



The awareness on sexual and reproductive health issues in urban and rural areas of Greece: a retrospective study on 200 adults 18-45 years old

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Abstract

Introduction

Every sexually active person is in danger of contracting sexually transmitted diseases (STDs). Younger adults, being more literate, should be better familiarized with the various methods of protection against STDs as well as traditional and modern contraception methods.

Our purpose was to investigate and compare the awareness of 18- to 45-year-old adults from urban and rural areas on sexual and reproductive health issues and to establish any potential new strategies for its best promotion.

Materials & Methods

Two hundred individuals coming from either our capital, which represents the purest urban dimension of our Greek lifestyle spectrum, or one specifically selected, as a characteristic opposite nonurban dimension in our lifestyle scale, rural town were stratified randomly and answered a three-part closed-ended questionnaire.

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Results

Useful results were extracted, like, for example, although 29.5% reported that they were in a committed relationship and trusted traditional methods of contraception and protection from STDs, like condoms, 18% out of them have not been regularly using it. Moreover, the percentage of hormonal contraception was low (9%). The younger the people and the more the urban lifestyle they have adopted, the less cautious they are of their choice of sexual partners. Men still seem to be alternating between sexual partners and perform ‘one-night stands’ more frequently than women. The study assesses the awareness of sexual and reproductive health issues in urban and rural areas.

Conclusion

The awareness on sex and reproduction is not developed as we would expect from our adequate standard of living before the years of economic crisis (<2010). We noticed many cases of fragmentary information, false view and high-risk sexual behaviour. Moreover, mainland residents seem to be less informed about the current data of STDs and contraception, even though their behaviour is less risky.

Introduction

Sexuality is a basic component of the human existence and a comprehensive concept, which refers to the sexual act itself, and also to the gender, the masculinity or femininity, the sexual orientation, the eroticism, the sentimental attachment/love, the pleasure and the reproduction^{1,2}. As

a determining factor for young people's behaviour, it often urges them towards intergender experimentations, with consequent results concerning increased sexually transmitted diseases (STDs) and abortion rates³. We live in an epoch where on one hand, young people have a prolonged adolescence and confusion regarding their identity, while on the other hand, the economic crisis brings us low-quality standards, such as false and inadequate information regarding STDs^{4,5}. Furthermore, sexual education is not very widespread due to conservative elements of society who think that it virtually reveals practices to young people that they would never have employed otherwise. However, it has not been proven yet that it increases the percentage of sexually active teenagers; instead, it effectively delays the onset of sexual activity, it increases the use of birth-control methods and it also decreases the high-risk sexual behavior⁶. Sexual health refers to three dimensions that all contribute to making a person whole. The first dimension is the physical one, which refers to preventing infections and unwanted pregnancies. The second dimension is the mental one, which refers to getting rid of negative emotions, such as fear and guilt; to boosting a person's self-esteem; to familiarize him/her with his/her sexuality and to teach him/her how to respect him/herself and others. The third dimension is the social one, which refers to a person's choices regarding his/her sexual relations based on individual values and convictions

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and not under the influence of other pressing emotions, peer pressure or other factors. The ultimate purpose of sexual education is to establish a threshold of sexual behaviour, above which its quality will benefit our society and the individual to the maximum⁷.

The purpose of this study was to investigate the awareness regarding sexual and reproductive health issues and determine any false perceptions and ignorance on main issues regarding STD prevention and birth control, with further goal to improve the already established public knowledge, using the aforementioned configuring factors as means of achieving that.

Materials and methods

This work conforms to the values laid down in the Declaration of Helsinki (1964). The protocol of this study has been approved by the relevant ethical committee related to our institution in which it was performed. All subjects gave full informed consent to participate in this study. Permission to use this sensitive data was obtained from each participant through the Ministry of Health.

This study was conducted in the context of the 'Research on Female Reproduction' postgraduate program, which was co-organized by the Medical School of the University of Athens and the Nursing Department of the TEI of Athens. A three-part closed-ended questionnaire was used as a research tool. The first part referred to the participants' demographic features (seven questions with subquestions), the second part to the STDs (nine questions with subquestions) and the third part to basic contraception practices (eight questions with subquestions). The questionnaire was based on similar questionnaires from Greek and international sexual health centres^{8,9}. The used questionnaire is attached in the Appendix of this study. We included 200 adults 18–45 years of age

coming from the capital (Athens, as the most developed area of Greece that has been inhabited by 18- to 45-year old adults) and one rural town (Tripolis-Arcadia, as an industrialized and rural at the same time area that has been inhabited predominantly by adults of the reproductive age [18–45 years old]). The reason we chose individuals from these industrialized areas, and thus appealing to reproductive ages, was to create a certain lifestyle spectrum; on the one side the urban mentality is fully expressed (Athens) whereas its other side (Tripolis) represents the rural way of life. The spectrum interval between these cities can be assumed, which contains the rest of the Greek areas that are more urban than Tripolis but less than Athens. Smaller towns and villages, surrounding the bigger ones of our studied spectrum, were excluded from our study since they included smaller 18- to 45-year-old population (work offers are less for people of reproductive ages), who additionally are mostly visitors. The prerequisites for an individual to take part in the research were to be healthy, able-bodied, between the ages of 18–45 and not to be substance users. Nationality and religion were the information needed to confirm that the interviewees were Greeks and Orthodox Christians. In this way, we prevented any differences in opinions attributed to nationality or religious influences, and consequently, we tried to present the stance and experience of the average adult with an active sexual life in the Greek society—a reality for which this survey was conducted. About 100 people from areas in the capital (St. Paraskevi, Zografou, Kallithea, Marousi, Glifada) and 100 from the centre of the rural town Tripolis were chosen. The questionnaire was distributed to visitors of Citizens' Service Centres, public services and outside of places where young people gather; every third person entering these areas was asked and if he

declined, then the next person was asked. People were informed about the research purpose and they voluntarily filled in the questionnaires anonymously.

Descriptive statistics were conducted and contingency tables were created. Inferential statistics were further conducted and comparison between subgroups was made. Larger subgroups by demographic variables were created in order for each new subgroup to compromise sufficient number of individuals for statistical analysis. Two age groups were created, based on age median value (29 years old), in accordance with European Community guidance for youth. Normality was checked with the Smirnov–Kolmogorov test. Non-parametric statistics were applied for most variables: Mann-Whitney U-test was used for ordinal/interval variable and χ^2 test, with or without continuity correction depending on tables' cell frequency (2×2 or other respectively). If distribution was normal, *t*-test was applied for comparison between the two groups. The data were encoded and recorded in the SPSS 17.0 statistical program database.

Results

Ninety-six participants were men and 104 were women. About 20% were university graduates and 35.5% were married. Fifty-nine persons were involved in a permanent relationship (29.5%), while 30.5% were parents, with two children, on average (Table 1). The above results were nearly the same between capital and province groups, a fact that reveals the homogeneity in morals throughout Greece concerning the family institution and the necessity of general education. This is due possibly to several factors such as common history, common problems, homogenous political and educational system throughout Hellas, mosaic of several rural origins in people living in urban areas, etc. The mean

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age of participants was 29.29 ± 8.38 years. Nevertheless, more capital inhabitants had their first information regarding STDs from Mass Media in comparison with their provincial counterparts (Table 2). Moreover, the number of their sexual partners was statistically significantly higher, a difference that also persists in the sample subgroups (Table 3). No statistical differences were noted regarding condom use (Table 4), something

revealing that both rural and urban areas have received the same quality of information regarding this traditional method of contraception over the last decades. Unfortunately, the oral contraceptive (OC) use was low in both areas (9%), showing insufficient efforts of the state in promoting this particular type of contraception method. Capital inhabitants are more of the opinion that a condom is an effective protective measure against STDs and surer that HIV infection is rarely spread with unprotected sex (Table 5). Here we

notice that multi- and uncontrolled information as a part of the urban lifestyle confuses people; correct information is not perceived properly and can become misleading towards risky behaviours. Mass Media are mainly responsible for this, as they were the main source of information on contraception and sexual health in capital inhabitants compared with their province counterparts (Table 6). Capital inhabitants used hormonal contraception more frequently and they consider it more effective, while a greater percentage

Table 1 Demographic characteristics of the sample

	N	%
Gender		
Men	96	48.0
Women	104	52.0
Total	200	100.0
Education level		
Elementary	8	4.0
Junior high school	21	10.5
High school	105	52.5
Technical school	30	15.0
University	30	15.0
Master/doctorate	6	3.0
Total	200	100.0
Family status		
Unmarried	54	27.0
Occasional relationship	16	8.0
Permanent relationship	59	29.5
Married	71	35.5
Total	200	100.0
Children		
Yes (mean number)	61 (1.97)	30.5
No	139	69.5
Total	200	100.0
Place of residence		
Capital city	100	50.0
Province	100	50.0
Total	200	100.0

Table 2 First information source on AIDS and STD

	Capital city	Province	P
Parents	27	31	>0.05
School	48	48	>0.05
Spouse	5	6	>0.05
Significant others	20	23	>0.05
Brochures/books	42	47	>0.05
Mass Media	43	26	0.017
χ^2			

Table 3 Number of sexual partners

	Capital city (mean \pm SD)	Province (mean \pm SD)	P (t-Test)
Total sample	N = 85 8.37 \pm 6.38	N = 83 4.55 \pm 5.55	<0.001
Unmarried	N = 29 11.75 \pm 8.47	N = 23 3.08 \pm 2.69	<0.001
≤ 29 years	N = 40 9.40 \pm 8.30	N = 47 3.51 \pm 2.74	<0.001

Table 4 Condom use (traditional method of contraception) during sexual intercourse

		Always	More than Half Encounters	About Half Encounters	Less than Half Encounters	Never
Place of residence	Capital city	30	23	5	15	18
	Province	30	22	10	16	15
$\chi^2, P > 0.05$						

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	Strong	Somehow	Not at all	P
Condom				
Capital	76	16	0	<0.02
Province	78	11	5	
Have unprotected intercourse, when you are sure you have not got AIDS				
Capital	11	26	39	>0.05
Province	18	4	47	
χ^2				

	Capital	Province	P
School	28	40	>0.05
Friends	13	20	>0.05
Brochures	44	41	>0.05
Family	26	28	>0.05
General practitioners	22	28	>0.05
Magazines	30	18	0.018
Family planning centres	11	8	>0.05
TV/radio	26	15	0.05
χ^2			

		Use	Effectiveness
Whole sample			
	Capital	14	38
	Province	3	11
$P < 0.05$			
Unmarried			
	Capital	4	12
	Province	2	2
$P < 0.05$			
≤29 years			
	Capital	11	24
	Province	2	4
$P < 0.05$			

of province inhabitants used no contraceptive method (14% vs. 3%) (Table 7). People living in the capital have abandoned sexual intercourse

without condom, while they still have multiple sexual partners and more 'one-night stands' in comparison with people living in province

(Table 8). Inhabitants of the capital city answered with a statistically significant difference that AIDS does not concern certain minorities and the probability of transmission does not prevent sexual enjoyment, while thinking that they themselves could also be at risk (Table 9). We notice that the urban population appears to be more confident, but this seems to be a result of multiple sources of information that have led to 'fatigue' and a defeatist attitude towards current health dangers. Province inhabitants prefer contraceptive methods with easiness in use, low cost and in accordance with moral beliefs (Table 10).

Discussion

According to the research results, the awareness of young adults regarding sexual and reproductive health issues is not so developed as we would expect from our adequate standard of living before the years of the economic crisis (before 2010). There are many cases of fragmentary information, accompanied by many false views, which does not translate into a change of high-risk sexual behaviour.

The mainland providence residents of our lifestyle spectrum present a more 'conservative' profile, which is more related though to avoiding risky sexual interactions, and not necessarily taking all the right precautions during sexual intercourse. While people seem to trust the condom as a method of contraception and protection from STDs, large percentages do not use it. The percentage of hormonal contraception is also low. People who are married and in a committed relationship differ in regard to the precautions from STDs, since they get tested more rarely and think that they are in less danger to get an STD. Younger people (≤ 29 years old) differ substantially from older people in their sexual behaviour, since they appear to be less cautious with their choices. Two more interesting facts are that

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half of today's young people started their sexual relations after the age of 18 years, whereas a significant percentage of people who have had casual relationships almost never use a condom.

All of these issues strongly concern the international scientific community and, while there are great differences from one country to another, and even within the same country in regard to the views and behaviours on sexual health and behaviour, certain

general trends regarding younger adults have been observed. It has thus been observed that single and sexually active young people know more about contraception, but do not take all the right precautions. This difference between convictions and practical implementation is encountered in both developing and developed countries, noting however that the latter have larger percentage of hormonal contraception use. Indeed, OCs are very popular in Northern

European countries and USA. In 2002, approximately 12 million women 15–44 years of age used contraceptives in the United States, with 45 million women reporting that they had used contraceptives at least once¹⁰. The greatest inhibitory factor is the fear of side effects. It has been noted that whatever disadvantages these methods might have are enlarged, whereas there is a tendency to downplay their most significant advantages. This results in young people feeling that they know a lot about these methods, and therefore not using them. The very small percentage of contraception use and the concurrent increased percentage of side effect awareness are noted in this study, and this is also observed worldwide¹¹. It is indicatively reported that 54% of women falsely believe that there are significant risks in using these methods, whereas 42% think that there is no benefit besides birth control; these percentages were confirmed in this study¹².

Table 8 Change of sexual behaviour due to STD risk

	Capital		Province		P
	Stopped	Continued	Stopped	Continued	
	N (%)	N (%)	N (%)	N (%)	
Sexual intercourse with strangers without protection	19	0	3	1	<0.001
Frequent change of sexual partners	26	15	17	5	<0.01
'One-night stands'	24	16	13	2	<0.001

Table 9 STD effect on sexual behaviour

	Capital					Province					P
	Strongly agree	Agree	Nor agree or disagree	Disagree	Strongly disagree	Strongly agree	Agree	Nor agree or disagree	Disagree	Strongly disagree	
	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	N (%)	
I could never acquire AIDS/STD	16	24	30	19	4	23	26	16	15	16	<0.01
Only homosexuals or drug users are prone to AIDS	—	3	6	49	37	10	5	18	32	32	<0.001
The probability of getting AIDS/STD has rendered me unable to enjoy sex	—	3	4	58	29	1	3	20	41	28	<0.01

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**Table 10** Most Important Factors—Advantages of Contraceptive Methods (Rating 1 to 5)

	25th	50th	75th	P
1. In accordance with my moral beliefs				
Capital	1	2	4	<0.001
Province	2.25	4	5	
2. 'Natural' (no medicine or operation)				
Capital	3	4	5	0.001
Province	4	4	5	
9. Low cost				
Capital	1	4	4	0.001
Province	4	4	5	
10. Easy to use				
Capital	3	4	5	0.001
Province	4	5	5	

In Canada, even though 95% of the women were familiar with the use of contraceptives and 85% of them had a positive view, only 15% knew that the benefits outweigh the risks of a potential unwanted pregnancy¹³. In regard to the state of our country, many studies have found that women in their adolescence and their reproductive age on a low socioeconomic status depend more on traditional birth-control methods (intermittent intercourse or pace), and also on abortions. In order to break the stereotypes and the prejudice, women should be appropriately informed, according to the needs of their respective age group. Additionally, an organized information campaign on a social level should help clear the rumours that prevent women from using contraception, always sticking of course to their indications and contraindications. The improvement of the medicinal products in terms of composition and time of administration, for example one pill monthly if possible, should also reinforce the women's compliance. The technological progress is expected to soon bring advances in that field also^{14,15}.

Socioeconomic, cultural and demographic factors influence young

adults' views regarding the risk of sexual behaviours and contraception, as it is apparent by the differences between the various groups in this study. Specifically, the capital's residents seem to be less cautious with their sexual interactions and at the same time more familiar with hormonal contraception and STDs than the mainland residents. The capital's residents responded with a statistically significant difference that AIDS does not concern certain groups, and that the chance of STD transmission does not prevent them from enjoying sexual intercourse, despite the fact that they think that they might be in danger. They still have sexual intercourse with strangers, without using a condom, and they still alternate between sexual partners and have 'one-night stands' with strangers. The mainland residents, instead, avoid getting tested and talking about STDs to a higher extent than the capital's residents. Furthermore, they do not often think about the possibility of STD transmission during sexual intercourse without a condom, while they avoid having sex with people who might be suspicious for having an STD more often, showing therefore a more 'conservative'

profile. It appears that the capital's residents adopt a more 'aggressive' strategy towards STDs, whereas the mainland residents tend to avoid any involvement in high-risk behaviours. The environment of rural towns and the closer relationships between their residents possibly discourage extreme and risky behaviours, which are encountered more often by people living in the capital.

Conclusion

It must be mentioned that the frequency of prostitution was not recorded, so we cannot rule out the fact that questions regarding the alternation and the number of partners for the people who have casual relationships, could have included such cases, so the results were somehow differentiated. Moreover, in some cases, the frequency of answers in each group was low due to the respective small number of participants; thus, the correlations regarding their socioeconomic background might not be fully accentuated. We must always keep in mind the fact that the mainland sample came from a specific region of the rural mainland with certain geographic and cultural features (Tripolis, Arcadia) and which does not obviously represent the Greek mainland in its totality.

By summarizing the results of this research, we can observe the big picture of young adults' sexual behaviour and their stand towards contraception issues. The low frequency of condom use and the inadequate information on STDs for half of the sample subjects is underlined. Furthermore, the level of birth-control pill use is low. There is also a noted differentiation between the participants' views and their implemented practices, especially in those who have casual relationships. A significant percentage of the male capital residents under the age of 29 years appear to follow a high-risk behaviour, and that group should be a potential intervention target, in order

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to limit the transmission of STDs and also to adopt efficient contraception practices. We recognize the fact that the information on STDs and the risk of transmission has not led to safer sex, which shows that the interventions should not be just medical, but should also take into consideration the desires and the cultural singularities, as well as the socioeconomic background of every person. The objective improvement of contraception methods, the thorough information and the organized sex education programs for young people, free from prejudice, are all expected to help adopt safe sex practices. New scientific data suggest that perhaps the solution might not lie in abstinence and the total renouncement of some sex practices, but in their 'active' management by the partners involved in order to maximize pleasure and safety.

Abbreviations list

OC, oral contraceptive; STD, sexually transmitted disease

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