Family Planning in Romania: A Cross-sectional Study of Knowledge, Practice and Attitudes

Cornelia Rada *

PhD; Biomedical Department, "Francisc I. Rainer" Anthropology Institute of the Romanian Academy, 8 Avenue Eroii Sanitari, O.P. 35, C.P. 13, Sector 5, 050474, Bucharest, Romania

**** Corresponding Author:*** e-mail:corneliarada@yahoo.com | Telephone: +40728824852 | Fax number: +40213175072

Abstract

Background: Prior to 1990 voluntary abortion and sale of modern contraceptives was prohibited in Romania. Family planning in Romania has enjoyed a positive evolution, but some problems persist.

Objectives: This study proposes to determine the knowledge and practices regarding family planning (FP) methods, the situation of pregnancies planning, communication within couples about FP and the impact of socio-demographic variables on these issues in Romania.

Method: Between 2011 and 2012, 863 subjects, 18-49 years old, from urban and rural environment, responded to a questionnaire with 96 items on family-related topics. To achieve the objectives of this study we focused on five items. The Pearson chi-square tests were employed using the statistical programs SPSS.

Results: Subjects became parents for the first time at an average age of 24.81. 34.76% had a second or third child. 84.81% of the couples were married when the children were born. 12% became parents between the ages of 15-19, with a larger share in rural areas and a low educational level ($p<0.0001$). 70.5% used methods of contraception, the most popular being male condoms, withdrawal, the oral contraceptive pill, and calendar rhythm. More than ½ planned their pregnancy, with the average dropping at second and third birth, and over ¾ of the partners discussed FP; this was lower in rural areas, for those with a low educational level ($p<0.001$).

Conclusion: There will never be sufficient funds to cover the needs of the educational and health care systems. Consequently, the efforts must target the population at risk for unwanted pregnancies, such as those in the rural area, those with lower educational levels, and those with poor income. Schools, families, City Halls, medical centers, the church, etc. can have a positive effect, with concurrent activities, on both children and parents in terms of participation in education.

Key words: family planning; contraception; adolescent pregnancy; couples; communication

Background

Family planning (FP) helps prevent high obstetrical risk pregnancies, such as those for women under the age of 20, for those over 35 years of age, and those with an intergenesic interval shorter than 2 years or higher than 5+ years. By reducing the unintended pregnancy rates, family planning also reduces the need for unsafe abortion.[1, 2]

FP came into its own in Romania only after 1989, as did the use and sale of modern contraceptive measures. Abortions per 1,000 women aged 15-49 year has dropped consistently from 78.6‰ in 1996 to 18.8‰ in 2010, with the highest number of abortions registered among women aged 25-29, followed by the 20-24 and 30-34-year age groups.[3] Nevertheless, the percentage of known pregnancies ending in legal abortions in Romania is one of the highest in the European Union.[4]

At the same time, the birth rate among teenagers aged 15-19, per 1,000 girls, is one of the highest in the European Union. In 2008 that birth rate in Europe varied from 43‰ in Bulgaria, 39‰ in Romania, 27‰ in the United Kingdom, between 10-6‰ in Germany, France, Norway, Italy, Sweden, and Denmark, and the lowest rates in the Netherlands (5‰) and Switzerland (4‰).[5]

Data suggests that the best way to reduce abortion rates is to make contraception more accessible rather than banning the practice of abortion.[6] Prior to 1989, the aggressive Ceauşescu-era pro-natalist policy prohibited both the sale and use of modern means of contraception and abortion. Family planning programs began after 1990 to deal with the serious situation in which Romania found itself after communism, when the high number of illegal abortions led to a high rate of morbidity and mortality among women, and a large number of abandoned children or children with disabilities. During the communist period there was a definite violation of the fundamental right of the family to determine how many children it wanted to have. Romania developed and implemented the most restrictive legislation in terms of access to the voluntary interruption of pregnancy in the communist bloc, while prohibiting the import and sale of modern contraceptives.[7]

Objectives

Taking into consideration the facts presented above, this study proposes to determine the knowledge and practices regarding family planning (FP) methods, the situation of pregnancies planning, communication within couples about FP and the impact of socio-demographic variables on these issues in Romania. Comparisons with other studies will likewise be drawn. The results of such a study will cover a gap in the specialized FP planning literature in Romania, and the trends identified regarding unintended pregnancy (mistimed or unplanned) can form a basis for public health programs and demographic policies.

Data & Methods

Design and sampling

The study was conducted between 2011- 2012 in urban areas. Subjects with a high level of education filled out the questionnaire themselves; interviewers later verified the responses in face-to-face encounters with the respondents. For subjects with low and medium levels of education, questionnaire-based face-to-face interviews were used. The response rate was 100%.

A simple random selection of subjects was undertaken from the sampling frame. We selected 863 men and women, aged 18-49, who have started to be sexually active; 18 is the age of majority in Romania, while 49 is statistically considered the maximum fertility age for women. The distribution of subjects was relatively homogenous with respect to environment and gender (Table 1).

Questionnaire design

We used an *omnibus* questionnaire of 96 items that focused on topics related to family functioning: economic function, education, cohesion & solidarity and sexual reproduction. A large number of articles as well as questions from various studies, surveys, and guides were used to create and modify the questionnaire.[8,9] In the present study we focused on five items, namely:

1) Which contraception method below did you use in the past, and which did you use in the past 3 months?: calendar rhythm, coitus interruptus (withdrawal), spermicides, male condoms, basal body temperature, vaginal sponge, diaphragm, cervical cap, intra-uterine device**,** oral contraceptive pill, injectable contraceptive, emergency contraception, tubal ligation, vasectomy (variants of answer: No, Yes).

2) What are your reasons for not using regular contraception in the past three months?: I want to become pregnant, I am opposed to family planning, I am infertile/subfertile, I am pregnant or have just given birth, I am afraid of side effects, I am going through Menopause, I am sexually inactive, I have no partner, I am careless, Lack of information, Other reasons, such as: .. (variants of answer: No, Yes).

3) What chance does a breastfeeding woman have to get pregnant? (variants of answer: The same as a woman who is not breastfeeding, greater chance, less chance, I do not know).

4) Do you (have you) discussed with your partner the question of how many children you want, family planning, the right kind of contraception method? (variants of answer: No, Yes, Is not the case).

5) What was the planning situation of the first three pregnancies? (variants of answer: Planned, wanted at that moment, Unplanned, earlier than wanted, Unintended, I have never given birth).

Data management and statistical analysis

The Pearson chi-square tests were employed using the statistical programs SPSS Version 15 (SPSS Inc., Chicago, IL). Demographic variables used in the statistical analyses were: environment, gender, educational level, age groups and marital status.

Ethical considerations

Informed written consent was obtained from each participant at the time of recruitment. The study was approved by the Ethics Commission of the "Francisc I. Rainer" Anthropological Institute of the Romanian Academy. The interviews were held in specially designated rooms: offices of family physicians, rooms made available with the help of village mayors and university lecture rooms.

Results

Statistical data concerning age at the birth of the first child

The average age at which respondents (62.57%, N=540) became parents for the first time was 24.81 years, higher in urban areas, among men, and those with higher educational levels. 240 subjects had a second child, and 60 had a third child. The average age at birth of the second child, compared to the age at which they became parents with their first child, was some 2 years later (age 27.14, respectively 27 years median). At the birth of the third child the average age was 28.83 years, while the median was 28.5 years. 12% became parents between the ages of 15-19 years, 36.7% between 20-24 yerars, 36.1% between 25-29 yerars, 12.4% between 30-34 yeras, and 2.8% between the ages of 36-42. The ratio of those becoming parents before the age of 19 was higher in rural areas (Pearson Chi-Square=73.97, $p<0.001$), among those with a lower educational level (Pearson Chi-Square=118.80, $p<0.001$).

Past and present use of methods of contraception, and knowledge about lactational amenorrhea

The most used methods of contraception in the past and in the last three months were the male condom, withdrawal, the oral contraceptive pill, and calendar rhythm (Table 2).

During the interviews 22 men did not know how to respond about methods of contraception used, indicating that this is "the business of the woman." A further 44 respondents, who used the withdrawal and calendar rhythm methods, reported that they had not used any form of contraception for fear of side effects or because they are opposed to family planning.

70.5% (N=608) of the subjects used methods of contraception. The reasons given by 255 of the respondents for not regularly using contraception during the last trimester are included in Table 3. 24 of the respondents chose to give the following reason "Fear of God, it's a sin" (Table 3)

Most of those who did not use methods of contraception due to negligence, opposition to family planning, lack of information, or fear of committing a sin were from rural areas, with medium or low educational levels.

Taking into account the contraceptive methods used in the last three months the results are the following. All of the contraceptive methods were used more by subjects from urban areas with higher educational levels. Men reported a greater use of male condoms and withdrawal. The oral contraceptive pill, calendar rhythm, emergency contraception, spermicides, and intrauterine device were reported more by women. Male condoms and emergency contraception were used primarily by those aged 18-24. The oral contraceptive pill, calendar rhythm, spermicides, and the intrauterine device were used more by those aged 25-49 ($p<0.001$). With the exception of emergency contraception, all 7 methods of contraception were used more by married subjects. It was found that the condom was used in equal proportion by those married and unmarried (Table 4). Taking into account that the frequency and duration of breastfeeding brings on *amenorrhea* (natural method of contraception), for the sake of an evaluation of the level of knowledge, subjects were asked to classify the risk of women for getting pregnant while breastfeeding. In the opinion of 37% of the subjects, women who breastfeed are as likely to get pregnant as women who do not breastfeed. 38.8% were unable to respond to this question, and only 24.2% answered correctly, indicating that there is less likelihood of the woman getting pregnant. Statistically significant there were more correct answers to this questions from women, (Chi-Square=9.01, $p<=0.01$), those aged 35-49 years (Pearson Chi-Square=13.29, $p<0.001$), and those married (Pearson Chi-Square=17.61, $p<0.001$) (Table 4).

Situation of planned pregnancy and communication between partners regarding family planning

37.4% (323) subjects reported that there was no birth. Of the 540 subjects who are parents, almost half of the pregnancies were planned, with the ratio dropping for the second and third births. Most opted to have a single child.

There was a higher ratio of planned first and second pregnancies in urban areas, among those with medium or higher educational levels, those aged 24-34, but especially among those aged 35-49 ($p<0.001$).

82.7% of partners involved in a stable relationship communicated about the number of children desired and family planning, while 76.9% of such partners communicated about the choice of contraception. 8.3% (72) did not respond because they were not in a relationship with a stable sex partner. Communication was higher among those in urban areas, with a higher educational level, and those married ($p<0.001$). There was also more communication about the number of children wanted and FP among those aged 25-49 than those aged 18-24 ($p<0.05$) (Table 5).

Discussion

Intergenesic intervals, reproductive behavior, age of parents at birth of first child

Studies show that the optimum 4-year intergenesic interval has a beneficial effect on infant and maternal mortality, bringing about a drop in both levels. [10]

The two-year intergenesic interval for the birth of the second child, identified in this study, can be considered relatively reasonable, while that for the third child, around 1.5 years, is far too short.

The national level in the 1990-2010 period was subject to a sharp drop in natality, from 13.6 live births per 1,000 population (1990) to 9.9 live births per 1,000 population (2010). [3] This drop in natality after 1989 occurred due to a reduction in the number of live births at all levels, but especially the higher levels (level 3 and over). This study shows that the current preferred family model is a smaller one, with one or no more than two children.

Prior to 1990 some 100% of births in Romania occurred within the framework of marriage, with natality linked to a greater degree to nuptiality. The present study shows a preponderence of births within marriage, as well as a 15% ratio of births outside of marriage.

Based on the age group of parents, one sees a restructuring of the early model of natality, with fertility at age 20-24; the ratio of those becoming parents at ages 25-29 was almost equal to that of those becoming parents at ages 20-24; this is an intermediary to late model, specific to Western European models. The intermediary model tends also slightly to be adopted by the rural areas.

The continued drop in births among adolescents is encouraging. Since 1989, of the national total births 15.13% were to mothers aged 15-19, compared to only 10.6% of total births in 2010 to mothers in this same age group [11]. According to the present study, 9 times more adolescents became parents in rural areas, with over 4 times as many among those with low educational levels. In urban areas twice as many persons became parents at ages over 35 and with high educational levels.

Socio-economic disadvantage and limited education appear to be most consistently related to teenage pregnancy. These two factors associated with teenage pregnancy and identified here are rather similar to those found in other research carried out in European Union countries [12].

Adolescent pregnancy has medical risks for mothers, such as proteinuria, anemia, urinary tract infection, pyelonephritis, and eclampsia [13], and for children, such as preterm birth, and low birth weight. [14] The choice of timing when people wish to become parents and how many children they want to have, are fundamentul rights which must be respected. Therefore, in order to bring down the risks of adverse obstetric outcomes greater efforts are required for adequate antenatal care for these teenagers. Pregnant adolescents especially should be registered from the beginning of their pregnancy and monitored for the duration. The month when prenatal care begins and the number

of prenatal visits, expressed by the Kotelchuck Index (Adequacy of Prenatal Care Utilization) are essential issues for mother and child health. The study shows the necessity for increasing educational and counseling efforts among women in Romania, especially in rural areas, in respect to the start of prenatal care visits in the first month and to ensure there are at least 10 prenatal care visits after that. [15]

This is not as simple as it is for other future mothers. Many adolescents keep their pregnancy hidden from their parents, their teachers, and society out of fear and embarrassment, because they are so often condemned and marginalized. Any future mother is subject to tremendous changes in self-perception and identity. The period of adolescence, an age of full development, is already a fairly confusing one in terms of identity. The combination of these two states brings about even greater confusion, and can affect normal mental function; when other girls their age go out to have a soda or socialize, she has to do things that are required of adults.

In addition to these medical risks, there are also problems relating to inadquate education and upbringing, resulting from poor income and insufficient mental maturity of both the girl and the father, in most cases still a child himself. Many girls who become pregnant have to leave school. This has long-term implications for them as individuals, for their families, and for the community. Low educational levels are closely associated with early childbearing. This can lead to the perpetuation of a vicious cycle of the following behavior pattern: early childbearing → school abandonment → poverty → early childbearing.

Practices and knowledge regarding forms of contraception

Compared to the 2004 national study entitled *Reproductive Health Survey Romania 2004*, the present study, which shows a ratio of over 70% contraception usage, is proof of considerable improvement. [16]

Excluding those who do not use contraception for objective reasons, including: a desire to procreate, postpartum pregnancy, infertility, menopause, or sexual inactivity in the past three months, this leaves 35% who risk pregnancy because of non-use of contraception for the following reasons: negligence, fear of side effects, opposition to family planning, and lack of information.

It is interesting that none of the subjects indicated non-usage because of lack of access to the form of contraception, as was indicated in other studies. [17] This shows an improvement in FP services in Romania.

There are studies, including this one, that have identified the most widely used forms of contraception in the past and in the last three months as being male condoms, withdrawal, and the oral contraceptive pill. [18] Other studies by populations that have had access to modern contraception as far back as the 1960s, such as the United Kingdom, Germany, Italy, Spain, and the USA, have identified the most widely used forms of contraception as the oral contraceptive pill, male condoms, and the intrauterine device, with withdrawal the least popular. [19] Compared

to older Romanian studies, we notice a considerable drop in the use of traditional contraception, such as calendar rhythm and withdrawal, which were the two most readily available forms for Romanian couples before 1989.

We draw attention to the fact that some of the men who were interviewed did not know how to respond to the question concerning methods of contraception used, as they consider this matter to be the woman's business. We also wish to highlight the situation of some subjects who, while using natural methods of contraception, reported that they did not use any contraception. The some 5% of subjects who expressed their opposition to contraception declared themselves to be strong believers, who are frequent church-goers, and have low or medium educational levels. This group is at risk for unintended pregnancies.

The results of this and other studies show that there is greater vulnerability in terms of unplanned pregnancy among the rural population with low educational levels due to the non-use or irregular use of contraception. [20]

The needs for contraception differ in terms of age and respectively marital status. Young and unmarried subjects largely use male condoms and emergency contraception.

The AIDS epidemic and the negative biological and social consequences of adolescent pregnancy have made it necessary to promote the use of condoms among young people. [21] There is not always a direct connection between knowledge about the method and its usage. Nevertheless, this and other studies show that young people have in the past and in the past few months preferred the condom, which proves that this information campaign has been successful. [22] The intra-uterine device and contraceptive pill are more popular among persons over the age of 24 and married couples; at the same time, the change in marital status, which brings about a constancy in sexual activity, makes withdrawal and calendar rhythm more manageable.

The fact that less than ¼ of respondents indicated that women who breastfeed are at lower risk of becoming pregnant indicates poor knowledge about lactational *amenorrhea* as a natural form of birth control. As is to be expected, women aged 35 and over and married are more familiar with this method. Men and subjects from rural areas responded less correctly. The trends are similar to those in the Rada-Tarcea Study carried out in 2005-2006. [23]

The situation of planned pregnancies and communication between partners about family planning

Couples tend to limit the number of births to one or two, at most (mean 1.63, median 1), which leads us to state that the conjunctural fertility index will continue not maintaining the replacement rate. For that matter, for over 30 years, many developed countries have found it difficult to maintain the replacement rate.

Over 40% of births were unplanned, unintended, with the rate of unplanned higher for the second child, and especially for the third. This percentage is higher than that found in an Ethiopian

study, according to which unintended pregnancy was reported in a proportion of less than 30%. [24] Compared to older Romanian studies, we found a drop in the rate of unplanned, unintended births. The ratio of unplanned, unintended births was higher in rural areas, among those with lower educational levels, and those aged 18-24. Thus we have found that those who planned a second and third child are usually found to have a higher educational level and were born between 1963-1977, which shows that a new reproductive model was established: fewer children, preferably one, brought into the world at an older age has become the rule that governs the reproductive behavior of young couples in Romanian society, a society that has rapidly adopted the value and attitude system of developed countries.

In Romania Law nr.1/26 December 1989, which permits abortion and the legal use of modern forms of contraception, brought about a considerable drop in the rate of abortions and generated a drop in a single year of the natural increase from 5.3‰ to 3‰, due to a drop in the live birth rate from 16‰ to 13.6‰ , while the death rate remained constant (10.6‰). The natural increase turned negative (-0.2) since 1992, to reach -2.2‰ in 2010, again due to the drop in the rate of live births to 9‰. [3]

Access to modern contraception techniques must be considered rather a means and not a direct cause for the drop in natality, because countries such as France, Norway, and the Netherlands, with a tradition for use of contraception show fertility above the European average. [25]

It is rewarding to note that over ¾ of subjects reported that they communicate with their partner about the number of children they wish to have, about family planning, and about the choice of contraception. This percentage is higher than a study carried out in Bangladesh. [26] It is indicative of a modernization in the distribution of roles in couples. The man is no longer the major decision-maker in terms of issues of reproduction, the institution of patriarchy, religion, and male economic power.

Communication was poorer in rural areas, among those with lower educational levels, and those aged 18-24. We stress that these same demographic characteristics can be found among those who had children before age 19. Therefore, as is the case also in other studies, we have identified a correlation for poor communication between partners on the one hand and early pregnancy and non-use of contraception on the other. [27]

Considering that some men were unable to respond to the question about methods of contraception used, and that they responded that the woman is the one to be in charge of the contraception, it is necessary to make men more responsible about matters of sex and reproduction. One way to prevent unwanted pregnancies is to change the attitude of the male population, which is a “relaxed” delegation to the female partner of the responsibility for protection against unwanted pregnancies.

Conclusions

FP in Romania has enjoyed a positive evolution, but some problems persist. The social and economic consequences of adolescent pregnancy have, in recent years, motivated many states and cities to implement comprehensive adolescent pregnancy prevention programs. [28] In Romania there are likewise regular early pregnancy prevention education campaigns, especially among women belonging to the Roma ethnic group. [29] Regular workshops have been organized in locations allocated by City Halls, and mass-media campaigns have taken place with the use of booklets, flyers, newspaper and magazine advertisement. However, the problem has been insufficiently resolved, also because the model of early birth and numerous children is perpetuated within families. Education must take place not only before children are brought into the world too early, but also after, because the entire family and community must be involved.

School should be an important place for sexual and reproductive education. Prior to 1989, young people in Romania, unlike their Western counterparts, did not receive sufficient sexual education, and no contraceptive education at all. In Romania, beginning with the school year 2004-2005, the optional *Education for Health* course was introduced into the curriculum *for classes 1-12*. The teaching line is organized in a 6-module-structure, and each module has a chapter dedicated to *reproductive and family health* [30], but it is unfortunate that in the 2011-2013 school years only a few students attended these classes.

But even this effort is insufficient; in Romania, the rate of school abandonment was 18.4% in 2010, 17.5% in 2011, and 17.4% in 2012, while the average in the European Union in 2012 was below 13% .[31]

There will never be sufficient funds to cover the needs of the educational and health care systems. Consequently, the efforts must target the population at risk for unwanted pregnancies, such as those in the rural area, those with lower educational levels, and those with poor income. Schools, families, and institutions representing the community (City Halls, medical centers, the church, etc.) can have a positive effect, with concurrent activities, on both children and parents in terms of participation in education. Being part of a socio-economically disadvantaged family can be a barrier for obtaining information due to the fact that parents with low levels of education cannot offer their children the necessary educational support. Partnership, parent-school dialog, and parental education for more rigorous control of children is essential.

The involvement and awareness-raising of men in connection with FP and sexuality issues is important for an improvement of sexual and reproductive health. Policies should be encouraged to promote greater integration of men in FP programs.

It should not be forgotten that one cause for adolescent pregnancy is insufficient attention by the family, which leads them to believe that if they become involved in a sexual relationship they will obtain the attention they need. Therefore parents, teachers, family physicians, and gynecologists should offer as much understanding and kindness in connection with their way of approaching such situations.

Acknowledgements

The data used for this article were part of a larger research project 'Identitary (sic) values of the contemporary Romanian family in the framework of the globalization. An anthropological approach,' which received financial support from the European Social Fund, Contract POSDRU/89/1.5/S/59758/2011–2013, awarded to the author.

Conflict of Interest: There is no conflict of interest.

References

1. Saha UR, Van Soest A. Contraceptive Use, Birth Spacing, and Child Survival in Matlab, Bangladesh. *Studies in Family Planning.* 2013; 44(1): 45–66.
2. Switzerland, WHO, Family planning. Fact sheet N°351. http://www.who.int/mediacentre/factsheets/fs351/en/. Accessed January 4, 2012.
3. România, Institutul Naţional de Statistică. *Anuarul Statistic al României 2011*, Bucureşti: Institutul Naţional de Statistică; 2011.
4. Johnston Wm R. Percentage of Pregnancies Aborted by Country (countries listed by percentage). 2012. http://www.johnstonsarchive.net/policy/abortion/wrjp334pd.html. Accessed October 22, 2013.
5. USA, National Center for Chronic Desease Prevention and Health Promotion, Division of Reproductive Health, CDC Vital Signs. Preventing Teen Pregnancy in the US, 2011. http://www.cdc.gov/vitalsigns/pdf/2011-04-vitalsigns.pdf. Accessed October 18, 2012.
6. Olson, L. Global Abortion Rates. 2012. http://www.infoplease.com/science/health/global-abortion-rates.html. Accessed September 22, 2012.
7. Rada C. *Family planning at the boundary between medical and social. An anthropological and psycho-medical approach.* Piteşti: Publishing Parallel 45 (in Romanian); 2009.
8. Denny S, Robinson E, Lawler C, et al. Association Between Availability and Quality of Health Services in Schools and Reproductive Health Outcomes Among Students: A Multilevel Observational Study. *American Journal of Public Health.* 2012; 102 (10):14–20.
9. USA, Planned Parenthood Federation of America, Inc. *Birth control.* 2012. http://www.plannedparenthood.org/health-topics/birth-control-4211.htm. Accessed January 30, 2012.
10. Kozuki N, Walker N. Exploring the association between short/long preceding birth intervals and child mortality: using reference birth interval children of the same mother as comparison. *BMC Public Health.* 2013; 13(Suppl 3), S6.
11. România, Comisia Naţională pentru Statistică, *România date demografice*, Bucureşti: Comisia Naţională pentru Statistică; 1994: pp. 76-87.
12. Imamura M, Tucker J, Hannaford Ph, et al. Factors associated with teenage pregnancy in the European Union countries: a systematic review. *Eur J Public Health.*2007; 17 (6): 630–636.

13. Leppälahti S, Gissler M, Mentula M, Heikinheimo O. Is teenage pregnancy an obstetric risk in a welfare society? A population-based study in Finland, from 2006 to 2011. 2013. *BMJ Open* 3(8).
14. Rada C, Prejbeanu IM, Cichirea V, Pîrcălabu R. Prenatal care and behavioural risk factors for pregnancy evolution in Romania. *European Journal of Public Health.* 2008; 18 (suppl 1): 158.
15. Rada C, Prejbeanu IM, Mihai MG, Zugravu CA, Ciuvat V. Adequacy of Prenatal Care Utilization Index and Breastfeeding, Practices in Romania. APHA 139TH Annual Meeting an Exposition Oct 29-Nov 2, Washington DC, 2011; abstract, 236907. http://apha.confex.com/apha/139am/webprogram/Paper236907.html. Accessed March 12, 2012.
16. *Reproductive Health Survey Romania 2004, Summary Report* Buzău: Alpha MDN; 2005. http://www.unece.org/fileadmin/DAM/stats/gender/vaw/surveys/Romania/Romania_Publication.pdf. Accessed September 30, 2012.
17. Ahmed S, Li Q, Liu L, Tsui A Maternal deaths averted by contraceptive use: an analysis of 172 countries. *Lancet*. 2012; 380(9837):111–125.
18. Ong J, Temple-Smith M, Wong CWW, Mcnamee K, Fairley C. Contraception matters: Indicators of poor usage of contraception in sexually active women attending family planning clinics in Victoria, Australia. *BMC Public Health*. 2012; 12, 1108. http://www.biomedcentral.com/1471-2458/12/1108. Accessed February 2, 2013.
19. Johnson S, Pion C, Jennings V. Current methods and attitudes of women towards contraception in Europe and America. *Reproductive Health,* 2013;10,7. http://www.reproductive-health-journal.com/content/10/1/7. Accessed November 28, 2013.
20. Layte R, Mcgee H, Rundle K, Leigh C, Does ambivalence about becoming pregnant explain social class differentials in use of contraception?. *Eur J Public Health.*2007; 17 (5): 477–482.
21. Castro MG, Abramovay M, Silva LB. *Juventude e sexualidade*. Brasília: UNESCO Brasil; 2004.
22. Tavares C M, Schor N, Valenti VE, Kanikadan PYS, Carlos De Abreu L. Condom use at last sexual relationship among adolescents of Santiago Island, Cape Verde, - West Africa., *Reproductive Health.* 2012; 9, 29. http://www.reproductive-health-journal.com/content/9/1/29. Accessed August 4, 2013.
23. Rada C, Tarcea M. *Sexual and family life of the Romanians. Study Rada – Tarcea* (Iaşi: Editura Institutul European (in Romanian); 2010.
24. Kassa N, Berhane Y, Worku A. Predictors of unintended pregnancy in Kersa, Eastern Ethiopia, 2010. *Reproductive Health*. 2012; 9,1. http://www.reproductive-health-journal.com/content/9/1/1. Accessed January 28, 2013.
25. Rotariu, T. *Demografie şi sociologia populaţiei, Fenomene demografice*, Iaşi: Editura Polirom; 2003.
26. Shahjahan Md, Mumu SJ, Afroz A, Chowdhury HA, Kabir R, Ahmed K. Determinants of male participation in reproductive healthcare services: a cross-sectional study. *Reproductive Health.* 2013; 10, 27. http://www.reproductive-health-journal.com/content/10/1/27. Accessed November 26, 2012.

27. Shattuck D, Kerner B, Gilles K, Hartmann M, Ng'ombe T, Guest G. Encouraging Contraceptive Uptake by Motivating Men to Communicate About Family Planning: The Malawi Male Motivator Project. *American Journal of Public Health.* 2011; 101 (6): 1089–1095.

28. Azar B. Adolescent Pregnancy Prevention Highlights From a Citywide Effort. *American Journal of Public Health.* 2012;. 102 (10): 1837–1841.

29. Prodan GC. (ed.) *Suport de curs şi aplicaţii practice: problematica femeii rrome, din România,* Timişoara: Eurobit; 2011.

30. România, Ministerul Educatiei ºi Cercetării: *ORDIN nr. 4496/11.08.2004, privind aprobarea programelor ºcolare pentru disciplina opþionalã Educaþie pentru sãnãtate, clasele I-XII -a (variantã modularã).* http://administraresite.edu.ro/index.php/articles/5146. Accessed October 26, 2013.

31. România, Comisia Europeană în România, Direcţia Generală pentru Comunicare. 2013. http://ec.europa.eu/romania/news/11042013_educatie_strategia_europa_2020_ro.htm. Accessed October 23, 2013.

Tables

Table 1: Distribution of subjects according to environment, gender, educational level, age group and marital status

Sociodemographic Variables	Number	%
Environment		
Urban	501	58,1
Rural	362	41,9
Gender		
Male	429	49,7
Female	434	50,3
Educational level		
Low (primary education <10 years)	224	26,0
Medium (secondary education 10–12 years)	343	39,7
High *	296	34,3
Age groups (years)		
18–24	228	26,4
25–34	294	34,1
35–49	341	39,5
Marital status		
Married	547	63,4
Unmarried	172	19,9
Consensual union	144	16,7

* Tertiary education >12 years, completed by obtaining a diploma. University. Post-university.

Table 2: Contraceptive methods used in the past and in the last three months

Contraceptive methods used		In the past		In the last 3 months	
		N	%	N	%
1	Male condoms	513	59.4	276	32
2	Coitus interruptus (withdrawal)	362	41.9	199	23.1
3	Oral contraceptive pill	277	32.1	132	15.3
4	Calendar rhythm	276	32	120	13.9
5	Emergency Contraception	86	10	29	3.4
6	Spermicides	37	4,3	19	2.2
7	Intra-uterine device	29	4.4	21	2.4
8	Basal body temperature	14	1.6	2	0.2
9	Vaginal sponge	12	1.4	4	0.5
10	Cervical cap	10	1.2	6	0.7
11	Diaphragm	8	0.9	8	0.9
12	Tubal ligation	6	0.7	18	2.1
13	Injectable contraceptive	5	0.6	2	0.2
14	Vasectomy	1	0.1	0	0

Table 3: Reasons for inconsistent contraception use in the last 3 months

	Reasons for inconsistent contraception use in the last 3 months	N	%
1	I want to get pregnant	71	27,8
2	Negligence	37	14.5
3	Pregnant or soon after birth	33	12.9
4	Infertility, subfertility	26	10.2
5	Fear of side effects	25	9.8
6	Menopause	20	7.8
7	Sexually inactive, without a partner	16	6.3
8	I am opposed to family planning	15	5,9
9	Lack of information	12	4.8
10	Total	255	100
11	Fear of God, it is a sin	24	8.6

Table 4: The main methods of contraception used, knowledge of lactation amenorrhea, according to socio-demographic characteristics

The first 7 Methods of contraception used in the past 3 months	Environment		Gender		Educational level			Age groups			Marital status		
	Urban	Rural	Male	Female	Low	Medium	High	18–24	25–34	35–49	Unmarried	Married	Consensual union
	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)
Male condoms	66.7[a] (184)	33.3[a] (92)	56.5[b] (156)	43.5[b] (120)	14.1[a] (39)	48.6[a] (134)	37.3[a] (103)	37.0[a] (102)	34.4[a] (95)	28.6[a] (79)	38.4[a] (106)	49.6[a] (137)	12.0[a] (33)
Withdrawal	55.3 (110)	44.7 (89)	54.3 (108)	45.7 (91)	31.7[b] (63)	31.2[b] (62)	37.2[b] (74)	25.1 (50)	35.2 (70)	39.7 (79)	14.6c (29)	70.4c (140)	15.1c (30)
Oral contraceptive pill	74.2[a] (98)	25.8[a] (34)	44.7 (59)	55.3 (73)	23.5 (31)	47.0 (62)	29.5 (39)	25.8 (34)	42.4 (56)	31.8 (42)	14.4[a] (19)	57.6[a] (76)	28.0[a] (37)
Calendar rhythm	72.5[b] (87)	27.5[b] (33)	42.5 (51)	57.5 (69)	15.0[a] (18)	30.8[a] (37)	54.2[a] (65)	15.0[b] (18)	41.7[b] (50)	43.3[b] (52)	13.3 (16)	72.5 (87)	14.2 (17)
Emergency Contraception	58.6 (17)	41.4 (12)	34.5 (10)	65.5 (19)	10.3 (3)	65.5 (19)	24.1 (7)	72.4[a] (21)	20.7[a] (6)	6.9[a] (2)	75.9[a] (22)	10.3[a] (3)	13.8[a] (4)
Spermicides	57.9 (11)	42.1 (8)	47.4 (9)	52.6 (10)	10.5 (2)	42.1 (8)	47.4 (9)	10.5 (2)	31.6 (6)	57.9 (11)	10.5 (2)	73.7 (14)	15.8 (3)
Intra-uterine device	85.7[b] (18)	14.3[b] (3)	42.9 (9)	57.1 (12)	9.5 (2)	33.3 (7)	57.1 (12)	0[c] (0)	52.4[c] (11)	47.6[c] (10)	4.8[b] (1)	95.2[b] (20)	0[b] (0)
Woman who is breastfeeding have lower risk of getting pregnant	53,1 (111)	46.9 (98)	40.7[b] (85)	59.3[b] (124)	26.8 (56)	40.7 (85)	32.5 (68)	21.5[b] (45)	28.2[b] (59)	50.2[b] (105)	10.5[a] (22)	74.2[a] (155)	15.3[a] (32)

Significant at [a] $p<0.001$; [b] $p<0.01$; [c] $p<0.05$

Table 5: Planning pregnancies *a*ccording to socio-demographic characteristics

Planificarea sarcinilor	Environment		Gender		Educational level			Age groups		
	Urban	Rural	Male	Female	Low	Medium	High	18–24	25–34	35–49
	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)	% (N)
First pregnancy										
Planned, desired at that moment	60.5[a] (216)	39.5[a] (141)	48.5 (173)	51.5 (184)	26.1[a] (93)	35.9[a] (128)	38.1[a] (136)	7.8[a] (28)	29.7[a] (106)	62.5[a] (223)
Unplanned, unwanted	30.6[a] (56)	69.4[a] (127)	46.4 (85)	53.6 (98)	52.5[a] (96)	31.7[a] (58)	15.8[a] (29)	21.3[a] (39)	34.4[a] (63)	44.3[a] (81)
Second pregnancy										
Planned	60.0[a] (72)	40.0[a] (42)	46.7 (56)	53.3 (64)	30.0[a] (36)	45.8[a] (55)	24.2[a] (29)	1.7[a] (2)	26.7[a] (32)	71.7[a] (86)
Unplanned	25.8[a] (31)	74.2[a] (89)	45.8 (55)	54.2 (65)	63.3 (76)	25.0 (30)	11.79 (14)	15.8 (19)	34.2 (41)	50.0 (60)
Third pregnancy										
Planned	70.6[a] (12)	29.4[a] (5)	41.2 (7)	58.8 (10)	17.6[b] (3)	52.9[b] (9)	29.4[b] (5)	0	11.8 (2)	88.2 (15)
Unplanned	18.6[a] (8)	81.4[a] (35)	39.5 (17)	60.5 (26)	69.8[b] (30)	25.6[b] (11)	4.7[b] (2)	4.7 (2)	30.2 (13)	65.1 (28)
Communication between partners regarding										
number and when to have children	63.5[a] (415)	36.5[a] (239)	48.3 (316)	51.7 (338)	23.9[a] (56)	38.8[a] (254)	37.3[a] (244)	20.6[b] (135)	35.2[b] (230)	44.2[b] (289)
the choice of contraceptive method	64.1[a] (390)	35.9[a] (218)	48.8 (297)	51.2 (311)	23.2[a] (141)	38.5[a] (234)	38.3[a] (233)	22.4 (136)	34.7 (211)	42.9 (261)

Significant at [a]$p<0.001$; [b] $p < 0.01$