Contraceptive consciousness and sexual behavior in three different female age groups in Greece: a retrospective study of the evolution during the last three decades

E. Keletzian, A. Koumousidis, S. Dimopoulos, N.J. Varvayannis, A. Kotelis, K. Dimitroglou, N. Kanellopoulos, M. Katsoulis

Tzaneio Hospital, General Hospital of Piraeus, Attiki (Greece)

Summary

The aim of the study is to describe the evolution of contraceptive and sexual behavior within our Greek society. *Materials, Measures and Methods:* We interviewed 508 females and made a statistical analysis of their answers. *Conclusion:* We tried to underline a strategy for the best promotion of the values in question. General, sexual and contraceptive education as well as the use and type of contraception are the weapons that will lead our endeavors to decreased involuntary pregnancy and towards responsible sexual behavior.

Key words: Contraception; Sexual behavior; Induced abortion; HPV infection; Evolution of sexuality; Sexual promiscuity; Sexual liberation; Contraceptive and sexual consciousness.

Introduction

There is a strong and extensive discussion on sexual behavior in Greece on the dawn of the third millennium, resulting in the contemporary average female to be tangled between sexual promiscuity, as a state of emotional instability and loose morals and sexual liberation. Early sexual intercourse among adolescents represents a major public health problem and a suitable indicator of the degree of sexual promiscuity within our society. Many factors are considered to be involved in early sexual activity, and among them, media is believed to play the most significant role. In film, television and music, sexual messages are becoming more explicit in dialogue, lyrics, and behavior. In addition, these messages contain unrealistic, inaccurate, and misleading information that young people accept as fact [1]. Furthermore, in spite of the persistence of the traditional importance placed on marriage and motherhood, the fertility rate in Greece is very low. Sex education is still not included in the school curriculum, and the lack of accurate information on contraception and the prevention of unwanted pregnancy, especially in adolescence, still have critical repercussions for women's life choices [2]. Additionally, as sexual behavior, especially the number of sexual partners as well as the type of current relationship, remain the dominant and individual risk factors for high HPV prevalence [3], the latter, together with induced abortions, unwanted pregnancies [4] and emergency contraception (EC), also reveals the size of the prevailing sexual degradation. Although sexual behavior is considerably influenced by each country's culture [4], these differences have been normalized lately under the current expanding globalization and thus, our results could easily be applied in several other countries as well. This study has been conducted in the spirit of a globalized society and its conclusions are saturated with the concept of a potential future global community, beyond the narrow barriers of a nation.

As sexual behavior consists at large of several other partial factors like the age at first coitus, frequency of sexual intercourse, number of lifetime sexual partners, use and type of contraception and the selection of proper sources of sexual education, our survey collected information on these topics to contract a realistic model of current sexual behavior. Moreover, since the study of sexuality consequences, either positive (childbirths, desired pregnancies, etc.) or negative (induced abortions, EC, HPV infection, etc.), determines its quality and nature, information on these topics was also gathered.

The purpose of this study was to investigate the evolution of the Greek sexual and contraceptive consciousness and estimate its contemporary status proposing strategies out of the current social dead end. The population we studied (15-45 years old women) covers a spectrum of the last 30 female reproductive years (1980-2010), being at the same time a dynamic and flexible pattern of multiple different mentalities through the flow of 30 years' time within our Greek society.

Materials and Methods

We interviewed 508 women, 15-45 years old, who came for some reason to our outpatient department, through anonymous questionnaires and studied their experience on certain issues concerning their contraceptive knowledge and sexual behavior (Table 1).

Sensitive questions, like those on abortion and HPV infection, were answered in a self-completed questionnaire. With their permission, the 508 female individuals were divided into three categories according to their age; females 15-25 years old

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Table 1. — *The questionnaire.*

How old are you?	15-25 years	25-35 years	35-45 years		
Are you a Greek or a foreigner?	Greek	Foreigner			
What is your religion?	Orthodox Christian?	Other?			
What is your level of education?	Elementary	Middle school	High school	University	
When did you have your first coitus?	15-20	20-25	25-30		
Use of contraception	yes	no (z)			
Type of contraception	a, b, c, d, e, f, g, h, i, j, k, l, m				
Use of emergency contraception (EC)	yes (EC)	no			
If yes (EC), please write down how many times approximately you have used this method:					
How many times have you been having sexual intercourse per week?	2/week (at least)	1/week	less frequently	other (rarely)	
What is the number of your lifetime sexual partners?	1 to 5	5 to 10	> 10		
Which is the main source of your sexual education?	Doctors	Family	Friends	Media	Other
How many births or/and miscarriages have you had before?	o (n)	1-2 (q)	> = 3 (r)		
Are you pregnant?	yes	no			
How many induced abortions do you have in your medical history?	0 (s)	1-2 (t)	3-5 (u)	> 5 (v)	
Have you ever been diagnosed to have been suffering from HPV infection before?	yes (x)	no (w)			

a = withdrawal; **b** = condom; **c** = pill; **d** = IUD; **e** = other method; **f** = a+b (withdrawal and condom); **g** = a+c (withdrawal and pill); **h** = b+c (condom and pill); **i** = b+d (condom and IUD); **j** = c+d (pill and IUD); **k** = a+b+c (withdrawal, condom and pill); **l** = b+c+d (condom, pill and IUD); **m** = a+b+c+d (withdrawal, condom, pill and IUD); **n** = 0 no childbirths and/or miscarriages and/or current pregnancy; **q** = 1-2 childbirths and/or miscarriages and/or current pregnancy; **r** = > 3 three or more childbirths and/or miscarriages and/or current pregnancy; **s** = 0 abortions; **t** = 1-2 abortions; **u** = 3-5 abortions; **v** = < 5 more than five abortions; **w** = no, absence of HPV infection; **x** = yes, presence of HPV infection; **z** = no contraception (or emergency contraception).

(176, Group A), 25-35 years old (168, Group B) and 35-45 years old (164, Group C). We obtained information on age, nationality, education, religion, medical history, number of children, age at first coitus, frequency of sexual intercourse, number of induced abortions in the past, miscarriages, current pregnancy, HPV infection, 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 15-45 years-old, and Greeks and Orthodox Christians. In this way, we prevented any differences in participant opinions to be attributed to nationality or religious influences and, consequently, we tried to present the stance and the experience of homogeneous groups in Greece; 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: $p < 0.05$ (reveals a *moderate* but existing correlation, and $p < 0.01$ – in certain df – degrees of freedom-shows a *strong and significant* differentiation in the values we are studying, meaning that when the results are statistically significant, the null hypothesis of independence between the parameters that we investigated is rejected *(null hypothesis = the variables are irrelevant with each other, $p > 0.05$)* . We also have to mention that in many cases we analyzed our findings through, as well as beyond, the above cited mathematic (statistical) tool and to be more specific, we did use it as an essential tool in each case we studied in order to reach our conclusions. However additionally, we clearly used the basic *Principles of Logic* so as to complete and apply our thoughts in the *Real,* not only as a static but also as a dynamic (changeable potentiality) situation, and extract wider and more realistic results (for example, "age" as a general factor can give different quality to a portion we study, so we tried to interpret the latter using concepts borrowed from the science of *Logic*).

Results

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

Education: One hundred and ten women 15-25 years old (62.50% of group A) reported a university level education, while 107 individuals 25-35 years old (63.69% of group B) and 85 35-45 years old (51.83% of group C) reported the same. Taking into consideration the fact that there were several adolescents 15-18 years old in group A who will presumably enter the university in the future and then, using the chi-square test, we find: p value < 0.05 (between mainly group B and C (df = 1), while there is no statistical difference between groups A and B; but similarly, since the portion in group A will be augmented in the future (several girls will go to university), the same conclusion has to be approached at large for A and B groups) which means that there is a moderate, but countable positive relation between the two values (level of education, youth) and, more precisely, there is a negative correlation between the level of education, as a general factor that configurates contraceptive and sexual consciousness, and the women's age during the last 30 years, depicting a Greek society that has been struggling for a long period of time towards the promotion of gender equality in several sectors such as education. However, did this social fight against the gender inequality eventually meet the standards of a highly inspired mentality in the field of contraception and sexual behavior?

Use of contraception: One hundred and twenty-one young females (68.75%) of group A answered that they had mainly used traditional methods of contraception (withdrawal, condom, rhythm method, etc., that is, contraception a, b, e, f according to Table 2) during sexual

Table 2. — *Pathologic findings - Group A. Women 15-25 years old.*

Type of contraception		a	b	c	f	g	h	z	EC
Level of education	Elementary school							4 n,s,w/ 4 q,s,w	
	Middle school		5 q,t,w		4 n,s,x		5 q,t,w	2 q,t,w	5 n,s,x/1 n,s,w
	High school		14 n,s,w	4 n,s,w	4 n,s,x			14 n,s,w/ 4 q,s,x	7 n,s,w
	University	5 n,s,w	55 n,s,w/ 18 n,s,x	3 n,s,w	9 n,s,w/3 n,s,x/ 4 q,s,w	4 r,s,w	8 n,s,w		36 n,s,w/6 n,s,x/ 4 q,s,w/4 r,s,w
Age at first coitus	15-20 y		58 n,s,w/18 n,s,x/ 5 q,t,w	7 n,s,w	9 n,s,w/11 n,s,x/ 4 q,s,w	4 r,s,w	8 n,s,w/ 5 q,t,w	10 n,s,w/4 q,s,w/ 2 q,t,w/4 q,s,x	35 n,s,w/11 n,s,x/ 4 q,s,w/4 r,s,w
	20-25 y	5 n,s,w	11 n,s,w					8 n,s,w	11 n,s,w
	25-30 y								
Frequency of sexual intercourse	2 times/ week (at least)	5 n,s,x	59 n,s,w/5 q,t,w/	3 n,s,w 7 n,s,x	5 n,s,w/	4 r,s,w	8 n,s,w	5 q,s,w 4 r,s,w	19 n,s,w/9 n,s,x/
	1/week	5 n,s,w	3 n,s,w	4 n,s,w	4 q,s,w		5 q,t,w		9 n,s,w/4 q,s,w
	less frequently		7 n,s,w/ 13 n,s,x				17 n,s,w/2q,t,w/ 4 q,s,x		16 n,s,w/2 n,s,x
	other (rare)				4 n,s,w/4 n,s,x				
Sources of information on contraception topics	Doctors		23 n,s,w/9 n,s,x/ 5 q,t,w	3 n,s,w	5 n,s,w/7 n,s,x/ 4 q,s,w	4 r,s,w	8 n,s,w/ 5 q,t,w	9 n,s,w/ 2 q,t,w/4 q,s,x	31 n,s,w/7 n,s,x/ 4 q,s,w/4 r,s,w
	Family		16 n,s,w/4 n,s,x						9 n,s,w
	Friends		3 n,s,w	4 n,s,w	4 n,s,x			5 n,s,w/4 q,s,w	4 n,s,x
	Media								
	other	5 n,s,w	27 n,s,w/5 n,s,x		4 n,s,w			4 n,s,w	4 n,s,w
Number of lifetime sexual partners	1 to 5	5 n,s,w	46 n,s,w/13 n,s,x/ 5 q,t,w	7 n,s,w	5 n,s,w/7 n,s,x	4 r,s,w	5 q,t,w	13 n,s,w/4 q,s,x/ 2 q,t,w/4 q,s,w	33 n,s,w/7 n,s,x/ 4 r,s,w
	5 to 10		19 n,s,w		4 n,s,w/4 n,s,x/ 4 q,s,w		8 n,s,w	5 n,s,w	11 n,s,w/4 q,s,w
	> 10		4 n,s,w/5 n,s,x						3 n,s,x

a = withdrawal; **b** = condom; **c** = pill; **d** = IUD; **e** = other method; **f** = a+b (withdrawal and condom); **g** = a+c (withdrawal and pill); **h** = b+c (condom and pill); **i** = b+d (condom and IUD); **j** = c+d (pill and IUD); **k** = a+b+c (withdrawal, condom and pill); **l** = b+c+d (condom, pill and IUD); **m** = a+b+c+d (withdrawal, condom, pill and IUD); **n** = 0 no childbirths and/or miscarriages and/or current pregnancy; **q** = 1-2 childbirths and/or miscarriages and/or current pregnancy; **r** = > 3 three or more childbirths and/or miscarriages and/or current pregnancy; **s** = 0 abortions; **t** = 1-2 abortions; **u** = 3-5 abortions; **v** = < 5 more than five abortions; **w** = no, absence of HPV infection; **x** = yes, presence of HPV infection; **z** = no contraception (neither emergency contraception).

intercourse, while 84 (50.00%) of group B and 83 (52.61%) of group C reported the above. The chi-square test revealed a statistically significant increase of the traditional methods among young women 15-25 years ($p < 0.001$/df = 1, compared to use of the other contraceptive methods). On the other hand, a moderate ($p < 0.05$, when compared with the rest of the methods, df = 1) decrease in the percentage of "no use of any contraception" category was noticed in the group A women (15.91%) compared to those of group B (26.19%). Likewise, group C women that had not been using any type of contraception at all, were significantly fewer (9.76%) compared to their peers in group B ($p < 0.001$, df = 1). Moreover, modern contraceptive methods (contraception c, d, j in Table 2/ that is, OC pills, IUD, etc.) were moderately increased from A to B groups ($p < 0.05$) and strongly ($p < 0.001$) from A to C, while it was slightly increased from group B to C (16.46%, $p < 0.1$). The above analysis brings us face to face with a dilemma. Is the increased use of traditional contraceptive methods in young females, in combination with the decreased portion of "no use of any contraception" women in this group, attributed to a deeper sensitivity and knowledge on contraception topics emerging from a highly developed contraceptive consciousness in younger ages, or just to an imposed fear and confusion among youths in a society plagued with diseases such as AIDS and others?

Sexual education: In Greece, there are several potential sources of sexual education, such as family, friends, media, doctors, etc. According to our study, it seems that "doctors" (mainly specialist gynecologists) are gradually being displaced by other sources of sexual education in the new generation ($p < 0.001$ between groups A (50.57% "doctors") and B (76.19% "doctors"), as far as the doctors and the other sources of sexual information are concerned). On the other hand, unreliable sources of sexual education such as "friends" and others are increased in young females (15-25-year old) in comparison with the corresponding ones in the 25-45 years old women. The reason that "media" was not reported by groups A and B women to have been a source of sexual education can possibly be attributed to the quality/nature as a mechanism of sexual message transmission, since media (and mainly television) may function as a kind of "super-peer,"

Table 2. — *Pathologic findings - Group B. Women 25-35 years old.*

Type of contraception		a	b	c	d	e	f	i	k	z	EC
Level of education	Elementary school								4 r,s,x	4 q,t,w	1 n,s,w
	Middle school						4 n,t,x			4 n,s,w/4 q,s,w/ 4 q,t,w	
	High school	4 n,t,w/3 q,t,w	9 n,s,x	4 n,s,w			2 q,s,w			3 n,s,x/8 q,s,w	6 q,t,w/4 n,s,x
	University		35 n,s,w/4 n,t,w 4 q,s,w/4 q,t,x	5 n,s,w/ 4 r,t,w	3 q,s,w	4 n,s,x	6 n,s,w/ 5 q,s,w	5 q,s,w	8 n,s,w	4 n,s,w/4 q,s,x/ 9 q,s,w	4 r,t,w/ 2 q,t,w/ 3 q,s,w/ 13 n,s,w/ 4 n,t,w/3 n,s,x
Age at first coitus	15-20 y	4 n,t,w	16 n,s,w/9 n,s,x/ 4 n,t,w/4 q,t,x	4 r,t,w	3 q,s,w	4 n,s,x	4 n,t,x/ 6 n,s,w/ 2 q,s,w	5 q,s,w	4 r,s,x	21 q,s,w/4 q,t,w/ 4 q,s,x	7 n,s,x/ 4 r,t,w/ 4 n,t,w/3 q,t,w
	20-25 y	3 q,t,w	19 n,s,w/4 q,s,w	9 n,s,w			5 q,s,w		8 n,s,w	8 n,s,w/3 n,s,x/ 4 q,t,w	3 q,s,w/5 q,t,w/ 14 n,s,w
	25-30 y										
Frequency of sexual intercourse	2 times/ week (at least)	4 n,t,w/3 q,t,w 5 n,s,x/4 q,t,x	31 n,s,w/4 n,t,w/ 4 r,t,w	5 n,s,w/		4 n,s,x	4 n,t,x/ 6 n,s,w	5 q,s,w	4 r,s,x	8 q,t,w/ 12 q,s,w/4 n,s,w/ 3 n,s,x	4 r,t,w/8 q,t,w/ 7 n,s,x/4 n,s,w/ 4 n,t,w
	1 week				3 q,s,w		7 q,s,w			4 n,s,w/4 q,s,x/ 5 q,s,w	3 q,s,w
	less frequently		4 n,s,w/4 n,s,x/ 4 q,s,w						8 n,s,w	4 q,s,w	10 n,s,w
	other (rare)			4 n,s,w							
Sources of information on contraception topics	Doctors	4 n,t,w/3 q,t,w	31 n,s,w/4 q,s,w/ 9 n,s,x/4q,t,x	9 n,s,w/ 4 r,t,w	3 q,s,w	4 n,s,x	7 q,s,w/ 6 n,s,w	5 q,s,w	4 r,s,x/ 4 n,s,w	4 n,s,w/17 q,s,w/ 4 q,s,x	4 n,s,w/7 n,s,x/ 4 n,t,w/3 q,s,w/ 4 r,t,w/8 q,t,w
	Family									4 q,s,w	
	Friends		4 n,s,w								
	Media										
	other		4 n,t,w				4 n,t,x		4 n,s,w	8 q,t,w/4 n,s,w/ 3 n,s,x	10 n,s,w
Number of lifetime sexual partners	1 to 5	3 q,t,w	31 n,s,w/5 n,s,x/ 4 q,s,w/4 q,t,x	9 n,s,w			7 q,s,w/ 6 n,s,w	5 q,s,w	4 r,s,x	21 q,s,w/8 q,t,w/ 4 q,s,x/8 n,s,w/ 3 n,s,x	3 q,st,w/8 q,t,w 3 n,s,x/5 n,s,w
	5 to 10		4 n,s,w/4 n,t,w/ 4 n,s,x	4 r,t,w	3 q,s,w		4 n,t,x		4 n,s,w		6 n,s,w/4 n,t,w/ 4 r,t,w
	> 10	4 n,t,w				4 n,s,x			4 n,s,w,		3 n,s,w/4 n,s,x

normalizing degraded sexual behaviors and, thus, encouraging them among teenagers (1). Consequently, young women take them for granted as simply being natural facts, without feeling that such misleading messages are violently imposed on them by several corrupted sources through "media". Moreover, "family" does not seem to have played an important role in the sexual education of female individuals for the last three decades as its portion as a source is very low (11.93% in group A, 2.38% in group B, 3.05% in group C). However, there was a significantly increased portion in 15-25-year-old women ($p < 0.01$), but this mainly concerned females with traditional contraception use. The question that arises leads us towards a controversy: do the above findings reveal a certain disintegration of our social structure on the matter of contraception and sexual information as time elapses, or do they present a hidden, decomposed reality on the matter in question that struggles to be organized in highly qualitative levels of social remodeling?

Age at first intercourse: One hundred and fifty-one (85.80%) women of group A answered that they had had their first sexual intercourse at 15-20 years old, while 103 of group B (61.31%) and 104 of group C (63.41%) females gave the same answer. There is an obvious statistical differentiation in this parameter between group A and the other groups ($p < 0.001$), while there is not any significant change between groups B and C. We have to mention that nine individuals of group C (5.49%) had had their first experience at 25-30 years old. Do these results agree with an epoch characterized as the era of sexual liberation, meaning the ostracism of several prejudices and taboos from the social background or, do these results reveal a weakened and confused society that regresses to conditions of very primitive behavior, to an epoch when human principles did not even exist?

Number of lifetime sexual partners: 68.75% of group A women had had less than five sexual partners in their lifetime, while 75.60% of group B and 46.95% of group C

Table 2. — *Pathologic findings - Group C. Women 35-45 years old.*

Type of contraction		a	b	c	d	e	f	g	h	i	j	k	l	m	z	EC
Level of education	Elementary school				3 q,t,w	4 n,t,w			4 r,v,x			5 q,t,w				3 q,t,w/ 4 r,v,x
	Middle school		3 n,t,w						5 n,t,w							
	High school	4 q,s,w/ 3 q,t,w	7 n,s,w/ 8 q,t,w	3 q,t,w/ 4 q,t,x	4 q,t,w		4 q,t,w			4 q,s,x					6 q,t,w	3 q,s,x/ 5 q,t,x
	University	5 q,t,w	9 n,s,w/ 8 q,t,w/ 8 n,t,w/ 4 q,s,w	5 q,s,w	3 q,s,w	5 q,s,w	4 q,t,w/ 7 q,s,w	4 q,t,w			5 q,s,w		4 q,t,w	4 q,v,x	8 q,s,w/ 2 q,t,w	4 q,v,x/ 4 q,s,w/ 5 q,t,w
Age at first coitus	15-20 y	8 q,t,w/ 4 q,s,w	8 n,t,w/ 4 q,s,w	3 q,t,w/ 4 q,t,x/ 5 q,s,w	7 q,t,w	4 n,t,w/ 5 q,s,w	4 q,s,w/ 3 q,t,w	4 q,t,w	4 r,v,x		5 q,s,w	5 q,t,w	4 q,t,w	4 q,v,x	4 q,s,w/ 8 q,t,w	4 q,v,x/5 q,t,x/ 4 r,v,x/8 q,t,w/ 4 q,s,w
	20-25 y		3 n,t,w/ 16 n,s,w	12 q,t,w/		3 q,s,w	4 q,t,w	4 q,s,w/		5 n,t,w					8 q,t,w	4 q,s,w/
	25-30 y		4 q,t,w							4 q,s,x						3 q,s,x
Frequency of sexual intercourse	2 times/ week (at least)	4 q,s,w	3 n,t,w/ 11 n,s,w/ 4 q,s,w/ 8 q,t,w	5 q,s,w/ 4 q,t,x	3 q,s,w	4 n,t,w	4 q,t,w	4 q,t,w	4 r,v,x/ 5 n,t,w		5 q,s,w		4 q,t,w		4 q,s,w/ 3q,t,w	4 q,s,w/4 q,t,w/ 4r,v,x/5q,t,x
	1 week	8 q,t,w	8 n,t,w/ 8 q,t,w	3 q,t,w	4 q,t,w	5 q,s,w	7 q,s,w							4 q,v,x		4 q,v,x
	less frequently		5 n,s,w		3 q,t,w		4 q,t,w			4 q,s,x		5 q,t,w			4 q,s,w/	4 q,t,w/3 q,s,x 5 q,t,w
	other(rare)															
Sources of information on contraception topics	Doctors	4 q,s,w/ 3 q,t,w	12 n,s,w/ 16 q,t,w/ 7 n,t,w/ 4 q,s,w	3 q,t,w	3 q,t,w	5 q,s,w	7 q,s,w/ 4 q,t,w	4 q,t,w	4 r,v,x/ 5 n,t,w	4 q,s,x		5 q,t,w	4 q,t,w	4 q,v,x	5 q,s,w/ 8 q,t,w	4 q,t,w/4 r,v,x/ 3 q,s,x/4 q,v,x
	Family			5 q,s,w												
	Friends					4 n,t,w									3 q,s,w	
	Media		4 q,t,x	4 q,t,w		4 q,t,w									5 q,t,x	
	other	5 q,t,w	4 n,s,w								5 q,s,w					4 q,s,w/4 q,t,w
Number of lifetime sexual partners	1 to 5	4 q,s,w/ 8 q,t,w	9 n,s,w/ 12 q,t,w	3 q,t,w	3 q,s,w	4 n,t,w	4 q,s,w			4 q,s,x	5 q,s,w	5 q,t,w			3 q,s,w/ 8 q,t,w	8 q,t,w/3 q,s,x/ 4 q,s,w
	5 to 10		3 n,s,w/ 4 q,t,w/ 11 n,t,w/ 4 q,s,w		7 q,t,w		4 q,t,w/ 7 q,s,w		5 n,t,w						5 q,s,w	
	> 10		4 n,s,w	5 q,s,w/ 4 q,t,x		5 q,s,w	4 q,t,w	4 q,t,w	4 r,v,x				4 q,t,w	4 q,v,x		4 r,v,x/5 q,t,x/ 4 q,v,x

reported the same. Moreover, 53.05% of group C individuals, 24.40% of group B and 31.25% of group A had had more than five sexual partners in their lifetime. The above portions must be evaluated on the basis of different perspectives; although the differentiation between the portions in groups A and B is statistically insignificant, it could become stronger if we take into consideration the difference in the mean group age (younger women, as having had less sexually active years, were expected to have had a lower percentage of sexual partner and thus, the above result of statistical insignificance should be interpreted as a significant deviation of what was really expected to be found in our study, on the basis of the "age" parameter). Consequently, there is an important hidden differentiation that we have to mention in the percentages we cited, concerning the quality; the portions in group B and C females are mainly attributed to their older age which promotes the proliferation of sexual relations, while the corresponding one of group A is strongly related mostly to their attitude in the sexual sector. We can clearly reach the conclusion that the younger a woman is today, the looser her sexual choices concerning her partners are. Next, we have to wonder if this is a trend of our over-consuming epoch or, an expression of a current highly promoted ideal of freedom.

Frequency of sexual intercourse: One hundred and three (58.52%) group A individuals reported to have had sexual intercourse around two times per week, while 117 (69.64%) of group B reported the same ($p < 0.05$). On the other hand, 41.48% of women 15-25 years old reported having sexual intercourse less than two times per week and, 30.95% of group B and 48.78% of group C women

answered the same. We noted that, even if the number of lifetime sexual partners attributed a stronger desire of sexual variety was higher in the younger ages (increased number of lifetime sexual partners as proved in the previous paragraph), the frequency of sexual intercourse was statistically lower; a finding that confuses us, urging us to think whether sex is normally "shrinking" today because of the current hustle and bustle or worse, that people tend to become alienated from each other resulting straightforwardly in values like sex becoming eliminated.

Upcoming results of a certain sexual and contraceptive behavior: This paragraph refers to the outcome of women's entire sexual behavior and additionally, the practical side of their inner contraceptive consciousness, both reflected in phenomena like childbirth, abortion and sexually transmitted infectious diseases (STIs) such as HPV infection. We noted that the mathematical relation *"(childbirths, miscarriages, current pregnancy): (abortions)"* was equal to (42:18 =) 7:3 in group A, (102:54 =) 17:9 in group B women and (186:150 =) 31:25 in group C. In order to deeply comprehend the meaning of these portions, we have to take into our consideration two more facts: the age of women and percentage of women that had used emergency contraception (EC) before (in each group). We observed that 35.80% (63/176) of group A women, 23.81% (40/168) of group B and 17.07% (28/164) of group C had used EC before. The real portions of "induced paused pregnancies" (*EC* plus*(+) abortions*, as an aggregation of the induced paused potential (EC) and current (abortions) pregnancies) correct the previous math relation to: (42:81 =) 14:27 in group A, (102:94 =) 51:47 in group B and (186:178 =) 93:89 in group C ($p < 0.01$ between groups A and the other two, B and C). This finding in combination with the differentiation concerning women's age (group A women had fewer sexually active years, something that should normally suppress their portion of negative consequences emerged by their sexuality, such as unwanted pregnancies, induced abortions, use of EC, HPV infections, etc.) among groups, can lead us towards the conclusion that the younger a woman, who has experienced sex before in our epoch, the more negative the consequences of her sexual behavior are. This conclusion is enhanced by the fact that, according to several surveys, the percentage of unwanted pregnancies and childbirths are increasing among young female individuals [2]. Moreover, the HPV infection rate is higher in group A (19.89%) and group B (19.05%) females compared to the corresponding one in group C (14.02%) individuals (but not statistically significant). If we consider age to be a risk factor in the groups, we can clearly assume that women 15-25 years old are presenting a higher possibility of getting HPV infections in the future (attributed to their young age; proportionally we should expect group A females to have a significantly lower portion on HPV due to their less sexually active years of experience) and thus, their portion is supposed at large to be differentiated upwardly compared to group B and C females. We clearly reach again the previously cited conclusion that "the younger a woman is in our epoch, the more negative the consequences of her sexual behavior are".

Discussion

Our results form a picture of the evolution of sexual and contraceptive attitudes in Greece during the last 30 years. The age of women we studied and the chi-square test applied in our questionnaire were co-evaluated so as several safe conclusions could be extracted. Women in group A were directly influenced by prevailing contemporary behavioral streams, while group B and mainly group C individuals were more typical of the changes through the flow of time, concerning female sexuality during the last three decades. Our study clearly proved that sexual and contraceptive behavior in our country have started to become victims of our current over-consuming society. Young women appear today to be acquiring a higher general education, to be using more "traditional" than "modern" methods of contraception, to be advised on sexual and contraception topics mostly from unreliable sources (such as "friends") in a constantly increasing rhythm, to be experiencing sex at even younger ages, to be reporting a higher number of lifetime sexual partners and lower frequency of sexual intercourse compared to their elder peers. On the other hand, there is an increasing portion of failed pregnancies (unwanted pregnancy, induced abortion, use of EC) and HPV infections among 15-25 year-old females. The fact that the new generation (group A) is highly educated [5], which is one of the great achievements of the feminist movement, has triggered several controversies in the developed world [6]. Although women have surpassed men at many levels of education (e.g., in the United States in 2005/2006, women earned 62% of Associate degrees, 58% of Bachelor degrees, 60% of Master degrees, and 50% of Doctorate degrees) [7], there is a growing doubt as to whether the higher educational attainment of female individuals is related either positively or negatively to sexual promiscuity [6], which is a negatively charged concept that refers to the degradation of several other partial concepts/constitutes of female sexuality, like the age of first coitus, frequency of sexual intercourse, number of lifetime sexual partners and childbirths. In our study, the combination of three parameters, age at first coitus, number of lifetime sexual partners and frequency of sexual intercourse, revealed that young women today show a disproportionately high diversity in their sexual choices (younger age at first coitus and higher number of lifetime sexual partners than older women) compared to the quality/degree of their relationship bonds (lower frequency of sexual intercourse, as an indicator of the low quality/feeble bond of their sexual relationships) and thus, sexual promiscuity appears to have reached today the highest degree in the last three decades. This idea can also be extracted inversely from our study if we just apply the "upcoming results of a certain sexual and contraceptive behavior" conclusion: Since *"the younger a woman is in our epoch, the more negative the consequences (induced abortions, HPV infection) of her sexual*

behavior are" and since the degradation of sexual behavior is the main indicator of sexual promiscuity, the latter appears again to have today reached the highest degree in the last three decades. Moreover, the factors that configurate at large to sexual and contraceptive consciousness, and mainly the general as well as sexual and contraceptive education, seem to be derived mostly from unreliable sources in contradiction to what was happening in this sector during the last 30 years. The asymmetry between the high level of young female individuals' general education on the one hand and the low one of their sexual education on the other, reveals a superficial technologically orientated knowledge, a knowledge isolated from human values and from deeper understanding of human principles such as those that are given by a genuine and responsible sexual and contraceptive education within our society. Finally, the quality of contraceptive use in young people (the prevalence of traditional methods) shows that the new generation is inundated mainly with fear against an aggressive world, full of sexually transmitted diseases (HPV, HIV, etc.); a fear that can become an obstacle to any ideal of a prosperous social development.

On the other hand, there is a hidden and positive potentiality underneath the above-mentioned sexual promiscuity, which refers to a growing ideal of sexual liberation (lower age at first coitus, more lifetime sexual partners); an ideal that may be able to remodel our society into highly qualitative structures. Although recently it was noted that teenagers are sexually active in younger ages and demonstrate lower compliance to contraceptive methods [8], there is a moderate decrease in the "no use of any contraception" category in women 15-25 years old in our study that points a way towards a growing responsibility among these female individuals concerning their sexuality. Furthermore, other optimistic aspects of the contemporary situation can be derived from the higher level of general education among youths, as a matrix of a future well-orientated female sexuality, and the increase in the portion of "friends", as a source of sexual and contraceptive education, not only unreliable, but also a primitive sign of a developing social communication and interaction. The "family" (as a source of sexual education) also seems to play some role today in the formation of sexual and contraceptive consciousness in young female adolescents, revealing to us little but also evolving empowerment of family bonds and their importance in sectors like the one in question. Consequently, sexual liberation and empowered social and family bonds are potentials for which we have to struggle so as to transform them into facts. In other words, it is in our hands to lead our current female sexual behavior away from the plague of sexual promiscuity and develop it towards the high ideal of sexual liberation and thus, to make today's confusion on this sector just an intermediate stage of a 30-year evolution from social taboos [9] and prejudices to a real state of freedom and human respect.

First of all, our endeavors must be focused primarily on sexual education and contraceptive information as well as on the general (school/university) 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. This must be provided mainly by the school, family and doctors. Unfortunately, sex education is still not included in the school curriculum in Greece, and only sporadic information is given. 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 young people [10]. Moreover, the institution of family must be promoted to a very important social cell where proper knowledge that results in healthy development of youths' sexual and contraceptive consciousness, must be given mainly by the state through extensive scientific programmes, similar to those of schools that have already been mentioned. Finally, doctors (gynecologists) in Greece should undergo special training on female sexuality issues and become more sensitive and adequate on these matters without underestimating their importance to the social tissue; a practice that unfortunately is widespread in our country (e.g., some women are being treated in an adverse way by doctors and social workers in public hospitals [9]). In other words, we should never forget that the high quality of consultation contributes to the decrease of future and repeated unwanted pregnancies and induced abortions [10] and thus, to the suppression of sexual promiscuity. However, we have to mention that the least for all the above to be achieved remains always the high quality of the general education provided in our society (e.g., education of the young, mothers, of doctors, in families, through the media, etc.); an education which core is not inundated only with technological concepts (as today is intensely happening) but mainly with substantial human values and furthermore, with a deeper understanding of the mechanisms and the principles that harmonically constitute the reality and define the well – and the mal – function of things and concepts. This general consciousness could become the fertile ground where a healthy sexual and contraceptive consciousness could grow and thrive.

One of the conclusions that is quite obvious from our study is that Greek society has not fully adopted the modern methods of contraception and, according to several other studies, it appears to have one of the lowest rates in modern contraceptive use in Europe [2]. 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 [10]. Consequently, 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 [10, 11].

In conclusion the evolution of sexual and the contraceptive consciousness in Greece is ambiguous today, being degraded on the one hand, while very promising for

the future on the other. We must use this enormous potentiality, which is well hidden underneath our widespread social consciousness, to our general and universal benefit. General, sexual and contraceptive education as well as the use and type of contraception are the weapons that will lead our endeavors to success.

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Address reprint requests to:
A. KOUMOUSIDIS, M.D.
Grigoriou Lambraki 112-114
p.c. 18532 Pireas (Greece)
e-mail: kumusidi@yahoo.gr