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## CONTRACEPTIVE USE AND REPRODUCTIVE INTENTIONS AMONG FEMALE STUDENTS AT THE UNIVERSITY OF NOVI SAD

Milena SEKULIĆ,

*Faculty of Science - Department of Geography, Tourism and Hotel Management, Novi Sad. e-mail: milena.sekulic@dgt.uns.ac.rs;*

Milica SOLAREVIĆ,

*Faculty of Science - Department of Geography, Tourism and Hotel Management, Novi Sad. e-mail: milica.solarevic@dgt.uns.ac.rs;*

Anđelija IVKOV DŽIGURSKI,

*Faculty of Science - Department of Geography, Tourism and Hotel Management, Novi Sad. e-mail: ivkova@dgt.uns.ac.rs;*

Ljubica IVANOVIĆ BIBIĆ,

*Faculty of Science - Department of Geography, Tourism and Hotel Management, Novi Sad. e-mail: ljubica.ivanovic@dgt.uns.ac.rs*

**Abstract:** Family planning is the ability of individuals and couples to have the desired number of children at a time when they want to. This is achieved using contraceptive methods and the treatment of unintentional infertility. Family planning is crucial for women's empowerment, and gender equality and is an essential factor in reducing world poverty. The research was conducted on an electronic survey questionnaire on the final sample size of 660 female students from the University of Novi Sad (Serbia). Survey results were analyzed using SPSS 23 software for Windows (Statistical Package for Social Sciences). The aim of the study is the analysis of the reproductive intentions regarding the structure of contraceptive use, from which comes the secondary objective, which is identification of the need for the sexual and reproductive education of young people. More than half of female students use modern contraceptives, but a significant proportion of female students rely on traditional methods such as withdrawal (coitus interruptus) (26.0%) and calendar methods (10.7%).

**Keywords:** contraception; family planning; students; Novi Sad; Serbia

**Sažetak:** Planiranje porodice je sposobnost pojedinaca i parova da imaju željeni broj dece u trenutku kada to žele. Ovo se postiže primenom metoda kontracepcije i lečenjem nevoljne neplodnosti. Planiranje porodice je ključno za osnaživanje žena i rodnu ravnopravnost i suštinski je faktor u smanjenju svetskog siromaštva. Istraživanje je sprovedeno na elektronskom anketnom upitniku na uzorku od 660 studentkinja Univerziteta u Novom Sadu (Srbija). Rezultati istraživanja su analizirani korišćenjem softvera SPSS 23 za Windows (Statistički paket za društvene nauke). Cilj istraživanja je analiza reproduktivnih namera u odnosu na strukturu upotrebe kontraceptiva, iz čega proizilazi sekundarni cilj, a to je iden-

tifikacija potrebe za seksualnim i reproduktivnim obrazovanjem mladih. Više od polovine studentkinja koristi moderna sredstva za kontracepciju, ali značajan deo studentkinja se oslanja na tradicionalne metode kao što su prekinuti snošaj (coitus interruptus) (26,0%) i kalendarske metode (10,7%).

**Ključne reči:** kontracepcija; planiranje porodice; studenti; Novi Sad; Srbija

## INTRODUCTION

Family planning is a conscious activity of (effective) fertility regulation of couples and individuals of reproductive age. This activity is reflected through the regulation of the number of children and the definition of the time interval between births (Đurđev, Arsenović, & Marinković, 2016). Giving birth is a free choice of a woman, who sets the precondition that she is satisfied with her partner and the quality of life. Every woman and man can have as many children as they want when they want, and with whom, to plan a family when they think that is the right time in their lives (Birth incentive strategy, 2018). To prevent unwanted pregnancies, the most appropriate prevention should be the use of adequate contraception. The male condom should be used to prevent infectious and sexually transmitted diseases, and to preserve reproductive health. Knowledge of sexuality, physiology of reproduction, methods of contraception, consequences of intentional termination of pregnancy, and diseases transmitted by sexual contact is significant for forming correct attitudes about family planning and accepting responsibility for sexual behavior (Milić et al., 2021). From the earliest civilizations, the possibility of preventing unwanted pregnancies has been the subject of great interest (Pazol et al. 2015; Benagiano, Bastianelli & Farris, 2007). A large selection of contraceptives provides the opportunity to choose the most acceptable method for each individual, with the highest degree of efficacy and safety (Berisavac, 2008). With their adequate application, the rates of unwanted pregnancies should be reduced to a minimum (Benagiano, Bastianelli & Farris, 2007).

Contraception is an essential component of health care that enhances well-being, protects against various bad health condition, prevents unplanned pregnancy, enables women to realize their full potential, and have a positive impact on the family, community, and society (Rice et al., 2019). There are different divisions of contraceptives: concerning the user (contraception for women and men), according to the length of use (irreversible and reversible, which can be divided into short-acting contraceptive methods), the mode of action (natural, mechanical, chemical, and biological), according to the place of action (local and general). The most common division is into 1) hormonal contraception; 2) intrauterine

contraception; 3) local contraception, which involves the use of barrier methods and spermicides; and 4) natural (traditional) methods (Berisavac, Sparić & Argirović, 2009; Milosavljević, 2016).

Young people lack knowledge about reproductive functions and the skills needed to maintain general health. It has been undoubtedly proven that knowledge and motivation are prerequisites for adopting positive health habits, developing healthy sexuality, safe sexual and reproductive behavior, and developing personal responsibility for health preservation (Kirby, Laris & Roller, 2007). Research findings in Serbia also indicate insufficient information among young people about the proper use of contraceptives and the preservation of reproductive and sexual health, but also the desire to learn more about these topics (Stanković, 2004; Kuburović, 2003; Sedlecki, 2001; Vukićević, 2015).

The importance of the research is reflected in the fact that female students are a population group that will participate in childbearing after graduation or during their studies. Therefore, the use of adequate contraception and safe sexual behavior, and preservation of reproductive health deserve special attention from researchers.

The widespread use of contraception since the 1960s led to the postponement of childbearing for later years and contributed to the extended period of education for women and the later formation of a family following the personal aspirations of individuals (Vasić, 2021). Individual reproductive behavior is affected by modern methods of birth control. The role of contraception is to control fertility and contribute to reproductive health. Despite the low reproductive norms in Serbia, the use of contraception is not at a satisfactory level. That is, young women in the reproductive period, do not use contraception in the right way. Preservation and promotion of reproductive health (especially among adolescents), healthy motherhood, and fight against infertility, are some of the goals of sustainable demographic development in Serbia (Rašević, 2018). Family planning is also an issue of sexual and reproductive rights. The right to sexual and reproductive health is one of the fundamental human rights (Government of the Republic of Serbia, 2017). The National Strategy for Youth for the period from 2015 to 2025 emphasizes that one of the specific goals is the enhancement of the program for the promotion of reproductive health and prevention of risk behavior of young people and family planning (National strategy for youth, 2015). The Regulation on the National Program for the Preservation and Improvement of the Sexual and Reproductive Health of Citizens of the Republic of Serbia is particularly focused on family planning (Government of the Republic of Serbia, 2017).

## PREVIOUS RESEARCH

Since 1945, there has been a strong movement for family planning in Serbia. Population policy went through different stages of development and was shaped under the strong influence of general social policy (Gavrilović, 2006). The promotion of modern contraception is usually part of a wider set of actions to be taken to achieve higher goals, such as encouraging births. Reproductive health and sexual education in Serbia have not become an integral part of the school curriculum. Basic education in the field of reproductive health and family planning should be conducted at all levels of education. In one of the waves of education reform in the Republic of Serbia (in the period from 2001 to 2004), health education was recognized as a fundamental part of the educational process and was attached to physical education - as a subject Physical and Health Education (Youth health development strategy, 2006). In 2012, an initiative was launched in Serbia to introduce extracurricular activities related to reproductive health, by the Provincial Secretariat for Sports and Youth of Vojvodina. The program was implemented during three school years in secondary schools in Vojvodina, unfortunately, this initiative was not included in the curriculums for the following school years (Korać-Mandić, 2019). There were some initiatives to introduce sex education, but they were mostly met with disapproval by various social actors (Mladenović, 2020). Since the 2019/2020 school year, the subject of Physical and Health Education was re-introduced. However, according to the curriculum, students will receive information related exclusively to the impact of exercise on health (Government of the Republic of Serbia, 2019). The National program for the preservation and improvement of the sexual and reproductive health of the citizens of the Republic of Serbia proposes the establishment of a counselling centre for the protection of the sexual and reproductive health of adolescents, but not its introduction into the education system (Government of the Republic of Serbia, 2017). The Birth incentive strategy (2018) calls for specific measures to introduce sexual and reproductive education in primary and secondary schools.

Familiar arrangements for providing education about contraception involve discussions with health care providers, printed materials, audio-visual material, and a computer application (Pazol et al., 2015; Rodriguez et al., 2016; Dewart et al., 2019, Ingersoll, 2021). With the increasing availability of mobile technology, the use of electronic platforms for the provision of health education represents a unique opportunity for intervention in the dissemination of valuable information about using adequate contraception (McHenry et al., 2017; Dewart et al., 2019).

The absence of sexual education puts adolescents and young adults at significant risk, due to their lack of knowledge about the use of contraception (Savic et al., 2021). A large share of unintended pregnancies in Serbia occurs between the ages of 18 and 24 (Mijatović et al., 2014). According to the high percentage of unintended pregnancies, adolescents need a highly effective method of contraception. Emergency contraception is in most cases used by younger women who have higher levels of education, are familiar with the use of emergency contraception, generally do not use unreliable contraceptive methods, and had, in turn, unwanted pregnancy or abortion (Pajić-Nikolić et al., 2019; Srećković et al., 2019; Kavanaugh, Williams, & Schwarz, 2011; Parrish et al., 2009; Whittaker et al., 2007).

Birth control pills are a very effective tool for family planning because if used consistently, the failure rate is only 0.3% (Lazović-Radonjić et al., 2012). The use of oral hormonal contraceptives has been the most common pharmacological method of contraception worldwide since the 1960s (Darroch, 2013). Sterilization is a permanent contraceptive method, which is often resorted to when a woman has given birth to the desired number of children and wants to permanently prevent unwanted pregnancies, which reflects her role in the process of family planning and the preservation of reproductive health (Rašević, 2002). One research conducted in Germany indicates that sterilization is acceptable for women of all ages, but they do not use it significantly (Erlenwein et al., 2015).

Liberalization of abortion is a basic form of support for women in the field of birth control (Rašević & Sedlecki, 2012; Patel & Johns, 2009). Global estimates suggest that about 15% of total maternal mortality is attributed to causes that are associated with abortion (Kassebaum et al., 2014). Women most often do not want to talk about the experience related to abortion, in most cases because of prejudices, but also the psychological burden women are exposed to (Rašević, 1999). In Serbia as early as 2007, the abortion rate was twice as high as the total fertility rate, and it is among the highest in Europe and the world (Rašević, Sedlecki, 2011). Abortion has transparent advantages, as a method of birth control. It is completely effective, independent of intercourse, it is a one-stroke intervention, and it usually does not depend on the consent of the male partner. A logical solution to the contraception dilemma comes in the form of birth control. However, many women believe that there is no specific contraceptive method that would completely satisfy them (Rašević, 1999). The ideal contraceptive should be easy to use, affordable, long-lasting, effective, without side effects, universally applicable, and effortlessly accessible. The ideal contraceptive does not exist yet. All available contraceptive methods have good and bad properties, and it is up to the patient and the doctor to make a rational choice (Berisavac, Sparić & Agirović, 2009).

In Serbia, the use of contraception is not prohibited by law, it is up to individuals (women and men) to decide on their use. A small share of young people in Serbia uses effective contraception. According to the Republic Bureau of Statistics and UNICEF (2020), modern and effective contraception in Serbia is used by a fifth of women in the general population who are married or in a stable partnership (21.3%), while 40.8% of women rely on traditional methods of contraception. The reproductive health of the population of Serbia is endangered by several serious problems. One of the most important is that unwanted conception is most often prevented by traditional contraceptive methods whose effectiveness is not satisfactory. That is why women are often faced with an unplanned and unwanted pregnancy, which in most cases ends with a deliberate termination of pregnancy, various infections, and diseases of the reproductive organs in both, men, and women (Birth incentive strategy, 2018).

Other reasons for not using adequate contraception are misconceptions in terms of weight gain, loss of sexual desire, the psychological burden of contraception, the complexity of use, harmful consequences for health, etc.

Serbia is facing serious population challenges. A low fertility rate, a large number of abortions, and a low prevalence of modern contraceptive use, were the most prominent characteristics of reproductive behaviour in Serbia in the late 20th century (Rašević, 2004). This reproductive behaviour continued in the early 21st century (Rašević, 2009). One of the biggest problems is the decades-long sub-replacement fertility (Rašević, Nikitović, 2019). Research on the use of contraceptive funds to obtain a realistic picture of the attitudes of young women toward family planning is considered extremely important. To achieve the desired number of children, it is necessary to achieve the specific goals defined by the Birth incentive strategy (Birth incentive strategy, 2018). In this research, we will try to reach conclusions regarding the necessity of sexual and reproductive education of young people, as well as conclusions regarding the reproductive intentions of the respondents concerning their different characteristics and the structure of contraceptive use. Given that the average age at first sexual intercourse is 17 for girls and 16 for boys (Tomašević et al., 2017), they need to be educated punctually about the appropriate use of contraception to protect their health and prevent unwanted pregnancy. Depending on many circumstances and personal preferences for procreation (number of children, the interval between birth), there is always a need for family planning (United Nations, 2019). The aim of this study is the analysis of the reproductive intentions regarding the structure of contraceptive use, and identification of the need for the sexual and reproductive education of young people.

## **METHODOLOGY**

The research was conducted based on an electronic survey questionnaire. The questions were modelled on the research of UNICEF Serbia's multiple indicator cluster surveys in 2019 (UNICEF, 2020). The final sample consisted of 660 female students from the University of Novi Sad (Serbia). The questions included information on age, marital status, fertility, the desired number of children, the faculty and level of studies, questions related to the student's current employment status, a set of questions about knowledge of contraceptive methods and use, on the relationship with the partner (if the student has one), and attitudes about the use of the emergency contraceptive pills also called morning-after pills, as well as attitudes about abortion and sterilization. The answers were collected through an electronic survey in the period from January to March 2019. Because of the assumption that respondents would not honestly answer if the survey was conducted in a standard way (pen and paper). The answers were collected through social networks that almost all students at the University of Novi Sad use. The data were analysed using descriptive statistics and the Independent simple t-Test. The distribution of the sociodemographic characteristics of the respondents, relationship with a partner, and awareness of contraception were analysed using descriptive statistics such as frequencies, percentages, and crosstabs issues related to family planning and sterilization were analysed using a t-test, and questions related to abortion and the use of contraception concerning the characteristics of the respondents was analysed using analysis of variance (ANOVA). Survey results were analysed using SPSS 23 software for Windows (Statistical Package for Social Sciences).

## **RESULTS**

The characteristics of the study sample are shown in Table 1. More than two-thirds of the respondents are 20-24 years (72%). The vast majority (98.3%) of the respondents mentioned urban areas as their permanent place of residence. Only 3.3% of respondents are married, while 90.3% are unmarried. Nearly half of unmarried female students have been in a long-term relationship (more than two years). More than three-quarters (77.7%) of them are in bachelor studies.

Table 1. Socio-demographic distribution

Explanatory variables	N	Percentage	Explanatory variables	N	Percentage
<b>Age</b>			<b>Marital Status</b>		
Under 20	35	5.3	Married	22	3.3
20-24	475	72.0	Unmarried	596	90.3
25-29	134	20.3	Extramarital Union	42	6.4
30-34	10	1.5	<b>Level of Education</b>		
35-39	6	0.9	Bachelor study	513	77.7
<b>Place of Residence</b>			Master Study	120	18.2
Rural	11	1.7	PhD Study	27	4.1
Urban	649	98.3			

Source: Authors research, SPSS

Approximately two-thirds of the respondents use modern contraceptives (Table 2). The most used are condoms (46.2%) and contraceptive pills (16.6%). More than one-third of respondents use only traditional methods, particularly withdrawal (26.0%) and the calendar method (10.7%). Female students were able to choose multiple answers regarding the question of which contraceptives/methods they use. Most female students use multiple contraceptive methods. The most common combinations are withdrawal - condom, withdrawal - calendar method, birth control pills - male condom, withdrawal - birth control pills - male condom. None of the respondents stated that they use a diaphragm (Table 2).

Table 2. Contraceptives and methods

Explanatory variables	N	Percentage
Withdrawal (coitus interruptus)	264	26.0
Birth control pills	168	16.6
Intrauterine Device (IUD)	1	0.1
Male condom	468	46.2
Dyafragm	-	-
Chemical contraceptives	4	0.4
Calendar methods	109	10.7
Total	660	100.0

Source: Authors research, SPSS



One out of ten female students want one child (9.5%), while the majority wants to have two or more children. These results indicate a positive attitude toward childbirth. Only 10% of female students know how to determine the length of the menstrual cycle, making practicing the calendar method deeply problematic. However, 84.4% of respondents know in which period of the menstrual cycle ovulation occurs.

Table 3. Desired number of children

Number of children	N	Percentage
One	63	9.5
Two	275	41.7
Three	253	38.3
Four and more	69	10.5
Total	660	100.0

Source: Authors research, SPSS

Female students most often get information about methods and means of contraception 66.8% from their gynaecologists, 62.6% on the Internet, 36.5% from friends, 7.9% from parents, and 31% find information in books and magazines<sup>1</sup>. T-Test analysis showed that among female students who are in a relationship, compared to those who are single, there was a statistically significant difference in attitudes relating to motives for having children (Table 4). There are no statistically significant differences in the answers of respondents who are employed compared to those who are not when it comes to motivation for having children.

T-Test analysis showed a statistically significant difference between the female students' place of living in terms of motivation for having children. Respondents from urban areas stated that the most decisive motive for having offspring is security in old age ( $p=0.034$ ) and sense of duty towards the state and society ( $p=0.021$ ). In the case of other motives, there is no statistically significant difference in the respondents' answers.

The results of the ANOVA analysis indicate that there is a statistically significant difference between female students of different ages with the use of contraceptives, but only for the contraceptive pills. Female students under 20 years old use contraceptive pills to the greatest extent against unwanted pregnancy ( $F=2.945$ ,  $p=0.020$ ). As for calendar methods, there are also significant differences between married female students and those who are not married and those who are cohabiting. Unmarried female students rely much more on the calendar method ( $F=9.012$ ,  $p=0.00$ ).

<sup>1</sup> The sum is not 100%, because female students could choose more than one of the offered answers.

Table 4. The impact of the emotional status of the motives for the procreation

Motive	Emotional status	Mean	Std. Deviation	t	Sig. (2-tailed)
Family growth	In a relationship	3.85	1.119	2.067	.039
	Single	3.66	1.081		
Love for a partner	In a relationship	4.48	.886	2.407	.016
	Single	4.29	.920		

Source: Authors research, SPSS \*  $p < .05$

The results of the Independent Samples t-Test indicate that there is a difference in the respondent's attitudes about the health damage that the morning-after pills can cause. Respondents who have used the morning-after pills so far believe that the use of emergency contraception in the form of the morning-after pill is harmful to health ( $F=0.00$ ,  $p=0.009$ ).

The results of the research showed that for specific (different) reasons, almost all respondents would resort to the termination of pregnancy (abortion). Out of the total number of respondents, as many as 37.4% used the "day-after" pills, which represents a large share of the number of surveyed female students.

The results of the analysis of variance (ANOVA) indicate that there is a difference in the respondent's attitudes about situations in which abortion is acceptable. Respondents who would like to have two children, compared to respondents who want to have more than two children, agree more with the statement that abortion is acceptable only in the case of unwanted first pregnancy ( $F=3.581$ ,  $p=0.014$ ). Females who want to have a child compared to females who want to have more children are showing different opinions about the statement that abortion is acceptable in the case of unwanted pregnancy, regardless of the child's birth order ( $F=20.499$ ,  $p=0.000$ ). Females who want to have a child compared to females who want to have more children consider abortion acceptable if the partnership relations are not satisfactory ( $F=7.616$ ,  $p=0.000$ ).

## DISCUSSION

According to the Multiple Indicator Cluster Survey—MICS (UNICEF, 2020) in Serbia, 61% of women in their fertile period use any contraception method. The most frequently used are traditional methods, which do not have high efficiency (Horga & Mujović Zornić, 2013). A male condom is the most often used contraceptive method regarding the results of our research,

and most often used in Serbia (Maricic et al., 2021). According to a 2019 survey by the Institute for Public Health of Serbia “Dr Milan Jovanović Batut”, 26.8% of young people in Serbia between the ages of 15 and 19 have engaged in sexual relations. The median age of first sexual intercourse among young people aged 15 to 24 was 18 years. Two-fifths of women aged 15 to 49 (40.4%) who were sexually active during the observed period used one of the contraceptive methods.

The average age of mothers at the birth of their first child in 2020 in Serbia was 29.5 years ([https://ec.europa.eu/eurostat/databrowser/view/TPS00017/default/table?lang=en&category=demo.demo\\_fer](https://ec.europa.eu/eurostat/databrowser/view/TPS00017/default/table?lang=en&category=demo.demo_fer)). The average age of the surveyed female students is 23 years and considers the period of 20-35 years the optimal age for childbearing (Vasić, 2019). So far, only 3.3% of surveyed student has become mothers, of which 1.9% have one child, and only 0.8% have two children. The results of our research indicate that 90.5% of respondents want to have two or more children. The average desired number of children of the respondents is 2.29. The results of research by Vujičić and colleagues (2017) indicate that over 90% of respondents (students at the Faculty of Medicine in Belgrade) want to have two children and more.

In our study, there are no differences concerning the place of residence toward the use of contraception. However, the share of respondents from rural areas is small (1.7%). The results of our study indicate that there are no differences in the answers of female students concerning their economic status, toward the use of contraception. Contraception was significantly less used by women in Serbia with lower education and women from the poorest households (24.7% and 26.3%, respectively). In the same age group of women in general population, the percentage of those who used contraceptives is lower and amounts to 34.8% (Milić et al., 2021).

The results of a Crosstabs analysis revealed that bachelor students use modern contraception to a lesser extent than master’s students, while doctoral students primarily use modern contraception. Related results obtained by Zanin et al. (2014) indicate that the level of education or the age of respondents is positively correlated with the use of modern contraception. Comparing the results of previous research (Sedlecky, Rašević & Topić, 2011), insufficient knowledge and many misconceptions regarding reproductive health among female students at the University of Novi Sad, as well as at the University of Belgrade, indicate the need to improve relevant educational activities, which would include parents, schools, health care, media, and governmental and non-governmental organizations to provide comprehensive and age-appropriate education.

In Serbia, young people generally do not discuss the use of contraception with their parents, which is a taboo topic, even though we live in the 21st century. Adolescents and young adults should also receive information about family planning from their parents (Horga & Mujović Zornić, 2013). To the question, how do you usually get information and advice on methods and means of contraception, only 7.9% of female students answered that they were informed about contraception in a conversation with their parents, and most often they get information from their gynaecologist (66.8%) and on the Internet (62.6%)<sup>2</sup>. According to Sedlecki (2001), one in five adolescent girls can talk to their parents about sexual and reproductive behaviour, but most of them do not speak. In other countries the situation is different. For example, the survey of parents' attitudes toward providing information on sexuality and contraception in Mexico indicates that parents are open to discuss with, although mothers have a higher index of openness the fathers (Ojeda de la Peña, Goñzalez-Ramirez & Ramos-Vargas, 2019).

Of the total sample of female students from the University of Novi Sad, 27.6% have confidence in their partner and therefore do not use modern contraception, 10.2% have never discussed to partner the use of contraception, while 20.5% of students have encountered condemnation or rejection by the partner if the female wanted to use contraception. According to research by Djordjević (2020), women in their fertile period, from Serbia, who live in rural areas, most often use unreliable methods of contraception, such as withdrawal and calendar methods. Women whose partners did not support contraceptive use more often have an unsatisfied need for family planning compared to women whose partners had a supportive attitude (Djordjević, 2020). The issue of responsibility for the use of contraceptives was also discussed by Tountas and associates (2004) on a sample of women from rural areas in Greece, who are in the fertile period. The half of respondents (52%) stated that the use of contraception is the responsibility of men. The probability that women should be responsible for the usage of contraception was higher in women aged 25 to 34 years, those with a higher level of knowledge about contraception, and those who experience induced abortion (Tountas et al., 2004). Partners must have a functional and honest relationship. If the partnership does not work to some extent, there is a high probability that there will be disagreement regarding the use of contraceptives. Therefore, there is a higher risk of unwanted pregnancy, but above all, there is a risk to the health of both partners. Approximately one-third of the respondents at the University of Novi Sad rely on traditional methods of preventing unwanted pregnancies. Female students who rely on traditional methods of contraception want to have two or three children.

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<sup>2</sup> The sum is not 100%, because female students could choose more than one of the offered answers.

They also believe that abortion is acceptable in case of unwanted pregnancy regardless of the birth order, as well as ectopic pregnancy and poor partner relationships.

Unreliable contraceptive methods (which include infertile days, interrupted intercourse, and “day-after” pills) were used in Serbia by 17.1% of women aged 15 to 49 years. More than a third of the respondents from the University of Novi Sad used the “day-after” pill. Day-after pills are the most efficient in the first 24 hours after unprotected intercourse, but the reliability is still high in the first 72 hours after unprotected intercourse. It is assumed that the low frequency of use of modern contraception results in frequent resorting to intentional abortions. Research on multiple indicators of the position of women and children in the Republic of Serbia showed that 14.6% of women had at least one induced abortion (Đukić et al., 2019). Of the total number of women aged 15 to 49, 1.1% had an intentional termination of pregnancy in the year preceding the 2019 Survey (0.9% of girls aged 15 to 19). Intentional termination of pregnancy was represented in a higher percentage among women with lower education (2.0%) (Milić et al., 2021). Although sterilization is the most used contraceptive method in the world (United Nations, 2019), the results of this research showed that only 8.8% of female students would decide to sterilize, but only in situations if they gave birth to the desired number of children.

## **CONCLUSION**

Knowledge about contraceptives is not at a satisfactory level among female students in Novi Sad. One third of female students uses traditional methods of contraception like withdrawal (coitus interruptus) and calendar methods (counting fertile days), which do not represent an adequate basis for family planning. The reasons they do not use contraception were most often stated: I trust my partner, contraceptives change my feeling and experience, I was not informed enough, I am not sure. The big problem is the lack of information on contraception use. The partners must talk to each other about the use of contraception, as well as measures to prevent unwanted pregnancies. In Serbia, contraceptives are not cheap. There is a possibility that the reduction in prices would enable a certain percentage of the population to use it regularly, or to start using contraceptives, such as birth control pills and condoms. It would help reduce the number of abortions, which is remarkably high in Vojvodina and Serbia (Republic Bureau of Statistics & UNICEF, 2020). Failure to use regular contraception resulted in the use of abortion and the morning-after pill among female students at the University of Novi Sad.

Although many respondents want to have two or more children, the question is whether they will have the desired number of children. Contraceptive use is significant for maintaining reproductive health in the first place. It provides an opportunity for healthy and desired offspring. Will young and highly educated women in Novi Sad still decide to have the desired number of children, despite all the difficulties and obstacles that await them when they finish college and form a family? Reproductive intentions will likely decline with age, as this has been empirically confirmed in many populations with the problem of sub-replacement fertility. If female students achieve the desired number of children (2.29), it would be exceptional for future generations in Vojvodina, if they remain living in Vojvodina until the end of the reproductive period. The total fertility rate will cease to decline if every woman gives birth to at least two children, and each other three (Đurđev, 2004). The limitations of this research are that only a sample of female students was considered. Future research should cover the entire population of women in the fertile period, to get a credible picture of how much contraception is conducted in Serbia.

## REFERENCES

- Benagiano, G., Bastianelli, C., & Farris, M. (2007). Contraception: a social revolution. *European Journal of Contraception & Reproductive Health Care*, 12(1), 3-12. doi: <https://doi.org/10.1080/13625180601012311>
- Berisavac, M. (2008). Kontraceptivna sredstva – prednosti i zablude, [Contraceptives - advantages and misconceptions]. Innotech, Beograd.
- Berisavac, M. Sparić, R., & Argirović, R. (2009). Kontracepcija: savremeni trendovi i kontraverzna mišljenja, [Contraception: contemporary trends and controversial opinions]. *Srpski arhiv za celokupno lekarstvo*, 137(5-6), 310-319. doi: <http://www.doiserbia.nb.rs/Article.aspx?ID=0370-81790906310B#.YILYKe2LmUk>
- Birth incentive strategy (2018). *Strategija podsticanja radjanja, Službeni glasnik Republike Srbije*. (br. 25/2018)
- Daroch, J. E. (2013). Trends in contraceptive use. *Contraception*, 87(3), P259-263. <https://doi.org/10.1016/j.contraception.2012.08.029>
- Dewart, C. M., Serpico, J., Markus, J., Steiner M. J., & Gallo, M. F. (2019). Electronic interventions for changing knowledge, attitudes or practices regarding contraception: a systematic review. *Contraception* (100), 10-25. doi: <https://doi.org/10.1016/j.contraception.2019.04.004>
- Djordjević, G. (2020). The Impact of Demographic and Socioeconomic Inequalities on Women's Reproductive Health (*Doctoral dissertation*). University of Kragujevac, Faculty of Medical Sciences, Kragujevac, Serbia.
- Erlenwein, J. et al. (2015). Attitude toward, acceptance of and knowledge about female sterilization as a method of contraception. *European Journal of Obstetrics &*

- Gynecology and Reproductive Biology*, v 185, 83-87. doi: <https://doi.org/10.1016/j.ejogrb.2014.11.028>
- Gavrilović, A. (2006). Evolucija populacione politike u Srbiji 1945-2004. [Evolution of population policy in Serbia 1945-2004] Demografski zbornik SANU – knjiga VII. *Stanovništvo* 1:117-122.
- Government of the Republic of Serbia (2006). *Youth health development strategy in the Republic of Serbia*. “Official Gazette of the Republic of Serbia”, 05 no: 50-9629/2006-1. Retrieved from: <https://www.pravno-informacioni-sistem.rs/SlGlasnikPortal/eli/rep/sgrs/vlada/strategija/2006/104/1> Access 23rd September 2022
- Government of the Republic of Serbia (2015). *National strategy for youth for the period from 2015 to 2025*. “Official Gazette of the Republic of Serbia”, 05 no: 66-1998/2015-1. Retrieved from: [https://www.mos.gov.rs/wp-content/uploads/download-manager-files/nacionalna\\_strategija\\_za\\_mlade0101\\_cyr.pdf](https://www.mos.gov.rs/wp-content/uploads/download-manager-files/nacionalna_strategija_za_mlade0101_cyr.pdf) Access 23rd September 2022
- Government of the Republic of Serbia (2017). *National program preservation and improvement of the sexual and reproductive health of the citizens of the Republic of Serbia*. Retrieved from: <https://www.srbija.gov.rs/prikaz/311122> Access 21st September 2022
- Government of the Republic of Serbia (2019). “Official Gazette of the Republic of Serbia”, no. 88/17, 27/18. Retrieved from: <https://www.mpn.gov.rs/wp-content/uploads/2019/04/Pravilnik-o-izmenama-i-dopuni-Pravilnika-o-nastavnom-programu-za-sedmi-razred-osnovnog-obrazovanja-i-vaspitanja.docx> Access 23rd September 2022
- Horga, M., & Mujović Zornić, H. (2013). *Assessment of the Family Planning Services in the Republic of Serbia*. UNFPA, Serbia.
- Ingersoll, T. (2021). Improving Knowledge of Long-Acting Reversible Contraception in an Adolescent and Young Adult Female Population. *Nursing for Women's Health*, 25(1), 54-62. doi: <https://doi.org/10.1016/j.nwh.2020.11.008>.
- Kassebaum, N. J. et al. (2014). Global, regional, and national levels and causes of maternal mortality during 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *The Lancet*, 384(9947), 980-1004. doi: [https://doi.org/10.1016/S0140-6736\(14\)60696-6](https://doi.org/10.1016/S0140-6736(14)60696-6)
- Kavanaugh, M. L., Williams, S. L., & Schwarz, E. B. (2011). Emergency contraception use and counselling after changes in United States prescription status. *Fertility and Sterility* (95), 2578–81. doi: <https://doi.org/10.1016/j.fertnstert.2011.03.011>
- Kirby, D. B., Laris, B. A., & Roller, L. A. (2007). Sex and HIV education programs: their impact on sexual behaviors of young people throughout the world. *Journal of Adolescent Health* (40), 206-217.
- Korać-Mandić, D. (2019). *Pristup adolescencata informacijama o seksualnom i reproduktivnom zdravlju: kvalitativno istraživanje*. Novosadski humanitarni centar, Novi Sad.

- Kuburović, A. (2003). Stavovi studenata relevantni za buduće reproduktivno ponašanje. *Stanovništvo*, 1(4), 43-64.
- Lazović-Radonjić, G., Sedlecky, K., Kapamadžija, A., & Mitrović, A. (2012). *Kliničke smernice za kombinovanu hormonsku kontracepciju*. Institut za zdravstvenu zaštitu majke i deteta Srbije „Dr Vukan Čupić“ Republički centar za planiranje porodice, Beograd.
- Maricic, M. et al. (2021). Relationship Between Socio-Demographic Characteristics, Reproductive Health Behaviors, and Health Literacy of Women in Serbia. *Frontiers in Public Health*, 9:629051. doi: 10.3389/fpubh.2021.629051
- McHenry, M. S., Fischer, L. J., Chun, Y., & Vreeman, R.C. (2017). A systematic review of portable electronic technology for health education in resource-limited settings. *Global Health Promotion*, 26(2), 70-81. doi: <https://doi.org/10.1177/1757975917715035>
- Mijatović, V. et al. (2014). Hormonal contraception – habits and awareness female students of the University of Novi Sad, Vojvodina, Serbia. *Medicinski pregled*, 9(10), 290-296. DOI: 10.2298/MPNS1410290M
- Milić, M., Stanisavljević, D., & Krstić, M. (2021). *Istraživanje zdravlja stanovništva Srbije 2019*. Godine. OMNIA, Beograd.
- Milosavljević, J. (2016). Analysis of the impact of sociodemographic characteristics and attitudes on practice of gynaecologists and pharmacists regarding family planning methods in Serbia. *Doctoral Dissertation*, University of Belgrade, Faculty of Pharmacy.
- Mladenović, A. (2020). Potreba ili luksuz: seksualno obrazovanje u Srbiji. *Administracija i javne politike*, 2, 35-55. DOI: <https://doi.org/10.22182/ajp.1422020.3>
- Ojeda de la Peña, N., Goñzales-Ramirez, R. S., & Ramos-Vargas, A. (2019). Openness of fathers and mothers toward adolescent contraception in Mexico: a case study from a socio-demographic perspective, *Papeles de la Población*, 25(100), 153-181. Retrieved from <https://rppoblacion.uaemex.mx/article/view/12461>
- Pajić-Nikolić, Lj. et al. (2019). Znanja i stavovi studenata strukovnih studija o oralnoj urgentnoj kontracepciji. *Sestrinska reč*, 24-28.
- Parrish, J. W., Katz, A. R., Grove, J. S., Maddock, J., & Myhre, S. (2009). Characteristics of women who sought emergency contraception at a university-based women's health clinic. *American Journal of Obstetrics and Gynecology*, 201(1), 22.e1-22.e7. doi: <https://doi.org/10.1016/j.ajog.2009.03.012>
- Patel, C. J., & Johns, L. (2009). Gender role attitudes and attitudes to abortion: Are there gender differences? *The Social Science Journal*, 46, 493-505. Retrieved from <https://www.sciencedirect.com/science/article/abs/pii/S0362331909000263>
- Pazol, K., Zapata, L. B., Tregear, S. J., Mautone-Smith, N., & Gavin, L. E. (2015). Impact of contraceptive education on contraceptive knowledge and decision making. *American Journal of Preventive Medicine*, 49, pp. S46–56, <https://doi.org/10.1016/j.amepre.2015.03.031>.



- Rašević, M. (1999). *Planiranje porodice kao stil života*. Institut društvenih nauka. Centar za demografska istraživanja, Beograd.
- Rašević, M. (2002). Voljna sterilizacija u Srbiji: nezadovoljena potreba? *Stanovništvo*, 1(4), 15-33.
- Rašević, M. (2004). Fertility Trends in Serbia during the 1990s. *Stanovništvo*, 42, 1-4. doi: <https://doi.org/10.2298/STNV0404007R>
- Rašević, M. (2009). Šest zabluda relevantnih za populacionu politiku [Six misjudgements relevant for population policy]. *Zbornik Matice srpske za društvene nauke* [Collection for Social Sciences Published by Matica Srpska] 127, 73 – 91. Retrieved from [http://www.maticasrpska.org.rs/stariSajt/casopisi/drustvene\\_nauke\\_127.pdf](http://www.maticasrpska.org.rs/stariSajt/casopisi/drustvene_nauke_127.pdf)
- Rašević, M., & Sedlecki, K. (2011). Pitanje postojanja abortusne kulture u Srbiji. *Stanovništvo*, 49(1), 1-13. DOI: 10.2298/STNV1101001R
- Rašević, M., & Sedlecki, K. (2012). Da li je realno očekivati promene u modelu planiranja porodice u Srbiji u neposrednoj budućnosti? *Demografski pregled*, broj 44/2012, Ministarstvo rada i socijalne politike u saradnji sa Centrom za demografska istraživanja Instituta društvenih nauka i Društvom demografa Srbije.
- Rašević, M. (2018). Obrazloženje potrebe za revizijom strategije podsticanja rađanja u Srbiji. U: Mitrović, Lj. *Stanovništvo Jugoistočne Srbije: demografski problemi Jugoistočne Srbije i mogućnosti izgradnje pronatalitetske nacionalne strategije i politike*. Srpska akademija nauka i umetnosti – ogranak SANU u Nišu, Univerzitet u Nišu, Filozofski fakultet u Nišu, Centar za sociološka istraživanja.
- Rašević, M., & Nikitović, V. (2019). Strategija podsticanja rađanja i Agenda 2030. Ujedinjenih nacija. *Demografski pregled*, br 74. Ministarstvo za rad, zapošljavanje, boračka i socijalna pitanja; Centar za demografska istraživanja, Institut društvenih nauka.
- Rice, L. et al. (2019). Universal access to contraception: women, families, and communities' benefit. *American Journal of Obstetrics and Gynecology*. 222(2), 150.e1-150.e5. doi: <https://doi.org/10.1016/j.ajog.2019.09.014>
- Rodriguez, J., Abutouk, M., Roque, K., & Sridhar, A. (2016). Personalized contraceptive counseling: helping women make the right choice. *Open Access Journal of Contraception* 7, 89–96. doi: <https://dx.doi.org/10.2147%2FOAJC.S81546>
- Savic, N., Mirkovic, A., & Vasic, S. B. (2021). Knowledge and attitudes towards emergency contraception/among adolescents. *Medicinski Pregled*, 74(1-4)
- Sedlecki, K. (2001). Ponašanje i stavovi adolescenata relevantni za reproduktivno zdravlje. *Stanovništvo*, 1(4), 91-117.
- Sedlecky, K., Rašević, M., & Topić, V. (2011). Family planning in Serbia—The perspective of female students from the University of Belgrade. *The European Journal of Contraception and Reproductive Health Care*, 16, 469–479. doi: <https://www.tandfonline.com/doi/abs/10.3109/13625187.2011.614027?journalCode=iejc20>

- Srećković, M., Bogdanović Vasić, S., Karić, S., Aleksić, U., & Banovac, M. (2019). Procena znanja i stavova studentkinja strukovnih studija za vaspitače o hitnoj kontracepciji. *Sestrinska reč*, 7-12.
- Stanković, B. (2004). Psiho-socijalna slika seksualno aktivnih adolescentkinja. Rezultati istraživanja. *Stanovništvo*, 1(4), 67-92.
- Tomašević, T., Jovanović, M., Ukropina, S., Milijašević, D., & Brkić Jovanović, N. (2017). Seksualno ponašanje adolescenata uzrasta od 15 do 19 godina u Vojvodini, *Pedagoška stvarnost*, 63(1), 16-26. doi: 10.19090/ps.2017.1.16-26
- Tountas, Y., Dimitrakaki, C., Antoniou, A., Boulamatsis, D., & Creasas, G. (2004). Attitudes and behavior towards contraception among Greek women during reproductive age: a country-wide survey. *European Journal of Obstetrics & Gynecology and Reproductive Biology* 116, 190–195. Retrieved from <https://www.sciencedirect.com/science/article/pii/S030121150400106X>
- UNICEF (2020). *Serbia Multiple Indicator Cluster Survey 2019 and Serbia Roma Settlements Multiple Indicator Cluster Survey 2019*. Beograd: UNICEF in Serbia. Retrieved from <https://www.unicef.org/serbia/media/16726/file/MICS%20%20Multiple%20Indicator%20Cluster%20Survey%20for%202019.pdf>
- United Nations, Department of Economic and Social Affairs, Population Division (2019). *Contraceptive Use by Method 2019: Data Booklet (ST/ESA/SER.A/435)*.
- Zanin, L., Radice, R., & Marra, G. (2014). A comparison of approaches for estimating the effect of women's education on the probability of using modern contraceptive methods in Malawi. *The Social Science Journal* 51(3), 361-367. doi: <http://dx.doi.org/10.1016/j.soscij.2013.12.008>
- Vasić, P. (2019). Lokalna samouprava i politika prema rađanju – Analiza demografskih i socioekonomskih pokazatelja. *Demografija*, 16, 53-76. doi: 10.5937/demografija1916053V
- Vasić, P. (2021). Childbirth postponement and age-related infertility in Serbia. *Facta Universitatis Series Philosophy Sociology Psychology and History*, 20(2),97-111. DOI: 10.22190/FUPSPH2102097V
- Vujičić, I., Radičević, T., Dubljanin, E., Maksimović, N., & Grujičić, S. (2017). Serbian medical students' fertility awareness and attitudes towards future parenthood. *The European Journal of Contraception and Reproductive Health Care*, 22(4), 291-297. <http://dx.doi.org/10.1080/13625187.2017.1368478>
- Vukićević, J. (2015). Kulturno promišljanje polnih odnosa u savremenoj Srbiji. *Antropologija*, (1), 129-156.
- Whittaker, P. G., Berger, M., Armstrong, K. A., Felice, T. L., & Adams, J. (2007). Characteristics associated with emergency contraception use by family planning patients: a prospective cohort study. *Perspect Sex Reprod Health* vol.39:158-66. In: Parrish, J. W., Katz, A. R., Grove, J. S., Maddock, J. and Myhre S. (2009). *Characteristics of women who sought emergency contraception at a university-based women's health clinic*. *American Journal of Obstetrics and Gynecology* 201(1), 22.e1-22.e7. doi: <https://doi.org/10.1016/j.ajog.2009.03.012>

- Đukić, A. i sar. (2019). *Povezanost hroničnih nezaraznih bolesti i reproduktivnog zdravlja u populaciji žena centralne Srbije (STEPwise Approach)*. [The relationship between chronic non-communicable diseases and reproductive health in the population of women in central Serbia (STEPwise Approach)]. Kragujevac.
- Đurđev, B. (2004). Koliko dece treba Srbiji? [How many children does Serbia need?] *Stanovništvo*, 42(1-4), 29-44. doi: <http://doiserbia.nb.rs/Article.aspx?id=0038-982X0404029D#.YMihxagzaUk>
- Đurđev, B., Arsenović, D., & Marinković, D. (2016). *Geografija stanovništva*. [Human geography]. Novi Sad, Srbija, Univerzitet u Novom Sadu, Prirodno-matematički fakultet, Departman za geografiju, turizam i hotelijerstvo.
- [https://ec.europa.eu/eurostat/databrowser/view/TPS00017/default/table?lang=en&category=demo.demo\\_fer](https://ec.europa.eu/eurostat/databrowser/view/TPS00017/default/table?lang=en&category=demo.demo_fer) (11.10.2022.)

## УПОТРЕБА КОНТРАЦЕПЦИЈЕ И РЕПРОДУКТИВНЕ НАМЕРЕ СТУДЕНТКИЊА УНИВЕРЗИТЕТА У НОВОМ САДУ

Milena SEKULIĆ;  
Milica SOLAREVIĆ;  
Anđelija IVKOV DŽIGURSKI;  
Ljubica IVANOVIĆ BIBIĆ

### РЕЗИМЕ

Планирање породице представља свесну активност парова и појединаца у репродуктивном добу живота. Ова активност се огледа кроз регулисање броја деце и дефинисања временског интервала између рађања (Ђурђевић, Арсенијевић, Маринковић, 2016). У циљу спречавања нежељених трудноћа најприменија превентива би требала да буде коришћење адекватне контрацепције. Велики избор контрацептивних средстава пружа могућност избора најприхватљивијег метода за сваку индивидуу, с највећим степеном ефикасности и безбедности (Berisavac, 2008). Уз њихову адекватну примену стопа нежељених трудноћа би требало да се сведе на најмању могућу меру (Benagiano, Bastianelli & Farris, 2007). Примарни циљ истраживања је анализа репродуктивних намера у односу на структуру употребе контрацепције, секундарни циљ представља идентификацију потребе за сексуалним и репродуктивним образовањем младих. Истраживање је спроведено на основу електронског анкетног упитника. Питања су креирана по узору на истраживање UNICEF Serbia multiple indicator cluster surveys 2019 (UNICEF, 2020). Интервјуисано је 660 студенткиња са Универзитета у Новом Саду (Србија). Резултати анкета су анализирани уз помоћ софтвера SPSS 23 за Windows (Statistical Package for Social Sciences). Приближно две трећине испитаника користе модерна контрацептивна средства. Најчешће користе кондоме (46,2%) и контрацептивне пилуле (16,6%). Више од једне трећине испитаника користе само традиционалне методе, прекинут сношај (coitus interruptus) (26,0%) и метод календара (10,7%). Већина студенткиња комбинује више контрацептивних метода. У Србији млади углавном не разговарају са родитељима о употреби контрацепције, то је табу тема, иако живимо у 21. веку. Само 7,9% студенткиња је одговорило да су се информисале о контрацепцији у разговору са родитељима. Резултати Crosstabs анализе су открили да студенткиње основних студија у мањој мери користе модерну контрацепцију него студенткиње мастер студија, док студенткиње докторских студија у највећој мери користе савремену контрацепцију. Недовољно знања и многе заблуде о сексуалном и репродуктивном образовању међу студентима Универзитета у Новом Саду, указују на потребу унапређења релевантних образовних активности, које би укључивале родитеље, школе, здравство, медије, као и владине и невладине организације да обезбеде свеобухватно образовање које одговара узрасту ученика и студената. Иако велики број испитаника жели да има двоје или више од двоје деце, али се поставља питање да ли ће остварити жељени број деце?

**Кључне речи:** контрацепција, планирање породице, студенти, Нови Сад, Србија.