, "no": 1230 / "1": 58, "> 1": 32
Number of induced abortions	"yes": 435, "no": 885 / "1": 338, "2": 72, "> 2": 25
Time of abortion(s)	"abortion after birth": 79, "abortion before birth": 28
Quality of information given by the specialist before and after the abortion	"satisfying": 151, "not satisfying": 284
Sources of sexual education	"school": 217, "family": 341, "friends": 1134 "media": 688, "doctors": 260
Use and type of contraception	"withdrawal": 470, "condom": 780, "IUD": 170, "pill/OCs": 109, "abstinence": 85, "emergency contraception": 792, "other" (like the method of the rhythm): 65, "no/none": 169
Number of lifetime sexual partners	"1": 732, "2": 428, "> 2": 160

**Education (e):** 41 women (group A) reported education "e < 6 years" (and now working or unemployed), 110 (group B) answered "> 6 years e < 9 years" (and now working or unemployed), 752 (group C) "> 9 years e < 12 years" (high school, working unemployed) and 417 (group D) "> 12 years e" (university, working unemployed). Females, who had had one or more induced abortions (435), are distributed as follows according to their education level: 38 women (92, 68% of group A) in the "e < 6 years" category, 96 (87, 27% of group B) in "> 6 years e < 9 years", 200 (26, 59% of group C) in "> 9 years e < 12 years" and 101 (24, 22% of group D) in "> 12 years e" category. Using the chi square test, we find  $p > 0.01$ , a statistically significant relation between the two values (education, abortion) and, to be more precise, there is a negative correlation between the level of education, as a risk factor, and the possibility of induced abortion. In simple words, the less educated someone is, the more likely she is to undergo an abortion.

**Habits:** 468 youths in our survey (35.45%) answered "yes" to the question and 852 (64.55%) "no". We noticed that 197 women (42.9% of the "yes" group) that reported having "bad habits" (smoking, alcohol etc.) had undergone one or more induced abortions, while 271 (31.81% of the "no" group) of the second group had had the same experience. Statistical calculations of the data revealed  $\chi^2 > 6.635$  (df = 1),  $p > 0.01$ . "Bad habits" seem to positively affect the incidence of induced abortions.

**Medical history:** 149 young females answered "yes" to the question. To be more specific, 89 women who reported to have experienced at least one pregnancy before (17.25% of the group of 516 women – see Table 2 "number of pregnancies"), answered that they had had a positive medical history for psychological conditions in the past and they had visited a specialist for this reason at least once in their lifetime. On the other hand, 60 women, out of those who had had no pregnancy in the past (804), gave the same answer as the previous group (7.46% of this population). According to the chi-square test,  $\chi^2 > 6.635$  (df = 1),  $p > 0.01$ , which means that the null hypothesis – that pregnancy in this age group is independent of psychological medical history – is rejected. In other words, we observe that there is a positive relationship between pregnancy rates and psychological conditions in 16-22 year-old women.

**Age at first intercourse:** 752 (56.97%) women answered that they had had their first sexual intercourse < 18 years of age and 568 (43.03%) reported age at first coitus > 18 years old. The mean age of first coitus of the sample was 17.56 years old. The statistical study of its distribution among young women, in relation to any potential induced abortions, revealed that the earlier a female had had her

Table 3. — *Pregnancies categorized by parity, abortions or miscarriages.*

Number of women reporting	Children "1"	Children "> 1"	Abortion: "1"	Abortions: "2"	Abortions: "> 2"	Miscarriages (at least one)
Pregnancy: "1"	22	-	216	-	-	13
Pregnancy: "> 1"	100	23	122	72	25	77
Total	122	23	338	72	25	90

first coitus, the more likely she would have undergone an abortion.

*Number of pregnancies:* 516 women answered that they had experienced at least one pregnancy before and, moreover, 265 individuals out of the above-mentioned group (of these 516 women) reported more than one pregnancy - see Table 3.

*Number of children:* 122 young females reported having had one child, while another 23 had more than one. Twenty-two women had had just one pregnancy in the past that had ended up in a live birth, 85 reported an abortion before or after their child's birth, five had had two abortions and had given one live birth, one had had more than two abortions and had given one birth, nine reported one live birth and medical history of miscarriage(s), six had had two children and no abortion or miscarriage in their medical history, 14 had had an abortion before or after two live births, one answered three live births and one abortion in her medical history, one reported two live births and two abortions and finally, one answered two births and history of miscarriage(s) - see Table 4.

Table 4. — *Medical history of abortions and miscarriages in relation to parity.*

	No. of children = 1	No. of children > 1
No abortion/no miscarriage	22	6
History of 1 abortion	85	15
History of 2 abortions	5	1
History of > 2 abortions	1	0
History of miscarriages	9	1

We can clearly conclude that 91 women had had one child and history of abortion (group A), while 16 women, having had the same medical history, answered "more than one child" (group B). Sixty-three women in group A and 16 in group B (all of them) reported that the abortion(s) had taken place after the birth of their child(ren). The chi square test reveals again  $p > 0.01$ . Number of children is a factor which affects a woman's decision to abort. The more children a female has, the more likely she is to decide on abortion to control births.

*Miscarriage:* 90 (6.81% of the population we studied) women (of all groups: with or without any children, with or without having had any abortions) answered positively that they had experienced at least one miscarriage in their life. Fifty-eight females reported just one miscarriage in their medical history, while 32 reported more than one.

*Number of abortions:* 435 (32.95%) female individuals, either parous or nulliparous, reported having undergone at least one abortion in the past, while 1/6 (72 women) of them (435) reported two and 1/17 (25 women) had experienced more than two abortions. Two hundred and sixteen women answered that they had had only one pregnancy before which had ended up in induced abortion and 122 reported an abortion before or after birth or miscarriage.

*Quality of information (consultation) given by the specialist before and after the abortion:* 284 women (out of 435 that had had at least one abortion) answered "not sat-

isfying" and 151 "satisfying": 208/284 (61.54% of the group of 338 women reporting only 1 abortion) had undergone one abortion in the past, 54/284 two (75% of women with 2 abortions) and 22/284 more than two (88% of the women with > 2 abortions). Statistical analysis ( $\chi^2$  test) showed that the quality of information given by the specialist before and after the abortion plays an important role in the prevention of future induced abortions.

*Sexual education:* In Greece, like in all the Western world, there are several potential sources of sexual education such as school, family, friends, media and doctors. According to our study, 12.95% (171) of female youths supported "school" as the *main* source of sexual education, 9.55% (126) chose "family", 38.79% (512) "friends", 22.58% (298) "media" and 16.13% (213) "doctors". As far as the *secondary* source of sexual education is concerned, 3.48% (46) answered "school", 16.29% (215) "family", 47.12% (622) "friends", 29.55% (390) "media" and 3.56% (47) "doctors" - see Table 5.

We can clearly make out that the main influence on this field is coming from "friends" (1,134 individuals have picked it up either as a *main* or *secondary* factor / 85.91%), then from "media" (688/52, 12%), "family" (341/25, 83%), "doctors" (260/19, 697%) and, finally, "school" (217/16, 44%). We noticed that school, family and doctors (*their proportion was diminished in the group A category*) are more reliable sources of sexual education than friends and media (*their proportion was increased in the group A category*) in our society, since statistical analysis using the chi square test and evaluation of each proportion have revealed  $p > 0.01$ ; meaning that the *null hypothesis* (abortions are independent of the quality of sexual education/information) is rejected.

*Contraception:* The use and type of contraception chosen in the questionnaire were the following: "withdrawal" (470/35.61%), "condom" (780/59.09%), IUD (170/12.88%), "pill/OCs" (109/8.26%), "abstinence" (85/6.44%), "emergency contraception" (792/60%), "other" like the rhythm method (65/4.92%) and "none" (169/12.80%). We notice that the main preferences in contraception of these young women were "emergency contraception" and "condom", then "withdrawal", "IUD", "pill/OCs", "abstinence" and in the end, several "other" methods. Of youths, 12 (80%) reported that they had not used any kind of contraception during sexual intercourse - see Table 6.

Statistical analysis of the above data showed that the use and the type of contraception are very important in the prevention of an unwanted pregnancy and the following abortion(s). Traditional methods of contraception like withdrawal, condoms and others appear to be a statistically significant increased proportion in women reporting abortion(s), whereas, in women without abortions, the percentages, which are increased, point to more contemporary methods that are available to the common woman (IUD, pill/OCs, emergency contraception). It is obvious that contemporary methods are more reliable than traditional ones. As far as abstinence is concerned, it is undoubtedly a traditional and efficient way to prevent an unwanted pregnancy.



Table 5. — Sources of sexual education in women who underwent abortions or not.

Categories	School	Family	Friends	Media	Doctors
A: Women reporting abortion(s) in the past (435)	20 (8 1 <sup>st</sup> choice, 12 2 <sup>nd</sup> choice) 4, 60% of group A	63 (14.48%) 1 <sup>st</sup> : 30, 2 <sup>nd</sup> : 33	433 (99.54%) 1 <sup>st</sup> : 238, 2 <sup>nd</sup> : 195	308 (70.80%) 1 <sup>st</sup> : 125, 2 <sup>nd</sup> : 183	46 (10.57%) (1 <sup>st</sup> : 33, 2 <sup>nd</sup> : 13)
B: Women without abortion(s) in their medical history (885)	197 (1 <sup>st</sup> : 163, 2 <sup>nd</sup> : 34) 22.26% of group B	278 (31.41%) 1 <sup>st</sup> : 96, 2 <sup>nd</sup> : 182	701 (79.21%) 1 <sup>st</sup> : 274, 2 <sup>nd</sup> : 427	380 (42.93%) 1 <sup>st</sup> : 173, 2 <sup>nd</sup> : 207	214 (24.18%) 1 <sup>st</sup> : 180, 2 <sup>nd</sup> : 34
	217	341	1134	688	260

Table 6. — Use and type of contraception in women who had abortions and those who did not.

Categories	Withdrawal	Condom	IUD	Pill/OCs	Abstinence	Emergency	Other	None
A: Women reporting abortion(s) in the past (435)	195 (44.83% of this group A)	312 (71.72%)	33 (7.59%)	19 (4.37%)	9 (2.07%)	178 (40.92%)	39 (8.97%)	85 (19.54%)
B: Women without abortion(s) in their medical history (885)	275 (31.07% of this group B)	468 (52.88%)	137 (15.48%)	90 (10.17%)	76 (8.59%)	614 (69.38%)	26 (2.94%)	84 (9.49%)
	470	780	170	109	85	792	65	169

Table 7. — Lifetime sexual partners and pregnancy outcome.

Categories	Live births (145)	Abortions (435)
“One lifetime sexual partner” (732)	117/145	169/435
“Two lifetime sexual partners” (428)	23/145	187/435
“More than two lifetime sexual partners” (160)	5/145	79/435

*Number of lifetime sexual partners:* 732 (55.45%) individuals reported having had one sexual partner until the time of the survey, 428 (32.42%) reported two and 160 (12.12%) more than two lifetime sexual partners - see Table 7.

We noticed that 117 women that had had live births were included in the category of “one lifetime sexual partner”, 23 in the “two lifetime sexual partners” category and five in “more than two lifetime sexual partners”. The chi-square test showed  $p > 0.01$  for all the above categories, meaning that parity is related (negatively) to the number of lifetime sexual partners in this age group (the null hypothesis: «number of lifetime sexual partners / parity» is rejected). Moreover, we made out that, of the 435 females who had undergone one or more induced abortions, 169 (23.8% of the subgroup) were coming from the first category, 187 (43.69%) from the second and finally, 79 (49.37%) from the third category. The chi-square test revealed  $p > 0.01$ , showing that the more lifetime sexual partners someone reports, the more likely she is to have undergone an abortion (the null hypothesis: «number of lifetime sexual partners / possibility of abortion» is rejected).

## Discussion

Recently it has been noted that teenagers are sexually active in younger ages and demonstrate lower compliance to contraceptive methods. An unintended, and most of the time unwanted pregnancy brings teenagers to a crisis. The

decision to interrupt a pregnancy is today taken frequently. Although the teenage birthrate declined from 9.0% in 1985 to 5.2% in 2003, teenage pregnancy still remains a serious medical and social problem and abortion rates are still extremely high during adolescence [7].

In our study, the prevalence of self-reported abortions was highest among 16-22 year-old women with a low level of education and/or “bad” habits and/or medical history of psychological disturbances and/or high number of lifetime sexual partners and/or earlier age at first intercourse. Additionally, women who were parous (having one or more children), misinformed by specialists on the matter of abortions, without any proper sexual education and using mostly unreliable methods of contraception or no contraception at all were more likely to experience an unwanted pregnancy and a following induced abortion. It seems that this problem reflects more extensive and serious abnormalities in several sectors of our modern society which need to be addressed.

*Education:* The state must take measures to promote the level of youth’s education. Teaching people to think freely, to understand human values, and to act with merit, is the first step to enhance the social balance and to solve many of our contemporary problems, like the scourge of unwanted pregnancies. The more responsible people are in their lives, the more respected the idea of reproduction and birth become. Not only do we have to combat illiteracy, but also it is essential to improve the current way of learning and lead it towards the human principles. This is the deduction from our study in the sector of education – the family, schools and state have to realize that adolescents and young people must be given the chance of high quality education in order to prevent future unwanted pregnancies and induced abortions.

*Bad habits:* In our study there was a significant difference in the abortion rate between females with alcohol abuse or smoking and females without such habits. The family could play an important role through consultation

on this subject, and so as the state, through laws, and the school, through providing a better education. “Bad” habits, as a sign of personal weakness, can be successfully eliminated, thus helping us to suppress in a more efficient way the abortion rates among our youths.

*Medical history:* According to our survey unwanted pregnancies and the consequences (induced abortions, undesired births and children, child abuse, etc.) can be limited if we fight several taboos in the area of a psychologist’s consultation. It is necessary for young person to seek and accept a specialist’s advice, when needed, and this should not become a social stigma. In this way, many unwanted pregnancies can be prevented and well being can be established among young women.

Apart from the above-mentioned character of the problem in question, there is another and more practical side which needs to be approached, as cited below:

*Sexual education:* As the sexual activity rate in adolescence is reportedly increasing worldwide, improving knowledge concerning sexual education in adolescents might contribute to improving reproductive health issues in such age groups [8]. This should be provided mainly by the school, family and doctors. Media and friends can easily mislead and confuse young females. Unfortunately, sex education is still not included in the Greek school curriculum, and only sporadic information is given [5]. Moreover, many parents still believe that there is no need for sexual information at school due to personal taboos. However, the Ministry of Education and several non governmental organizations, such as the Greek Society of Family Planning, organize teaching programmes on Health Education for adolescents [6]. We just have to support this effort in order to reach, via our schools, a satisfying level of sexual education. We should improve the attitudes, beliefs and knowledge of Greek adolescents regarding sexual intercourse, contraception and sexually transmitted diseases through organizing better programmes on sexuality for youths [9]. Also parents can be trained so as to develop an understanding and proper behavior on this topic towards their children. The role of the gynecologists of course is very important and we have to urge youths to have regular visits.

*Quality of information (consultation) given by the specialist before and after an abortion:* Our study has clearly shown that 65.29% of the women who had had at least one abortion in their medical history, were not satisfied with the quality of consultation by their doctor before and after the abortion. This is in accordance with what the Non-Aligned Women’s Movement in 1992 argued: despite the fact that abortions were legalized in 1986 and covered by insurance funds, some women were being treated in a hostile way by doctors and social workers in the public hospitals [6]. Doctors must be convinced that a woman having an abortion is in a sensitive and vulnerable position, needing information and psychological support before and after the procedure. Younger women have an even more difficult time adjusting to their abortions. One study found that teenage aborters were more likely to report severe nightmares following abortion and to score

higher on scales measuring antisocial traits, paranoia, drug abuse and psychotic delusions than older aborters [1]. Considering the above, we understand the necessity of proper information given by the doctor to the patient. Another problem, which can be prevented, is “replacement pregnancies”. Young people tend to repeat pregnancies; a symptom of youths “acting out” unresolved abortion issues and the desire to “replace” the lost pregnancy with another child, which is often aborted because the woman faces the same pressures as she did the first time, and sometimes even more so [1]. To sum up, a high quality of consultation contributes to the decrease of future and repeated unwanted pregnancies and induced abortions in youths.

*Use and type of contraception:* In Greece poor education on the issue of contraception still remains a major problem among teenagers contributing to the increased prevalence of undesired pregnancies and abortions [10]. Greek society has not fully adopted the modern methods of contraception, and appears to have one of the lowest rates of modern contraceptive use in Europe [5]. Coitus interruptus and condom use are the most commonly used methods in our country, whereas the pill and other reliable contraceptive methods appear to have low use rates. Contraception is the proper way in which sexual behavior is expressed; the personality and level of the general and sexual education of the individual, as well as the maturity of her environment, are reflected thoroughly in the individual’s contraceptive consciousness. Consequently, abortion in our country is a part of the Greek contraceptive culture [11] and from this point of view, it is very important that contraception-related topics be introduced as a part of sexual education, despite several adverse circumstances, like the generation gap between parents and children, the lack of teachers trained in sexual education and discussion and other barriers [12].

## Conclusion

The matter of unwanted pregnancies and their following induced abortions among youths 16-22 years-old in Greece is existent and extremely important to be solved to ameliorate the everyday life of thousands of young people. We have to concentrate on the risk factors for the phenomenon and try to find the path away from this scourge. Sexual education and the proper use of contraception remain the essential tools in our effort.

## References

- [1] Sobie A.R., Reardon D.C.: “Detrimental effects of adolescent abortion”. *Post-Abortion Review*, 2001, 9 (1).
- [2] Panagopoulos P., Salakos N., Bakalianou K., Davou E., Iavazzo C., Paltoglou G., Liapis A.: “Adolescent pregnancy in a Greek public hospital during a six-year period (2000-2005). A retrospective study”. *J. Pediat. Adolesc. Gynecol.*, 2008, 21, 265.
- [3] UNICEF: “A league table of teenage births in rich nations”, Innocenti Report Card No.3, July 2001. UNICEF Innocenti Research Centre, Florence.

- [4] <http://www.childtrendsdatbank.org/indicators/27TeenAbortions.cfm>
- [5] Ioannidi-Kapolou E.: "Use of contraception and abortion in Greece: A review". *Reprod. Health Matters*, 2004, 12 (suppl. 24), 174.
- [6] Salakos N., Bakalianou K., Gregoriou O., Iavazzo C., Paltoglou G., Creatsas G.: "Abortion rates and the role of family planning: a presentation of the Greek reality". *Clin. Exp. Obstet. Gynecol.*, 2008, 35, 279.
- [7] Deligeoroglou E., Christopoulos P., Creatsas G.: "Pregnancy and abortion in greek adolescent gynecologic clinics" *Akush Ginekol (Sofia)*, 2004, 43 (suppl. 4), 37.
- [8] Bakalianou K., Salakos N., Iavazzo C., Liapis A., Gregoriou O., Papadias K.: "Greek students' experiences, attitudes and knowledge about reproductive health". 2<sup>nd</sup> Department of Obstetrics and Gynecology, University of Athens, Aretaieion Hospital, Athens, Greece.
- [9] Bakalianou K., Salakos N., Iavazzo C., Gregoriou O., Botsis D., Papadias K.: "Adolescent sexuality: The Greek reality". 2<sup>nd</sup> Department of Obstetrics and Gynecology, University of Athens, Aretaieion Hospital, Athens, Greece.
- [10] Mavroforou A., Koumantakis E., Michalodimitrakis E.: "Adolescence and abortion in Greece: women's profile and perceptions". *J. Pediat. Adolesc. Gynecol.*, 17, 321.
- [11] Georges E.: "Abortion policy and practice in Greece". *Soc. Sci. Med.*, 1996, 42, 509.
- [12] Regushevskaya E., Dubikaytis T., Laanpere M., Nikula M., Kuznetsova O., Haavio-Mannila E. *et al.*: "Risk factors for induced abortions in St. Petersburg, Estonia and Finland. Results from surveys among women of reproductive age". *Eur. J. Contracep. Reprod. Health Care*, 2009, 14, 176.

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