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**Factors influencing pregnant women's choice of elective
delivery. Role of the midwife**

ABSTRACT

of a dissertation for the acquisition of an educational and scientific
degree "Doctor"
Scientific specialty "Health Care Management"

Academic supervisor
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Sliven, 2023

The dissertation contains 158 pages and is structured in four main chapters. It includes 48 figures, 47 tables.

The reference list includes 242 literature sources, of which 56 in Cyrillic and 186 in Latin.

The dissertation has been discussed and referred for defense at the extended departmental council of the Department of Health Care, Branch Sliven, Medical University “Prof. Dr. Paraskev Stoyanov” - Varna on 2023 and is directed for public defense before a scientific jury composed of:

1.
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3.
4.
5.

The defense of the dissertation will take place on 28.02.2024 at 13:00 in hall, Sliven Branch of Medical University "Prof. P. Stoyanov" - Varna at an open meeting of the Scientific Jury. The defense materials are available in the Research Department of Medical University - Varna and are published on the website of Medical University - Varna.

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ABBREVIATIONS USED

AP - Antibiotic prophylaxis
OG - Obstetrics and Gynaecology
GDM - Gestational diabetes mellitus
GW - Gestational week
SG - State Gazette
EU - European Union
PAS - Pregnancy Advisory Service
BMI - Body Mass Index
MH - Ministry of Health
MU - Medical University
NE - New Era
NSI - National Statistical Institute
NHIF - National Health Insurance Fund
NCPHA - National Centre for Public Health and Analyses
UN - United Nations
WHO - World Health Organization
SHATOG - Specialized Hospital for Active Treatment in Obstetrics and Gynecology
CS - Caesarean Section
CSPR - Caesarean section at the patient's request
HIV - Human Immunodeficiency Virus
ACOG - American College of Obstetricians and Gynecologists
CDC - Center for disease control and prevention
CMCB - Cardiotocographic monitoring of childbirth
EUROBS - European multicenter study project
ERCS - Elective repeat caesarean section
FIGO - International Federation of Gynecology and Obstetrics
ICAN - International Cesarean Awareness Network
NICE - National Institute for Health and Clinical Excellence
OECD - The Organisation for Economic Cooperation and Development
PN – Partus normalis
RCOG - Royal College of Obstetricians and Gynaecologists
SC – Sectio Caesarea
TOL – Trial of labor
VBAC - Vaginal birth after cesarean
WHO – World Health Organization

INTRODUCTION

In recent years, there has been an alarming increase in the number of operative deliveries as a method of childbirth worldwide (as well as in our country). According to WHO, the proportion of caesarean sections should not exceed 12-15%. Given the higher risk to the life and health of the mother, the question of identifying the reasons why women make the choice in favour of caesarean section without medical indication is being raised in developed countries. This provoked interest in the state of the problem in our country and justified the need to conduct this study. The high proportion of operative deliveries in Bulgaria - 50.9% in 2022, and 35.6% in Sliven (according to the data of the NCPHA), predetermines the need for a more thorough, scientific and analytical study of the problem.

The focus of the dissertation is on social and psycho-emotional factors influencing pregnant women's choice of elective delivery. This includes an assessment and analysis of their opinions and attitudes as well as the social and health antecedents leading to the choice of operative delivery without medical indications. The researcher's interest is focused on pregnant women from the region with the highest birth rate in the country - the city of Sliven (12.2‰ in 2022). This implies the reliability of the studies conducted and conclusions formulated.

The significance of the overall study is also linked to the possible change in the attitudes of pregnant women by facilitating their access to reliable information. The role of the midwife in giving competent advice on the mode of delivery and the right to informed choice is acknowledged. This would contribute to reducing elective deliveries with all the medical, social and financial consequences that this entails.

1. METHODOLOGY AND ORGANIZATION OF THE STUDY

1.1. PURPOSE, OBJECTIVES AND HYPOTHESES OF THE STUDY

PURPOSE: The purpose of this empirical study is to investigate, analyze and generalize the awareness, attitudes, psycho-emotional and social factors influencing pregnant women's choice of elective delivery. The significance of the study relates to the possible change in attitudes by facilitating access to reliable information.

OBJECTIVES

The accomplishment of the objective is related to the implementation of the following research **tasks**:

- Investigating the attitudes of the three groups of respondents (pregnant women, midwives and midwifery students) towards elective delivery;
- Survey of the awareness of the three groups of respondents regarding the use of elective delivery;
- Study of factors influencing the choice of elective delivery;
- Survey of midwives' and student midwives' awareness and willingness to provide information on surgical delivery;
- To evaluate the role of the midwife in reducing surgical delivery;
- To demonstrate the need to develop an awareness raising programme related to elective deliveries.

1.2. WORKING HYPOTHESES OF THE STUDY

Main thesis

Women in our country are not sufficiently informed about elective delivery: about its benefits, disadvantages and risks. This may be a prerequisite for the increasing rate of CS deliveries in Bulgaria in recent years.

The following hypotheses are analysed:

Hypothesis 1. It is hypothesized that there is a relationship between **pregnant women's preferences for delivery** and the **order of upcoming delivery**;

Hypothesis 2. Age has an influence on the attitude towards the upcoming birth;

Hypothesis 3. It is hypothesized that a relationship exists between trust in the physician and pregnant women's preference/attitude for mode of delivery;

Hypothesis 4. It is hypothesized that a correlational relationship exists between education and the degree of fear of childbirth.

1.3. SUBJECT, OBJECT AND SCOPE OF THE STUDY

1. The **subject** of this study is the awareness of pregnant, working midwives and female students about the indications for elective delivery as well as the factors influencing the decision for the upcoming delivery.
2. Three selected groups of respondents were the subjects of the study: Healthy women (pregnant, at the time of the study), working midwives,

and female students studying to become midwives. The groups were selected according to certain criteria.

The following groups were the object of the study:

Group I. Pregnant women, aged 18-45 years at the time of the study: outpatient, hospitalized and healthy volunteers in the specified centers for the study (Multiprofile hospital for active treatment “Dr. Ivan Seliminski” AD, town of Sliven; Diagnostic-consultation centre-2 EOOD Third polyclinic, town of Sliven; Multiprofile Regional Hospital for Active Treatment “Dr. Stefan Cherkeзов” AD, city of Veliko Tarnovo; Diagnostic-consultation centre-1 EOOD, city of Veliko Tarnovo)

Group II. Midwives practicing the profession on the territory of the Republic of Bulgaria, working in the mentioned centres;

Group III. Students from the specialty “Midwife”, studying in the Branch Sliven and Branch Veliko Tarnovo at the Medical University “Prof. Dr. Paraskev Stoyanov” - Varna.

3. Scope, extent and limitations of the study:

The study started on 03.05.2022 and ended on 28.06.2022.

Given the number and residence of the respondents, it is a representative survey for the town of Sliven.

The general population consists of a total of 201 respondents, subdivided into the following groups:



Group I - 100 Pregnant women. (Outpatients, hospitalized and healthy volunteers in the indicated centers for the study).



Group II – 50 midwives. (Practitioners of the profession on the territory of the Republic of Bulgaria, working in the mentioned centers (Multiprofile hospital for active treatment “Dr. Ivan Seliminski” AD, town of Sliven; Diagnostic-consultation centre-2 EOOD Third polyclinic, town of Sliven; Multiprofile Regional Hospital for Active Treatment “Dr. Stefan Cherkeзов” AD, city of Veliko Tarnovo; Diagnostic-consultation centre-1 EOOD, city of Veliko Tarnovo)



Group III – 51 students from the specialty “Midwife”, studying in the Branch Sliven and Branch Veliko Tarnovo at the Medical University “Prof. Dr. Paraskev Stoyanov” - Varna. Since the female students in the midwifery specialty are trained according to already established curricula that are relevant for their entire training period, this dissertation only reports the results of their opinion survey. Their suggestions regarding the reduction of the number of surgical deliveries without medical indications are taken into account.

Place and time of the study:

The study was carried out in the cities of Sliven and Veliko Tarnovo. The survey among midwives was conducted in the Obstetrics and Gynaecology Department of the Multiprofile Hospital for Active Treatment “Dr. Ivan Seliminski” AD, town of Sliven; Diagnostic-consultation centre-2 EOOD Third polyclinic, town of Sliven; Multiprofile Regional Hospital for Active Treatment “Dr. Stefan Cherkeзов” AD, city of Veliko Tarnovo; Diagnostic-consultation centre-1 EOOD, city of Veliko Tarnovo. In the case of female students, the survey was conducted at the Sliven Branch of Medical University "Prof. Dr. Paraskev Stoyanov" - Varna and Medical University - Varna, Veliko Tarnovo Branch, Department of Health Care. The group of pregnant women was studied at the Multiprofile Hospital for Active Treatment "Dr. Ivan Seliminski" AD, town of Sliven; Diagnostic-consultation centre-2 EOOD Third polyclinic, town of Sliven; Multiprofile Regional Hospital for Active Treatment “Dr. Stefan Cherkeзов” AD, city of Veliko Tarnovo; Diagnostic-consultation centre-1 EOOD, city of Veliko Tarnovo.

The study was carried out independently during the period 03.05.2022 - 28.06.2022 and all the respondents were aware of the purpose and nature of the research. The participants were made aware of the potential risks of the study through informed consent by the principal investigator.

- **First respondent group:** 100 pregnant women, currently hospitalized, outpatients and healthy volunteers at the following centers:
 - Multiprofile Hospital for Active Treatment “Dr. Ivan Seliminski” AD, town of Sliven;
 - Diagnostic-consultation centre-2 EOOD Third polyclinic, town of Sliven;
 - Multiprofile Regional Hospital for Active Treatment “Dr. Stefan Cherkeзов” AD, city of Veliko Tarnovo;
 - Diagnostic-consultation centre-1 EOOD, city of Veliko Tarnovo.

- **Second respondent group:** 50 midwives practising the profession on the territory of the Republic of Bulgaria, working in the mentioned centres;
 - Diagnostic-consultation centre-2 EOOD Third polyclinic, town of Sliven;
 - Multiprofile Hospital for Active Treatment “Dr. Ivan Seliminski” AD, town of Sliven;
 - Multiprofile Regional Hospital for Active Treatment “Dr. Stefan Cherkezov” AD, city of Veliko Tarnovo;
 - Diagnostic-consultation centre-1 EOOD, city of Veliko Tarnovo.
- **Third respondent group:** 51 female students from the following affiliates:
 - Medical University - Varna, Branch Sliven, Department of Health Care;
 - Medical University - Varna, Branch Veliko Tarnovo, Department of Health Care.

Logical units of the study:

- All pregnant women at the time of the study who were healthy, hospitalized or outpatients attending a Diagnostic and Consultation Center or a Multiprofile Hospital for Active Treatment in the cities Sliven and Veliko Tarnovo.
- Working midwives, practicing the profession on the territory of the Republic of Bulgaria, from the the cities Sliven and Veliko Tarnovo.
- All female students from the 1st to the 4th year, studying in the specialty “Midwife” at the Medical University in the territory of the sities Sliven and Veliko Tarnovo.

Technical units of the study:

- For the first group:
 - Diagnostic-consultation centre-2 EOOD Third polyclinic, town of Sliven;
 - Multiprofile Hospital for Active Treatment “Dr. Ivan Seliminski” AD, town of Sliven;
 - Multiprofile Regional Hospital for Active Treatment “Dr. Stefan Cherkezov” AD, city of Veliko Tarnovo;
 - Diagnostic-consultation centre1 EOOD, city of Veliko Tarnovo.
- For the second group:
 - Multiprofile Hospital for Active Treatment “Dr. Ivan Seliminski” AD, town of Sliven;
 - Diagnostic-consultation centre2 EOOD Third polyclinic, town of Sliven;
 - Multiprofile Regional Hospital for Active Treatment “Dr. Stefan Cherkezov” AD, city of Veliko Tarnovo;
 - Diagnostic-consultation centre1 EOOD, city of Veliko Tarnovo.
- For the third group:

- Medical University - Varna, Branch Sliven, Department of Health Care;
- Medical University - Varna, Branch Veliko Tarnovo, Department of Health Care.

Inclusion criteria

➤ **First respondent group:**

- Pregnant - ambulatory, hospitalized and healthy volunteers;
- Persons 18 years of age or older;
- Individuals who have signed informed consent.

➤ **Second respondent group:**

- Midwives working in the indicated centres;
- Persons 18 years of age or older;
- Individuals who have signed informed consent.

➤ **Third respondent group:**

- Students of the specialty "Midwife"
- Persons 18 years of age or older;
- Individuals who have signed informed consent.

Authorities of the observation

The organization of the scientific study was carried out as follows: The principal investigator started the research study after obtaining permission from the Research Ethics Committee. Contact was made personally by the principal investigator. The study participants were briefed on the risks and benefits of the study by the principal investigator, and informed consent to participate in the study was provided. No tests or procedures posing a risk to the health of the study sites are envisaged. It included questionnaires to ascertain the level of awareness and attitudes of pregnant women and medical professionals towards surgical delivery.

The research team adhered to the data confidentiality protocol and undertook not to export or provide these data to third parties. The results of the study will be published in scientific journals and presented in scientific forums only in summary form, without revealing the identity of the participants.

1.4. TIME AND STAGES OF IMPLEMENTATION

Time and place of studies:

- A survey of pregnant women's opinions, attitudes and beliefs about elective delivery was conducted in May - June 2022.
- A survey of working midwives' views towards the reasons for choosing surgical birth without medical indication took place in May - June 2022.

- A survey of midwifery students' views on the issues of elective delivery and their skills in providing information was carried out in May - June 2022.
- Assessment of pregnant-midwife communication in the context of providing information related to operative delivery took place in May - June 2022.

STAGES OF THE SCIENTIFIC STUDY

Stage	Description of the activity	Instrument	Time	Location
First	Formulation of the problem, definition of the goal, objectives and design of the study, development of the hypotheses, instrumentation and organizational plan.	Study of literature on the problem.	January 2020.	Medical University- Varna- Branch Veliko Tarnovo, Branch Sliven
Second	After permission from the CRE of the Medical University - Varna, conducting a study. The study was conducted with student midwives, pregnant women and practicing midwives.	Informed consent Survey No. 1 for student midwives Survey No. 2 for working midwives Survey No. 3 for pregnant women	May 2022 - June 2022.	Sliven and Veliko Tarnovo.
	Analysis of the results.	Statistical processing of the data.	July 2022 - August 2022.	Sliven
Third	Preparation of conclusions and recommendations. Formation of the dissertation.		January, 2022 - March 2022	Sliven

1.5. METHODS OF THE STUDY

- Theoretical analysis - aimed at operationalising the concepts used through comparison, summary and interpretation of the literature;
- **Documentary method** - used to gather information on methods of obstetric care by examining normative documents. Documents of WHO, EU and Republic of Bulgaria - laws, regulations and decrees were studied. Through **qualitative content-analysis of the documents**, the necessary information for the study was selected and processed.
- **Sociological method** - using survey method and individual anonymous questionnaire with pregnant women, working midwives and female students primary sociological information was collected.
- **Statistical methods for analysis and interpretation** of the experimental data in order to reveal the nature of the observed phenomena, the subject of this study.

Statistical research methods used

The following methods were used for the statistical presentation of the results:

- Descriptive statistics;
- Factor analysis;
- One-factor analysis of dispersion;
- Variance analysis of quantitative variables;
- Hypothesis testing methods - Non-parametric methods - χ^2 (Chi-square test) method - Hypothesis analysis for bivariate frequency distributions.
- Correlation analysis to assess the dependence between the indicators studied.

1.6. INSTRUMENTS OF THE STUDY

▪ **Questionnaires**

In order to achieve the purpose and objectives of the study, 3 questionnaires were developed which contain closed and open questions. (*Appendix 1*)

Questionnaire 1 explored the opinions of female students regarding their awareness and attitudes towards elective delivery issues and their skills in providing information. The questionnaire contains 13 questions, of which 2 open and 11 closed, divided into 4 groups:

The first group of questions explores demographic characteristics and midwives' motivation related to their choice of profession - questions 1, 2, 3, 4, 5;

The second group of questions aims to investigate the awareness of midwives (students and working) about the prevalence of surgical delivery in our country - questions 6, 7, 8;

The third group of questions explores the attitudes towards the provision of information by medical professionals on the mode of delivery - questions 9, 10, 11;

Fourth group of questions aims to investigate the opinion of midwives on the factors influencing pregnant women's choice of surgical delivery without medical reasons and the necessary measures to prevent elective surgical delivery - questions 12, 13;

Questionnaire №2. Survey of pregnant women's opinions, attitudes and dispositions toward elective delivery; Evaluation of pregnant-midwife

communication in the context of providing information related to surgical delivery. The questionnaire contains 20 questions, of which 3 open and 17 closed, divided into 6 groups:

The first group of questions aims to establish demographic characteristics and the course of the current pregnancy (presence of complaints/disorders)- questions 1, 2, 3, 4, 5, 6, 7;

A second group of questions explores the psycho-emotional and social factors influencing their choice of elective delivery- question No. 8, 9, 10, 11;

The third group of questions investigates the attitude of pregnant women towards elective delivery - questions No. 11, 12, 13, 14, 15;

The fourth group of questions studied the degree of women's trust in the physician monitoring the pregnancy and the midwife - questions 12, 13, 14;

Fifth group of questions explores to what extent pregnant women are aware and informed about the possible risks and dangers of surgical delivery, also what measures (according to them) are necessary for prevention and control of cesarean deliveries - questions 15, 16, 17;

A sixth group of questions explores the need for further information on the dangers associated with surgical delivery and the measures to be taken - questions 16, 18, 19, 20;

Questionnaire No. 3 about the opinion of working midwives towards the reasons for choosing surgical delivery without medical indications and aims to explore their opinion on the provision of information to pregnant women giving birth by caesarean section. The questionnaire contains 13 questions, of which 2 open and 11 closed, divided into 4 groups:

The first group of questions identified demographic characteristics and midwives' motivation related to their choice of profession - questions 1, 2, 3, 4, 5;

The second group of questions explores the awareness of midwives (students and working) about the prevalence of surgical delivery in our country - questions 6, 7, 8;

The third group of questions explores the attitudes towards the provision of information by medical professionals on the mode of delivery - questions 9, 10, 11;

Fourth group of questions aims to investigate the opinion of midwives on the factors influencing pregnant women's choice of surgical delivery without medical reasons and the necessary measures to prevent elective surgical delivery - questions 12, 13;

The study was conducted after obtaining permission from the Commission on Ethics of Research at MU-Varna - Minutes / Decision № 116/28.04.2022. All participants in the study have signed an informed consent.

After completion of the study, the collected data were subjected to logical inspection and entered into a data matrix.

The data obtained from the respondents were processed using SPSS v. 20.0 for Windows software.

2. RESULTS OF OWN STUDY AND DISCUSSION

2.1. Demographic characteristics of the persons surveyed

The general population of the study consisted of 201 individuals who were divided into three main groups (midwives, students and pregnant women. (Fig. 6.)

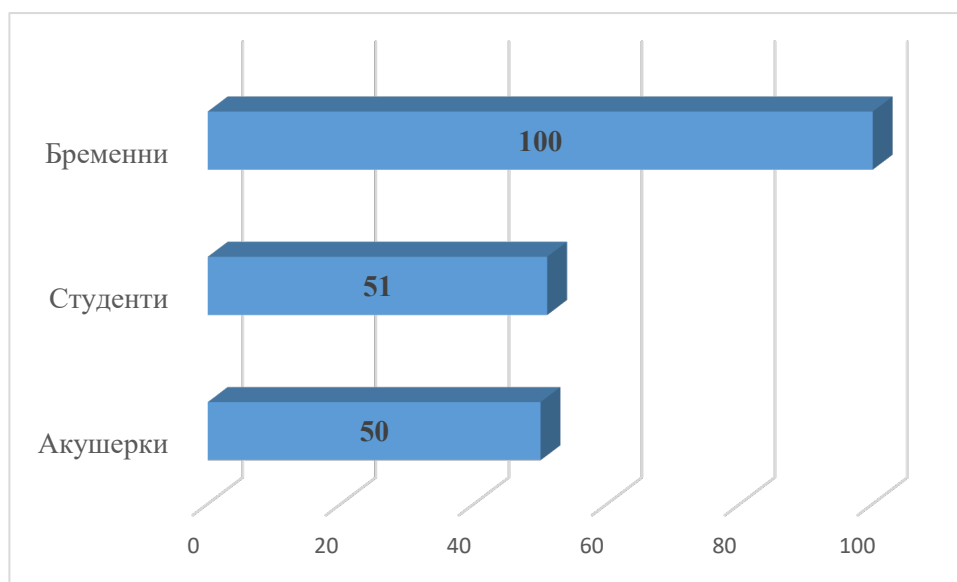


Fig. 1. Distribution of the total sampling

The largest group was pregnant women (n=100), practicing midwives were 50 and students were 51. The views of pregnant women, who make up the largest part of the sample, lead the way. They are the main source of information in the study. Their responses are of paramount importance to the principal investigator. Table 1 shows the demographic characteristics of the respondents regarding age, education, place of work and place of residence. There is a difference in age among the study groups, with the highest proportion of pregnant women in the age group 25-30 years (40%), followed by (25%) women in the age group 31-35 years. In the group of practicing midwives, women in the age group 18-35 years old (16.8%) predominated, and 13.9%

belonged to the age group 51-60 years old. 6.9% were practitioners aged above 60 years old. Female students were predominant in the age group 18-35 years

Indicator		Midwives (n=50)	Pregnant (n=100)	Female students (n=51)
Age	18-24 years old	16,8% (17)	19,0% (19)	37,6% (38)
	25-30 years old	-	40,0% (40)	
	31-35 years old		25,0% (25)	
	36-45 years old		16,0% (16)	
	36-50 years old	11,9% (12)	-	12,9% (13)
	51-60 years old	13,9% (14)	-	-
	over 60 years old	6,9% (7)	-	-
Education	primary	-	6,0% (6)	-
	secondary	6% (3)	45,0% (45)	82,35% (42)
	higher education (Bachelor, Master)	94,0% (47)	49,0% (49)	17,64% (9)
Place of residence	Sliven	50,0% (25)	90,0% (90)	61,0% (31)
	Veliko Tarnovo	50,0% (25)	10,0% (10)	39,0% (20)
Occupation/place of work	Practising midwife	50,0% (25)	-	61,0% (31)
	Student studying in the specialty "Midwife"	50,0% (25)	-	39,0% (20)

old (37.6%) and those between 36-50 years old(12.9%). (Table 1.)

Table 1. Characteristics of the persons surveyed

Regarding the educational background of the persons studied, the following was found: among the pregnant women, the majority were women with higher education (bachelor's degree, master's degree) (49.0%), while 45.0% had secondary education. Only 6 women indicated primary education. In the group of practicing midwives, the answer "higher education" is again logically predominant (94.0%), since the right to practice the profession has persons with the educational qualification "Bachelor". In the case of female students, respondents with secondary education predominate quite understandably (80.39%), while only 17.64% indicate that they already hold a Bachelor's or Master's degree, which is related to the fact that the female students surveyed are mostly in the 18-24 and 36-50 age groups.

Among the pregnant women the majority are women residing in the town of Sliven (90.0%), as the principal investigator aimed to survey a larger proportion of women in the mentioned centres in the city, while 10.0% indicated the city of Veliko Tarnovo as the place of residence. Female students are dominated by respondents residing in Sliven (61.0%) and 39.0% were from Veliko Tarnovo.

For practicing midwives, the ratio by the indicator of place of residence is fully proportional, divided by 50.0% for Sliven and 50.0% for Veliko Tarnovo. The last indicator related to demographic characteristics is "profession and place of work". Half of the working midwives are practicing in the Diagnostic and Consultative Centres and the structures of the Multiprofile Hospital for Active Treatment in the town of Sliven and city of Veliko Tarnovo. The question asked to the group of midwives "how long have you been practicing the midwifery profession?" was answered by the highest relative proportion "1-3 years" (32%). Next by a small margin (28%) were those practicing the profession for more than 20 years. The answer "more than 10 years" was given by 16% of midwives and 14% indicated that they have been practicing "for 5-10 years". 'Other' was stated by 10% of respondents. It is encouraging that the majority of respondents have been practising the profession for some time, given the shortage of medical staff, which is subject to in-depth discussion. (Fig. In favour of the study, midwives with longer and more professional practice and with more experience were also present among the respondents. (44%)

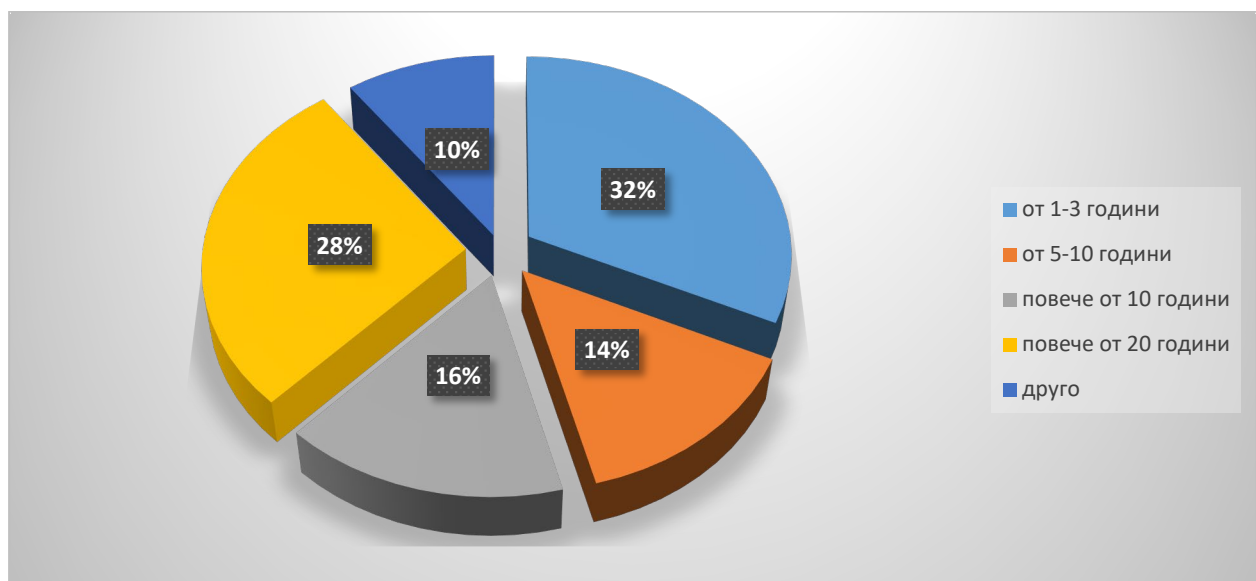


Fig. 2. Work experience of practicing midwifery profession

Examining the order of current pregnancy in our sample, women with first pregnancy (45%) and second pregnancy (44%) predominate. Third and fourth pregnancies accounted for 9% and 2% of pregnant women, respectively. (Table 2.)

Only one woman with a first pregnancy indicated that she did not always attend PAS (2.3%).

A significantly higher percentage of women with a third pregnancy do not attend PAS regularly - 11%. The reason for this may be a reappraisal of experiences from previous pregnancies.

Current pregnancy	Number (N=)	% of total group	% of non-regular PAS attenders
First	45	45%	2.3%
Second	44	44%	-
Third	9	9%	11%
Fourth	2	2%	(the sample is too small to draw conclusions)
Total	100	100%	

Table 2. Sequence of current pregnancy/ regular visit to PAS

As some of the pregnancies may have ended in failure, we asked the women which order the upcoming birth would be. The highest proportion were primiparous women (45%). They were followed by one per cent fewer second births (44%). Nine percent of women indicated a third birth. A response of "other" was given by 2% of pregnant women, indicating that the pregnancy was multiple (twins). (Table 3)

Order of birth	Number (N=)	Proportion (%)
First	45	45%
<i>Second</i>	44	44%
<i>Third</i>	9	9%
<i>Other</i>	2	2%

Table 3. Order of upcoming birth

Half of the women (50%) were pregnant in their third trimester, which is important for the study because this is the period during which mothers' fears intensify and the fear of childbirth comes to the fore. In the period of 13-28 gestational weeks are 35% of women. The smallest proportion (15%) are pregnant women with gestation period up to 12 gestational weeks. (Fig. 3.) In the last term of pregnancy, final decisions are usually made regarding the method of delivery, choice of delivery unit/clinic and choice of team. During this stage, hesitation decreases and women tend to stick to the decision made. This reduces feelings of uncertainty and reduces stress.

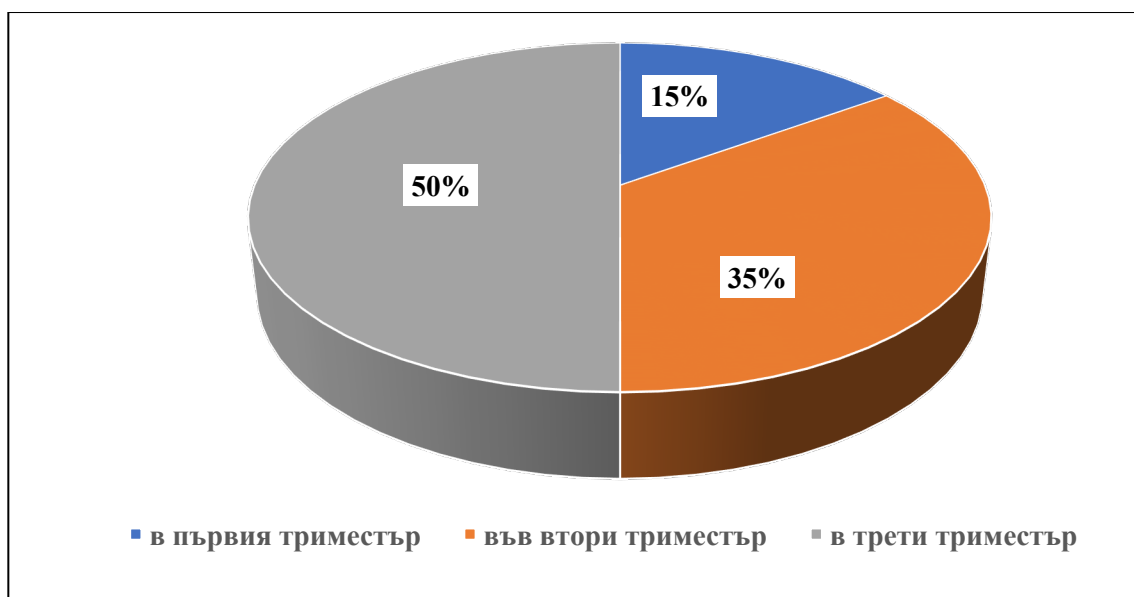


Fig. 3. Term of current pregnancy

Of significant importance is the answer to the question of whether the current pregnancy was planned and desired. The majority of women reported that the pregnancy was planned (85%). (Figure 4) Among them, women with first (39%) and second pregnancies (37%) predominated. This should be taken as a positive step in early abortion prevention. Two of the women in the total sample refused to answer this question and 13 said that the current pregnancy was not planned but was still accepted and saved.

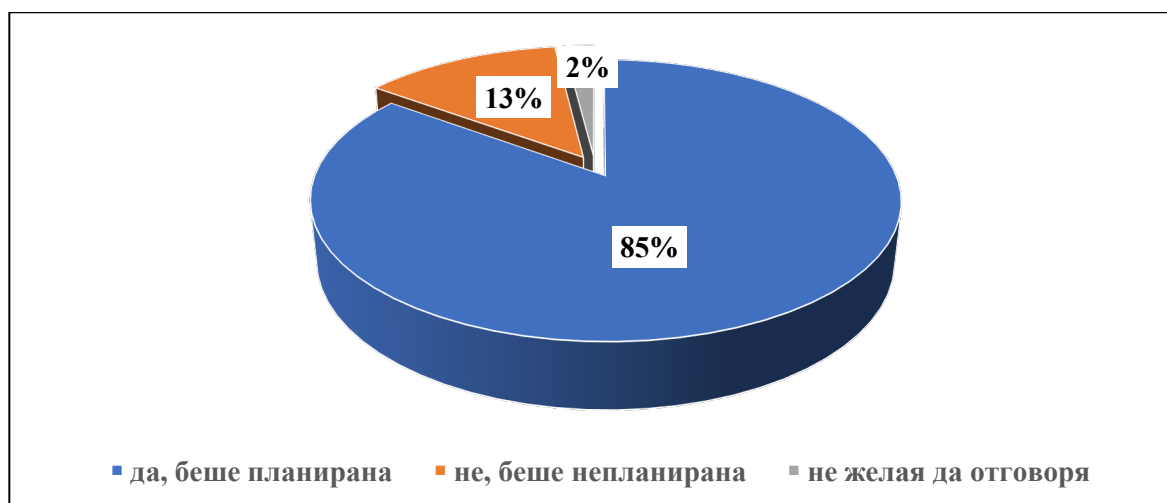


Figure 4. Pregnancy planning

Planned pregnancy implies a conscious and conscientious attitude towards the future child and one's own body, responsibility in making decisions related to childbirth. This makes the opinions obtained sufficiently reliable.

Exploration of factors influencing women's choice of elective delivery

According to research studies included in the literature review, spontaneous birth is accepted by most mothers as an existential event, a source of satisfaction and pride. Our study analyzed the birth order and the stated attitudes towards normal and surgical delivery, respectively.

In this aspect, *a relationship was found between the choice of mode of delivery and the sequence of the upcoming birth.* (Table 4.)

The results showed that 49% of all pregnant women surveyed wanted to give birth normally if all went well, and 18% assumed they had a medical indication for CS. This is scientifically in line with WHO recommendations that surgical deliveries should not exceed 20% of total births. One in four women in the present study will listen to their doctor's advice and comply with his or her recommendations for mode of delivery.

Attitude/ Preferences about the mode of the upcoming birth		I want to give birth in a normal way if everything goes well	By CS: I have a medical indication for this	By CS: it is safer for the child	I haven't decided yet	I will take into account the opinion of my supervising physician	Total
Current pregnancy	First	26	2	2	1	14	45
	Second	14	15	3	1	11	44
	Third	8	0	0	0	1	9
	Fourth	1	1	0	0	0	2
Total		49	18	5	2	26	100

Table 4 Relationship between mode of delivery and birth order

Among women who stated a desire to give birth per vias naturales, the highest proportion of women gave birth first: 53% prefer to give birth naturally, while this proportion drops to 29% for second births. (Fig. 5.)



Fig. 5. Preference for normal birth and pregnancy sequence

Second-time birth attendants are twice as likely to choose to give birth normally. This is probably due to previous birth experience, dissatisfaction with past births or other non-medical reasons. Figure 6 shows the relationship between existing medical indications for cesarean delivery and the order of the current pregnancy.



Fig. 6. Preference for CS due to medical indications

There is no evidence in the scientific literature that the second consecutive pregnancy is characterized by an increase in pathological abnormalities suggesting surgical delivery. The only argument for this could be an increase in age, which in the present sample was 30.5 years for women who indicated that they were pregnant for the second time, against a mean age of 24 years for first-

time pregnancies. Among second-time births, the fact that personal negative experiences of a previous birth (normal or surgical) may motivate the desire for a subsequent cesarean section comes into consideration. In the second birth group, 31.8% (n=14) intended to give birth normally. However, compared to all those who declared medical indication for surgical delivery, those giving birth for the second time accounted for the largest proportion - 83%. (Fig. 6.)

In our study, a Chi-Square test was performed to test the variables examined and an association was found between pregnancy order and preference for elective delivery.

In the present study, we asked all the three groups of subjects (pregnant women, midwives and students) **which factors they thought influenced pregnant women's choice of elective delivery without medical reasons.** Respondents were given the opportunity to indicate more than one answer that summarized their opinion.

The results for the pregnant group once again highlighted fear of pain as the leading factor in women's choice for surgical delivery. The majority of respondents (44%) stated that **fear of pain was a huge factor in their decision making about their choice.** Fear of labour has a proven association with elective caesarean section, which **was confirmed by our study.** (Table 5.)

<i>Factors</i>	<i>Answer "YES"</i>
Factor 1. Afraid of pain	71 (44,0%)
Factor 2. On doctor's advice	35 (21,0%)
Factor 3. Childbirth with CS is faster and easier	23 (14,0%)
Factor 4. Nowadays, cesarean delivery is very relevant	17 (10%)
Factor 5. Because girlfriends give birth like this	11 (7,0%)
Factor 6. Other	3 (4,0%)

*Table 5. Factors influencing women's choice of non-medically indicated (pregnant) surgical delivery. Possibility of multiple choice**

Fear of pain remains a major reason for requesting elective delivery, although modern medicine can offer epidural anaesthesia and a range of other medicated and non-medicated methods for its relief. The widespread fear of pain has biological roots but also a contemporary context.

Half a century ago, operative delivery was not marketed in the obstetric care market; today it is easy to find a physician willing to accept a woman's choice as a sufficient reason for operative intervention without medical indication. And this is unequivocally supported by the present study. In the towns of Sliven and Veliko Tarnovo, where the survey was conducted, maternity wards do not offer alternatives for pain relief in the birth process. Non-medical methods

of pain relief are not a priority among medical teams. Thus, the previous negative birth experience is reflected in a subsequent desire for elective delivery.

As a **second significant reason**, 21% of *pregnant women* indicated that they chose CS “**on the advice of the physician**” monitoring the pregnancy in the PAS. One in five women was guided entirely by the opinion and advice of the physician who observed her. As stated in the literature review, consent to perform operative delivery without medical reasons meets approval among some obstetricians. Pregnant women's views on the role of the obstetrician-gynaecologist may have an ambivalent interpretation. On the one hand, this indicates a high degree of trust in medical professionals, but on the other hand it confirms the view that doctors are "to blame" for the exponential increase in operative births in recent years. The misuse of information (insufficiently clear, reliable, scientific or deliberately not shared) may be the reason for the increased number of operative births without medical cause. The financial benefit, the investment of less time, the pressure of giving birth often tempt doctors. Planning an exact date and even an exact time of delivery is only possible if the delivery is surgical. The "schedule" takes into account not only the signs of the Zodiac, but also the planned leave or absence of the operator. The fact that in our country the proportion of operative deliveries reaches 50%, with 20% being the norm, indicates that obstetricians are willing to respond to women's requests for elective cesarean section and are motivated to do so.

Looking at the sample of pregnant women who said they would comply with their doctor, it was found that first births were the most likely to "lean" on their opinion. Over half (54%) said they would follow their advice. (Fig. 7. The share of those giving birth to a second child is also not small - 42% of the declared trusts. It is quite understandable that women who have no previous childbirth experience would rely on the opinion of a specialist obstetrician regarding the best possible way to end the current pregnancy. In conjunction with other studies, the presence of a so-called "third dimension" of pain related to fear as a result of previous illness experiences, current expectations, and other cultural characteristics should not be overlooked. The level of education, poor awareness and lack of knowledge also influence pain. Women with a first birth experience more pain during the first stage of labour and women who have already given birth experience more pain during both the first and second stages of labour. Therefore, information related to pain and options for overcoming it should be discussed in advance with each expectant mother.



Fig. 7. Preferences related to trust in the physician

According to 23 of the pregnant women (14%), delivery by operative means is an **easier and faster option**. This result can be seen in the context of missing and unreliable information. The risk of surgical delivery exceeds many times the risk of normal vaginal delivery. In addition to not being safer, surgical delivery is followed by a long and painful (sometimes) postoperative period. It is a common opinion that the quick and easy occurrence of the long-awaited event is a guarantee of the quality of obstetric care. Despite signing an informed consent for any surgery they have to undergo, women in labour are not always aware of the risks and consequences of surgical birth. Such information should have been discussed in advance with the operator and/or midwife. The medical specialist should receive clear feedback that all risks and benefits are well understood by the pregnant woman and her family.

Ten percent of pregnant women share the opinion that today, birth by cesarean section is a fashionable trend. (Fig. The publicity of operative childbirth among women in whom there is public interest creates a wrong image of it. Women perceive birth by section as a trend, current in importance and with a tendency to increase in rate, rather than as an issue that is socially significant and subject to discussion. This "following" of influencers, celebrities is confirmed by our study. This is also contributed by electronic media and platforms that are now so accessible that they are an integral part of our daily lives. Ten percent of pregnant women surveyed assume that a certain fashion is followed and 7% would give birth the way their friend gave birth. Figure 8 shows the distribution of pregnant women's opinions on the factors influencing the choice of surgical delivery without medical indication.



Fig. 8. Distribution of pregnant women's opinions on the reasons for choosing SC without medical indications. Possibility of multiple choice*

Comparing the responses of the three groups of respondents (pregnant women, midwives and students), we conclude that all of them agree on the fear of pain as the leading reason for choosing elective delivery.

This belief is particularly strong among students (44% of them share this opinion) and midwives (36%). Apparently, the medical community assumes that relief from pain and suffering are the main reasons why women choose to give birth surgically without medical reasons. The "on the advice of a doctor" factor, which is cited by 21% of pregnant women, is shared by only 15% of midwives surveyed. In comparison, only 8% of the student women agree with this opinion.

The idea that childbirth is 'fashionable' today is shared to the greatest extent by female students: 18% of them believe that this appears to be a trend that young pregnant women follow.

Comparing the answers of the three groups of respondents, we ranked the reasons that make women undertake surgical delivery without medical indications. (Table 6)

It is clear from the study that fear of pain is a "favourite" in all three groups studied. "On doctor's advice" is shared mostly by pregnant women and least by students. On the other hand, students prioritized the fact that birth through SC is quick and easy as a possible reason for choosing it. The midwives "split" equally in their opinion regarding the influence of friendship circle, "fashion" and the possibility of a quick and easy end of pregnancy. How the three groups ranked the reasons for choosing elective delivery is shown in Table. 6.

Ranking	Pregnant	Midwives	Female students
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First place	Afraid of pain	Afraid of pain	Afraid of pain
Second place	On doctor's advice	Nowadays, cesarean delivery is very relevant Childbirth with CS is faster and easier Because girlfriends give birth like this	Childbirth with CS is faster and easier
Third place	Childbirth with CS is faster and easier		Because girlfriends give birth like this
Fourth place	Nowadays, cesarean delivery is very relevant	On doctor's advice	Nowadays, cesarean delivery is very relevant
Fifth place	Because girlfriends give birth like this		On doctor's advice

Table 6. Ranking the reasons for choosing elective delivery according to the groups studied

Conversations between doctor and patient are usually confidential. In our country, there are no studies that investigate the opinion and behaviour of obstetricians about proceeding to elective delivery. Moreover, no such regulation is written in the obstetric standard.

When asked if pregnant women regularly attend the PAS, the majority (98%) strongly stated yes. Equally divided (1%) were the women who said that they do not always visit the PAS and only (1%) did not feel it necessary to visit the office for pregnancy follow-up.

The result data shows that the highest proportion (98%) who regularly visit the Pregnancy Advisory Service was given by the first and second pregnancy women. Only 2.3% of women with first pregnancy indicated that they do not always visit the consultation room, while 11% of women with third pregnancy did not find it necessary to visit the consultation room.

This logically explains the fact that women start following up their pregnancy at an early term. In Bulgaria, early screening for chromosomal and genetic disorders/anomalies is carried out from the earliest pregnancy (between 11-13 weeks of gestation) in the first months after the identification of pregnancy. These screening tests are an important tool for diagnosing certain maternal conditions, are usually quick and non-invasive, but provide a wealth of information. A healthy pregnancy depends on both a woman's physiology and regular visits to the PAS, which are once a month in the early months and at more frequent intervals in late pregnancy. Establishment of pregnancy and the need to monitor maternal and fetal development require systematic clinical monitoring.

The researcher also examined the correlation between a woman's age and regular attendance at the PAS. For this purpose, univariate analysis of variance was applied. There was a significant statistical difference in the responses of female respondents in the age group of 18-24 years and other female participants of the study. Thus, the data presented shows that the youngest respondents in the 18-24 age group were the most likely to attend the PAS. This is understandable as pregnancy at a younger age is often associated with greater personal

uncertainty on the part of the mother, as well as unknown possible risks during the current pregnancy.

Another important aspect of the desire for active monitoring of pregnancy, respectively a visit to the PAS is the level of education. Our study elucidates that the educational level of pregnant women, is also a factor influencing attendance at the PAS. Women with primary education were more likely to visit the office. This is probably due to their lack of confidence in their knowledge about the course of pregnancy and the upcoming delivery. This fact can be used in the formation of focus groups giving the necessary information and initiating discussions on the problem.

Of interest is the question of how pregnant women assess the course of pregnancy at the present time and whether this has a bearing on their choice of method of delivery. The majority of the group of respondents (70%) answered that the pregnancy was proceeding without complications. With "slight deviations" answered 29% of women. Satisfying is the fact that none of the respondents indicated serious problems related to the course of pregnancy.

During pregnancy, women go through various emotional states. In 2005 at the Fifth Russian Congress of Prenatal and Perinatal Psychology, Psychotherapy and Perinatology 6 styles of pregnancy experiences were presented. Recognizing the styles assists the team of professionals serving the pregnant woman to pinpoint her needs and offer appropriate help. Table 7 summarizes pregnant women's responses regarding pregnancy-related concerns and anxieties. It is clear that the highest percentage of women (32%) stated that their concerns were related to the baby. One in three women stated that they had no worries 28%. Among the most common concerns and worries, the answer "related to delivery" is also found with 22%. The remaining responses are joined by concerns related to:

- Abortion - 6%;
- Concerns related to mother and fetus - 4%;
- Other (child's health) - 4%;
- Concerns related to puerperium (postpartum period) - 2%;
- Preterm pregnancy - 1%;
- Fear of surgical delivery - 1%.

Concerns and anxieties related to pregnancy	<i>Number</i>	<i>%</i>
<i>No anxiety</i>	28	28.0%
<i>Related to the baby</i>	32	32.0%
<i>Related to childbirth</i>	22	22%
<i>Related to the postpartum period</i>	2	2.0%

<i>Fear of abortion</i>	6	6.0%
<i>Related to mother and child</i>	4	4.0%
<i>Preterm pregnancy</i>	1	1.0%
<i>Other causes</i>	4	4.0%
<i>Fear of section</i>	1	1.0%
<i>Total</i>	100	100%

Table 7 Concerns and anxieties related to pregnancy

Our results, shown in **Figure 11**, present an assessment of the emotional and mental health of pregnant women at the current point in pregnancy. In the survey, the majority of pregnant respondents (with a relative proportion of 58%) reported feeling happy. By a small margin (30%) stated that they were happy most of the time. Somewhat worryingly, the data showed that 7% of respondents said that they were depressed, confused and irritable most of the time. A very small proportion (4%) said they often feel depressed, which is a prerequisite for a depressive state, and 1% said otherwise. (Fig. 9)



Fig. 9. Assessment of the emotional and mental health of pregnant women at the present time

Through the application of univariate analysis of variance, we sought to identify the factors influencing the emotional and mental health of pregnant women. The use of a 5-point Likert scale facilitated data collection for further analysis.

From the results presented, it is clear that there is a statistically significant difference in the emotional state of women for whom the current pregnancy is their first compared to second pregnancies. Regarding the term of pregnancy, the data show that positive emotions are more common among second trimester pregnant women. This is explained by the fact that at the beginning of pregnancy

Primary education	6	1.37	3.50	.00	3.34	2	5
Secondary education	45	1.04	2.69			1	5
Higher education	49	.84	2.45			1	5

Table 10 Correlation between pregnant woman's education and the degree of fear of childbirth

Our study found that fear of childbirth was directly correlated with a woman's age and education. It was highest in women with primary education, progressively decreasing in those with secondary and tertiary education. The degree of fear was also significantly higher in the youngest women (age group 18-24 years). The results of the study on the influence of these factors are presented in Table 9 and Table 10, respectively. This fact supports the view that more information is needed on issues concerning childbirth. Since women with different levels of education cannot be treated as a homogeneous group, differentiation of the forms and ways of obtaining the necessary information is necessary.

We asked the pregnant women how they thought the father's presence during labour might affect the birth experience. One in three women felt that the father's presence during labour would not affect the birth process. (Fig. A further 23% thought it would make childbirth easier and more satisfying, in contrast to 18% who thought it would make childbirth more difficult. Only 6% were of the opinion that the father's presence during the birth would negatively affect the couple's sex life, and 22% could not answer the question.

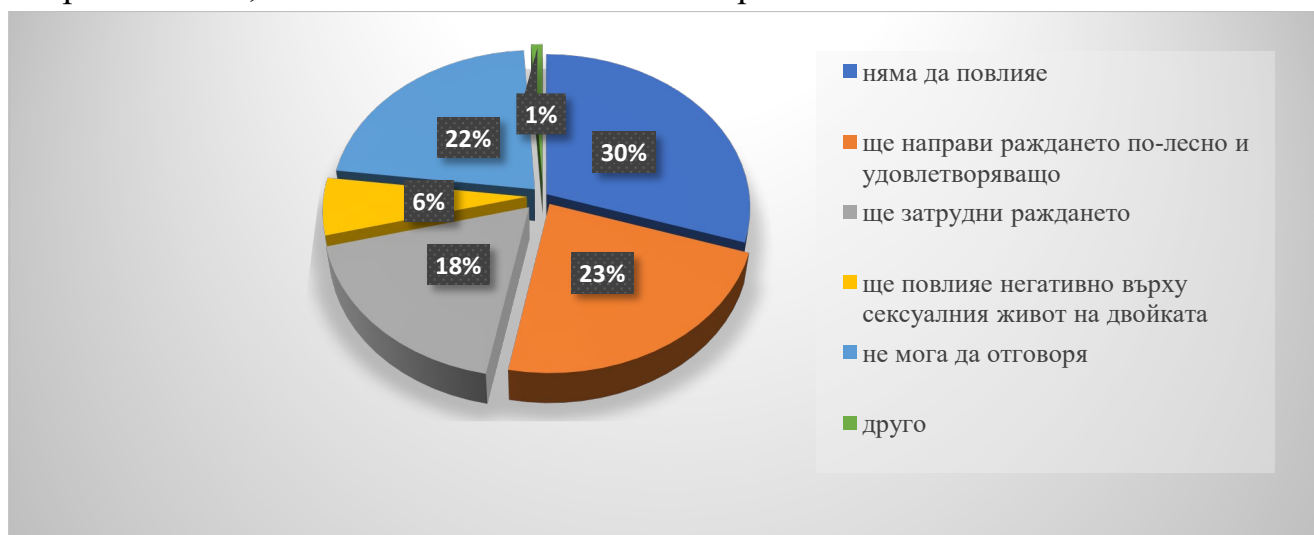


Fig. 10. Influence of the father's presence during childbirth

In our country, the presence of the father during childbirth is not practiced routinely in every health facility. It does not constitute a medical activity, is not covered by medical care and should be paid for by the patient. The role and presence of the father is often referred to as 'helpful' in the delivery room, as this

could establish the bond between the father and the newborn. According to the Annex to Regulation No. 9 of the Medical Standard, the presence of a relative or a psychological support person (according to Chapter II, point 6.1) during the delivery is permissible at the request and with the consent of the woman giving birth, only in the setting of a private delivery room and provided that it is regulated in the internal rules of the health establishment. There are statutory mechanisms in place to ensure that additional services can be obtained, including the presence of the father during childbirth.

2.2. Analysis of the opinion of the surveyed groups on the reasons for choosing caesarean section

The present study is structured in such a way that it allows for the identification of similarities and differences between the opinions of the three groups of respondents. Of interest are the responses to the question "what proportion (%) of women in our country give birth by caesarean section". The results of the comparative analysis show that the question related to the proportion of women who give birth in our country by cesarean section has similarities in all three groups of respondents, with the predominant answer being "50%". The highest proportion (33.0%) of the group of pregnant women thought that 50% in our country give birth through CS. The answer given is close to the actual percentage of surgical deliveries in Bulgaria in the last few years. *The arithmetic mean of the sample is considered 55.82 and the standard deviation is 14.057. (Table 11)*

Total number of respondents	Mean	Median	Mode	SD	Std. Error of Kurtosis	Std. Error of Skewness	Min.	Max.
100	55.82	50.00	50	14,057	,478	,241	20	90

Table 11. Descriptive statistics on the proportion of births by cesarean section/ sample - pregnant women

The results show that nowadays women in Bulgaria are aware and sufficiently informed about the proportion of women who give birth by surgery. Their answers are very much in line with the increasing percentage of operative births in our country.

We also asked this question to respondents from the group of midwives and female students. For the group of midwives and female students, responses were similar to those of respondents in the pregnant group. Majority of the practicing midwives (30%) gave the answer "50%" and the proportion was less

in case of female students 21.57%. The comparative analysis of the responses of the three groups of respondents is shown in Fig. 11.

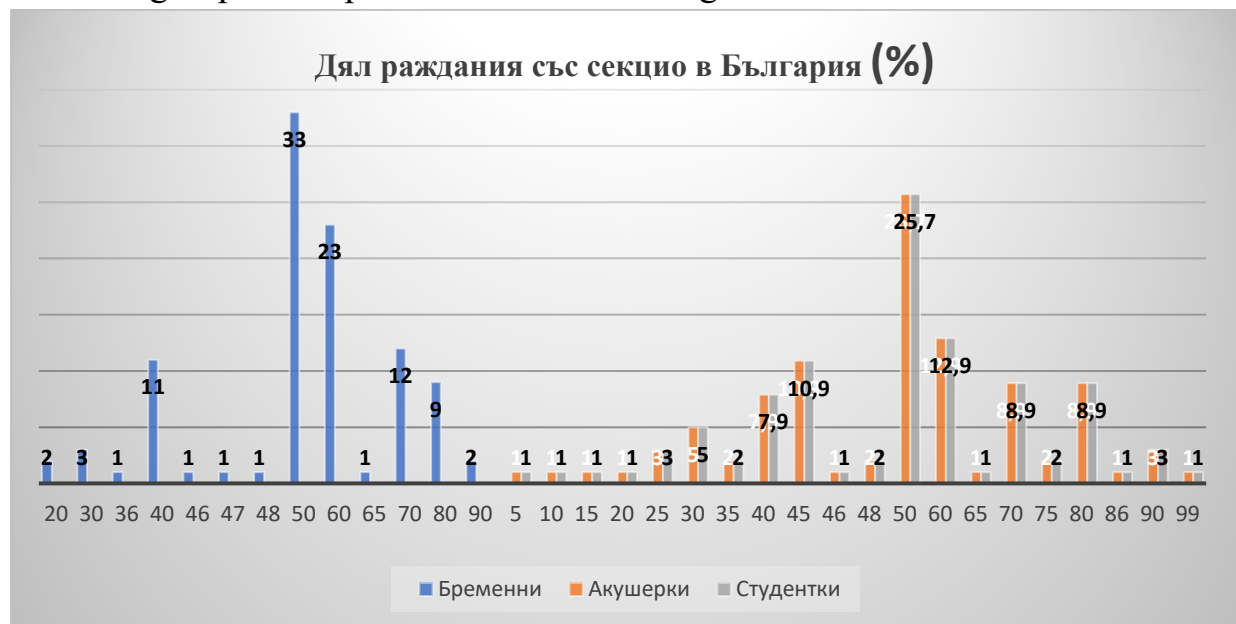


Fig. 11. Opinion on the proportion of births by caesarean section without medical indications (comparative analysis)

Awareness is of utmost importance for pregnant women in their choice for an upcoming birth. In this regard, we asked the pregnant women surveyed whether they thought they should be informed in detail about the dangers of cesarean delivery. A categorical "yes" was stated by 91% of them and only 3% did not think it was necessary. (Fig. 12)

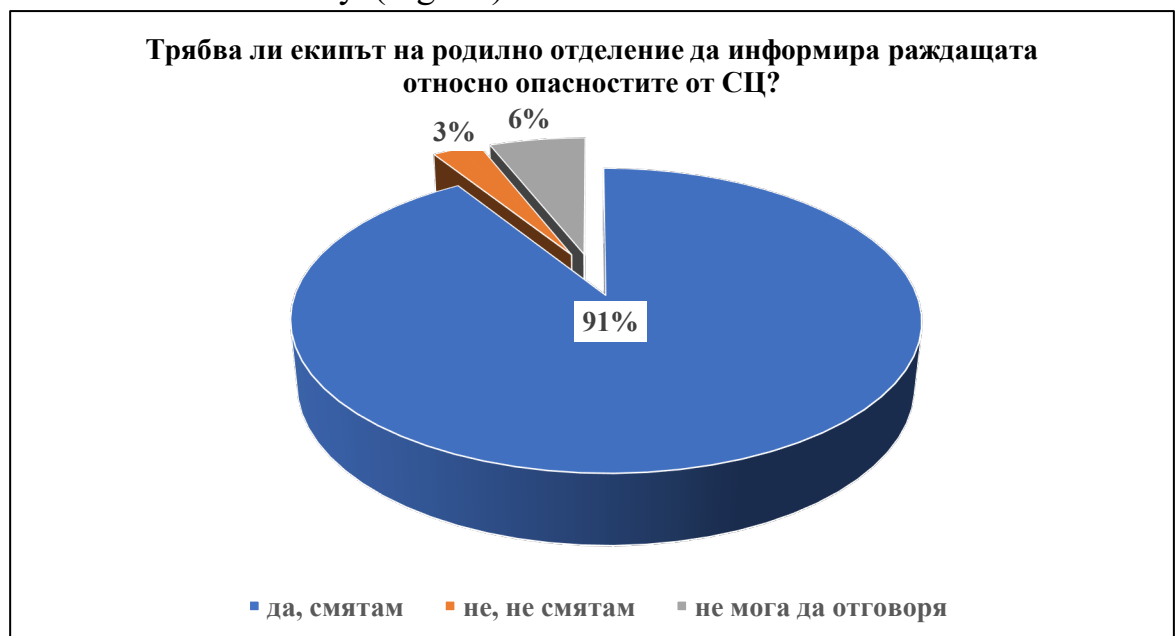


Fig. 12. Does the team need to inform the parturient prior to undertaking the SC (pregnant)

In the midwives and female students, we asked a similar question related to awareness. According to 63.4% of practicing midwives and students, the doctor and midwife together should inform the patients about the chosen method of delivery. (Fig.13)



Fig. 13. Awareness of the risks in SC / midwives and female students /

We asked all three groups of respondents a question related to the need for the pregnancy courses. There was similarity in the responses of all three groups of respondents. A majority of pregnant respondents (60%) found such courses sufficiently informative. In the case of practicing midwives and female students, the question was asked in order to find out to what extent health professionals recognised the courses as a source of information. The majority of midwives and female students (91% of each group) answered "yes". The comparative data is presented in Figure 14.

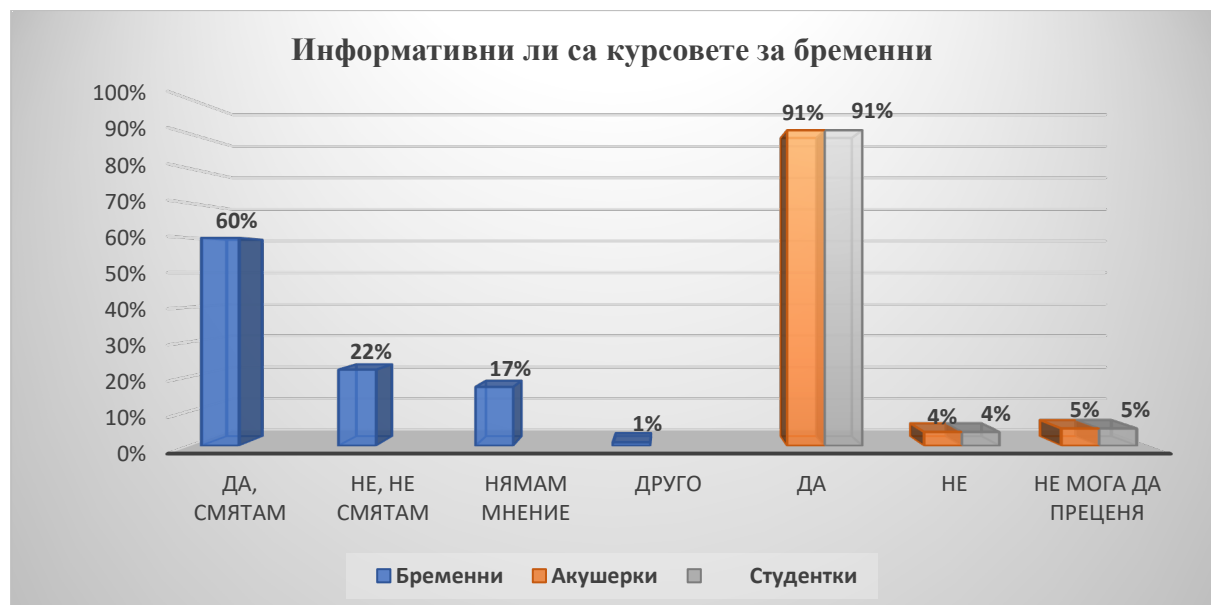


Figure 14. Opinion on the informativeness of courses for pregnant women (pregnant, midwives, female students)

To obtain more information related to the formation of the groups and curricula for pregnant women we used a univariate analysis of variance. We were able to identify three samples. The factor for their formation was the *educational status* of pregnant women. The obtained data revealed a significant difference between views, respectively propensity to attend courses for pregnant women and educational status. This necessitates the view that a differentiated approach should be taken in forming the groups for conducting courses. The optimal option is to have two of them: 1) women with secondary and higher education and 2) women with primary education. The teaching content should be tailored to the specificities, characteristics and capacities of each group.

3. Study of awareness among pregnant women about elective delivery

The mathematical analysis of the data necessitated the delineation of the following reasons that are essential for awareness: They are: Educational status; age and birth order. (Table 14) Our analysis gives us reason to claim that **women with lower awareness are those with primary education, in the age group 18-24 years, whose upcoming birth is their first.** The results support the fact that these pregnant women should be segregated into a separate group when providing information regarding elective delivery.

Risk awareness	N	SD	M	Sig.	F
Primary education	6	.000	1.00	.751	.287
Secondary education	44	.526	1.16		
Higher education	49	.514	1.16		
Risk awareness	N	SD	M	Sig.	F
Age 18 - 24 years old	19	.459	1.11	.002	.564
Age 25 - 30 years old	39	.556	1.18		
Age 31 - 35 years old	25	.440	1.12		
Age 36 - 45 years old	16	.554	1.19		
Risk awareness	N	SD	M	Sig.	F
First	45	.443	1.11	.007	4.228
Second	44	.540	1.18		
Third	9	.667	1.22		

Table 14. Univariate analysis of variance of factors influencing awareness

In the present study, 49% of pregnant women stated that they wanted to give birth normally if everything went well. Only 18% said they wanted a cesarean section because they thought they had a medical indication for it. 5% of women said they preferred to give birth by cesarean section because it was safer for the baby. Only 2% of women stated that they had no clear attitude about the upcoming birth. (Fig. 15).

Fig. 15. Attitudes about the method of childbirth

Exploring the factors influencing pregnant women's choice of elective delivery, fear of pain was found to be the leading factor. When asked "which factors influence pregnant women's choice of operative delivery without medical reasons", the study found that fear of pain continued to be the leading factor in the choice of elective CS.

With 71%, the majority of pregnant women indicated that pain was a huge factor in their decision making. ‘On the advice of the doctor’ monitoring the pregnancy in the PAS ranked next with 35%. By a small margin, 23% of women felt that cesarean delivery was an easier and faster option. The recent trend that cesarean delivery is very relevant today (17%) is found among the respondents' answers. A proportion (11%) indicated that they were influenced by the example of their friends, and 3% indicated "other" (Fig. 16).



Fig. 16. Factors influencing women's choice of non-medically indicated (**pregnant**) surgical delivery.

The two categorical variables regarding pregnant women's preferences for delivery (normal or operative) and order of upcoming delivery are examined. The results of the *Chi-Square Test* are presented in the following cross-tabulation. (Table 15) The results show that 49% of pregnant women want to give birth naturally. Another 26% of them will comply with the opinion of the attending physician. A total of 23% prefer to give birth by section, 18% of which for medical reasons, and 5% - for the safety of the baby. According to the order of birth, 26% of pregnant women prefer to give birth naturally for their first birth. With an upcoming second birth, 16% agree to give birth by section for medical

indications. Only 5% of pregnant women prefer to give birth by section, as they believe it is safer for the baby.

			Order of upcoming birth				Total
			First	Second	Third	Other	
Beliefs/Preferences about the mode of the upcoming birth	I want to give birth in a normal way if everything goes well	Number	26	16	6	1	49
		% Beliefs/Preferences about the mode of the upcoming birth	53.1%	32.7%	12.2%	2.0%	100.0%
		% Order of upcoming birth	57.8%	36.4%	66.7%	50.0%	49.0%
		% of total	26.0%	16.0%	6.0%	1.0%	49.0%
	c-section because I have medical indications for it	Number	1	16	1	0	18
		% Beliefs/Preferences about the mode of the upcoming birth	5.6%	88.9%	5.6%	0.0%	100.0%
		% Order of upcoming birth	2.2%	36.4%	11.1%	0.0%	18.0%
		% of total	1.0%	16.0%	1.0%	0.0%	18.0%
	by c-section because I think it's safer for the child that way	Number	2	2	1	0	5
		% Beliefs/Preferences about the mode of the upcoming birth	40.0%	40.0%	20.0%	0.0%	100.0%
		% Order of upcoming birth	4.4%	4.5%	11.1%	0.0%	5.0%
		% of total	2.0%	2.0%	1.0%	0.0%	5.0%
	I haven't decided yet	Number	2	0	0	0	2
		% Beliefs/Preferences about the mode of the upcoming birth	100.0%	0.0%	0.0%	0.0%	100.0%
		% Order of upcoming birth	4.4%	0.0%	0.0%	0.0%	2.0%
		% of total	2.0%	0.0%	0.0%	0.0%	2.0%
	I will take into account the opinion of my supervising physician	Number	14	10	1	1	26
		% Beliefs/Preferences about the mode of the upcoming birth	53.8%	38.5%	3.8%	3.8%	100.0%
		% Order of upcoming birth	31.1%	22.7%	11.1%	50.0%	26.0%
		% of total	14.0%	10.0%	1.0%	1.0%	26.0%

Table 15. Birth method preferences

Chi-Square Test shows that the characteristic Pearson Chi-Square = 22,886 is of significance level *Asymp. Sig. (2-sided)* = 0,029 < α = 0,05. (Tab.16)

Therefore, there is a correlation between pregnant women's preferences for delivery and the order of upcoming delivery.

Chi-Square Tests			
	value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	22,886 ^a	12	,029
Likelihood Ratio	25,994	12	,011
Linear-by-Linear Association	,243	1	,622
N of Valid Cases	100		

Table 16 Chi-Square Test- a statistical method for testing hypotheses

To measure the strength of the relationship between the two qualitative variables, we have applied the Cramer Coefficient (Cramer's V) (Table 17). The strength of the established correlation dependence is determined by Cramer's V=0,276, which is a statistically significant coefficient with a significance level *Approx. Sig.* = 0,029. This coefficient is less than 0.3, indicating that there is a weak correlation between the variables. Correlation dependence between age and sequence of current pregnancy was investigated. The results are presented in Table 17.

Symmetric Measures			
		value	Approx. Sig.
Nominal by Nominal	Phi	,478	,029
	Cramer's V	,276	,029
N of Valid Cases		100	
a. Not assuming the null hypothesis.			
b. Using the asymptotic standard error assuming the null hypothesis.			

Table 17. Symmetric Measures

An expected correlation was also found **between age and order of current pregnancy.** (Table 18)

The analysis shows that 59% (total number) of pregnant women are under the age of 30, and 41% are over the age of 30. There are 31 pregnant women under the age of 30 with their first pregnancy, and 12 pregnant women over the age of 30. There are 19 respondents in the age group under 30 with a second pregnancy, and 26 are pregnant over 30. There are 8 respondents with a third pregnancy under the age of 30, and 2 are pregnant over the age of 30. With a

fourth pregnancy, there is 1 respondent under the age of 30 and 1 over 30 (Tab. 18)

37 pregnant women under the age of 30 and 12 pregnant women over the age of 30 want to give birth naturally. 6 pregnant women under the age of 30 and 12 pregnant women over the age of 30 want to give birth by caesarean section due to medical indications. Only 1 pregnant woman under the age of 30, as well as 4 pregnant women over the age of 30 want to give birth by section because they think it is safer for the child. 13 pregnant women aged under 30 and 13 over 30 will comply with the opinion of the supervising physician. *Chi-Square Test* shows that the characteristic *Pearson Chi-Square* = 15,828 is of significance level *Asymp. Sig. (2-sided)* = 0,003 < α = 0,05. **Therefore, age influences the attitude towards the upcoming birth, i.e. there is a correlation between the two quantities.**

The strength of the correlation dependence is determined by Cramer's $V=0,398$. This coefficient is **statistically significant** with significance level *Approx. Sig.* = 0,003. Its value is greater than 0.3 and less than 0.5, indicating that a moderate correlation exists between the variables.

As a result of the correlation analysis of the obtained survey data, it

was

			Age groups		Total
			up to 30 y.o.	over 30 y.o.	
Current pregnancy	First	Count	31	12	43
		% within current pregnancy	72.1%	27.9%	100.0%
		% within age groups	52.5%	29.3%	43.0%
		% of Total	31.0%	12.0%	43.0%
	Second	Count	19	26	45
		% within current pregnancy	42.2%	57.8%	100.0%
		% within age groups	32.2%	63.4%	45.0%
		% of Total	19.0%	26.0%	45.0%
	Third	Count	8	2	10
		% within current pregnancy	80.0%	20.0%	100.0%
		% within age groups	13.6%	4.9%	10.0%
		% of Total	8.0%	2.0%	10.0%
	Fourth	Count	1	1	2
		% within current pregnancy	50.0%	50.0%	100.0%
		% within age groups	1.7%	2.4%	2.0%
		% of Total	1.0%	1.0%	2.0%
Total	Count	59	41	100	
	% within current pregnancy	59.0%	41.0%	100.0%	
	% within age groups	100.0%	100.0%	100.0%	
	% of Total	59.0%	41.0%	100.0%	

found that all the factors described above influence the preferences/attitude of pregnant women in the choice of birth method to an approximately equal extent.

Of interest are the responses of the pregnant respondents regarding whose advice they would trust regarding the mode of delivery. Categorically, with 96%, the majority of women state that they fully trust the physician who observes

them. With a difference in responses of 3% indicated that they consult with other people and make decisions together with their partners. A small percentage (1%) trust their mother/sister or other relatives. None of the women surveyed said they trusted female friends who already have experience, which is somewhat contrary to the recent trend of following the example of female acquaintances and friends . (Fig. 17)



Fig. 17. Degrees of confidence about method of birth (pregnant)

According to the degree of trust in the physician, a correlation between the trust in the physician and the preferences/attitude of the pregnant women about childbirth was examined and established. The results of the Chi-Square Test are presented in the following cross-tabulation. (Table 19)

		Whose advice would you trust most about how to give birth?			Total	
		I will fully trust the observing physician	I will trust my mother/sister/ other close relatives	I will consult with many people and make a decision together with my partner		
Indicate your beliefs/preferences about the mode of the upcoming birth	I want to give birth in a normal way if everything goes well	Number	46	1	2	49
	% Beliefs/Preferences about the mode of the upcoming birth		93.9%	2.0%	4.1%	100.0%

		% of "Whose advice would you trust most about how to give birth?"	47.9%	100.0%	66.7%	49.0%
		% of total	46.0%	1.0%	2.0%	49.0%
c-section because I believe I have medical indications for it		Number	18	0	0	18
		% Beliefs/Preferences about the mode of the upcoming birth	100.0%	0.0%	0.0%	100.0%
		% of "Whose advice would you trust most about how to give birth?"	18.8%	0.0%	0.0%	18.0%
		% of total	18.0%	0.0%	0.0%	18.0%
by c-section because I think it's safer for the child that way		Number	5	0	0	5
		% Beliefs/Preferences about the mode of the upcoming birth	100.0%	0.0%	0.0%	100.0%
		% of "Whose advice would you trust most about how to give birth?"	5.2%	0.0%	0.0%	5.0%
		% of total	5.0%	0.0%	0.0%	5.0%
I haven't decided yet		Number	1	0	1	2
		% Beliefs/Preferences about the mode of the upcoming birth	50.0%	0.0%	50.0%	100.0%
		% of "Whose advice would you trust most about how to give birth?"	1.0%	0.0%	33.3%	2.0%
		% of total	1.0%	0.0%	1.0%	2.0%
I will take into account the opinion of my supervising physician		Number	26	0	0	26
		% Beliefs/Preferences about the mode of the upcoming birth	100.0%	0.0%	0.0%	100.0%
		% of "Whose advice would you trust most about how to give birth?"	27.1%	0.0%	0.0%	26.0%

	% of total	26.0%	0.0%	0.0%	
Total	Number	96	1	3	100
	% Beliefs/Preferences about the mode of the upcoming birth	96.0%	1.0%	3.0%	100.0%
	% of "Whose advice would you trust most about how to give birth?"	100.0%	100.0%	100.0%	100.0%
	% of total	96.0%	1.0%	3.0%	100.0%

Table 19. Crosstabulation of the correlation between trust in the physician and pregnant women's preferences/attitudes about childbirth

Chi-Square Test shows that the characteristic *Pearson Chi-Square* = 17,974 is of significance level *Asymp. Sig. (2-sided)* = 0,021 < α =0,05.

Therefore, there is a correlation between pregnant women's preferences for delivery and the trust in the physician.

In PAS, the position of the midwife can be defined somewhat as passive, since the specialist doctor is the leader in the formation of decisions, and in some cities the PAS is conducted entirely by an OG specialist, which minimizes the role of the midwife. Figure 30 presents the results obtained from the pregnant respondents regarding their knowledge of the dangers associated with operative delivery. The survey found that the majority (68%) said they were aware, compared to 27% who said "leaning no". An insignificant share of 1% categorically states that they are not aware, and only 4% do not wish to be informed about the complications after operative delivery. (Fig. 18).

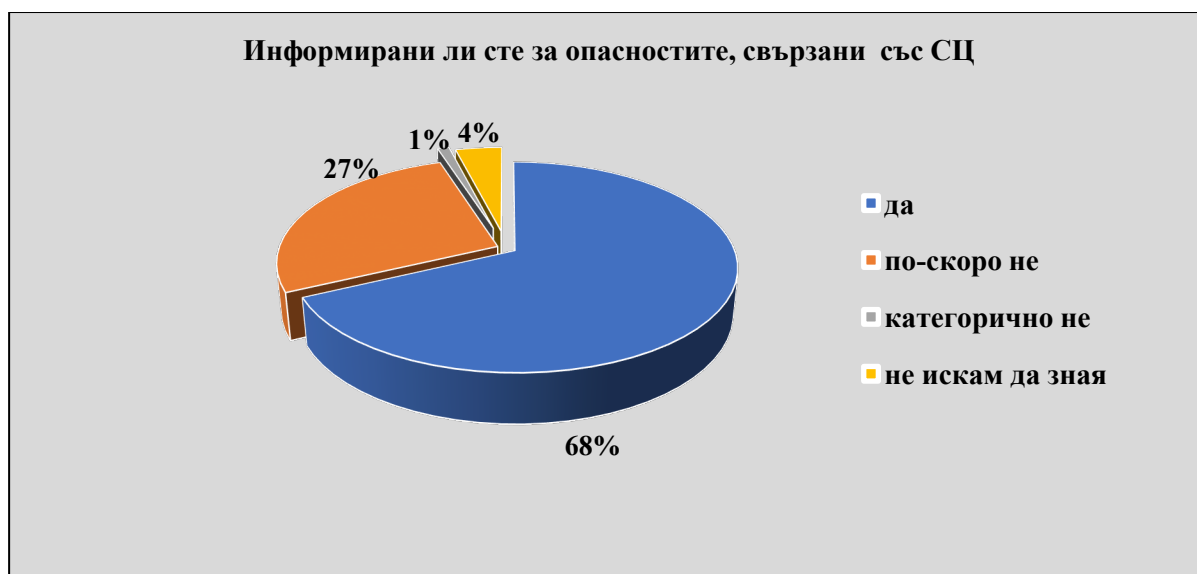


Fig. 18. Level of awareness about the risks of C-section

The opinion of pregnant women regarding the source of knowledge and information related to the dangers of C-section is interesting. The preferences for providing this information in the maternity ward are shown in Tab. 20. The majority (91%) categorically state that they should be fully informed. Only 3% do not consider it necessary, and 6% cannot answer. Techniques for preparing pregnant women regarding the mode of birth should be included in the PAS, as well as creating confidence and security for pregnant women for the upcoming birth. Providing reliable and scientifically based information that meets the individual needs of the woman should be a good alternative and a positive step in the patient's decision-making.

Is it necessary for the maternity ward team to provide information about the dangers of C-section	Number (n=)	Proportion (%)
Yes	91	91.0
No	3	3.0
Cannot answer	6	6.0
Total	100	100.0

Table 20. Need to be informed by the maternity ward team about the dangers of caesarean section

Pregnancy courses and parenting schools are a good alternative for proper preparation for an upcoming birth. According to 60% of pregnant women, attending such courses would affect the psycho-physical preparation of women. In contrast, 22% do not think that the courses would affect them, and 17% have no opinion on the matter. The results of the data lead us to think that organizing such courses and schools for parents is a positive step to promote natural

childbirth. Currently, there is no established school for pregnant women in the city of Sliven that would offer similar services to future parents.

Despite the widespread network of Parenting Schools and organized (mainly by midwives) courses for pregnant women, their influence is not assessed by the surveyed women as significant. This may be due to the fact that such courses are little known in Sliven.

4. Survey of awareness and willingness of midwives and female-students to provide information on C-section

We asked the midwives and students a question related to awareness about cesarean delivery. The data shows that the majority of respondents (89.1%) believe that the midwife should play a leading role in informing pregnant women about operative delivery. This shows that both groups of respondents are aware of the profession's responsibility and are confident that they have the competencies to inform pregnant women. Only 5% say they play a leading role, and 5.9% can't decide. (Table 21.)

Does the midwife have the leading role in the process of informing pregnant women about cesarean delivery	Number (n=)	Proportion (%)
Leaning yes	90	89.1
Leaning no	5	5.0
Cannot decide	6	5.9
Total	101	100

Table 21. Leading role of the midwife

Of particular importance for the professional self-esteem of midwives is the knowledge of **Robson classification** for assessing the need to apply C-section. This is a standardized, internationally recognized classification system for ongoing monitoring and benchmarking of caesarean section rate data proposed by the WHO. The use of this system will enable a comparative analysis of caesarean sections both within individual institutions and between different health facilities, as well as between individual countries and regions. Our survey shows that the majority of respondents (midwives and students) - 63.4% **are not familiar with the classification and its purpose**. However, 36.6% stated that they know of the Robson classification (Figure 19).



Fig. 19. Knowledge of the Robson classification (midwives and students)

Figure 20 presents the opinion of practicing midwives and students regarding the source of information about the upcoming birth. A larger proportion (63.4%) stated that the physician and the midwife together should be the main source of information for pregnant women. One in three (28.7%) indicated separately the physician monitoring the pregnancy, and 7.9% believed that the midwife should be the main source of information for pregnant women.



Fig. 20. Information sources (midwives and students)

A majority of respondents (91.0%) strongly believe that courses for pregnant women are suitable for providing information to women about the risks of an

upcoming operative delivery (if necessary). A small percentage (9.0%) stated that the presentation of information about the risks of childbirth should not take place in courses for pregnant women. However, the percentage ratio between the answers is understandable, since parenting schools and courses for pregnant women are perceived as a modern and appropriate alternative to inform and prepare for the upcoming birth.

Of interest is the data obtained on the question whether midwives and students take time to inform women (about pregnancy, childbirth and the puerperium) Almost half (48.5%) indicate that they always take time, 31.7% answer with "more often yes", and 13.9% shared 'only sometimes'. Only 1.0% answered that they have no time left to give information related to pregnancy, childbirth and the postpartum period. 'Other' was stated by 5.0% of respondents. These results show that health professionals manage to find time during their routine work and provide the necessary information to women despite their busy work schedules. The application of one-factor analysis of variance reported statistically significant differences in the responses of midwives with **different professional experience**. Logically, midwives with the most experience and experience (over 20 years) tend to inform and advise pregnant women more often compared to the group of practitioners with experience of 1-3 years, where the mean value M=1.93. (Table 22)

<i>Informing women about pregnancy, childbirth and the puerperium by the midwife</i>	N	SD	M	Sig.	F
1-3 years	15	.704	1.93	.412	1.02
5-10 years	7	.535	1.43		
over 10 years	8	.886	1.75		
over 20 years	14	.829	2.70		

Table 22. Relationship between midwife work experience and provision of information

On the other hand, female students studying Midwifery do not have the opportunity to provide information to women, except during the time they are in clinical practice. During their practice, they can make contact with patients and share their knowledge gained during studying.

We also asked midwives and female students a question on the factors influencing women's choice of operative delivery without medical indications. The aim was to find out which factor prevailed among the answers. Among midwives, the claim that the fear of pain during childbirth is a leading factor for elective childbirth is confirmed. This accounts for 85,1% of the responses. In 34.7% of replies, midwives and female students suggest that the opinion that childbirth is easier by operative route is the reason for choosing C-section. Approximately the same proportion (33.7%) say that women follow the advice

of their friends. The idea that today cesarean delivery is very modern accounts for 26.7% of the answers. 24.8% answered "on the advice of a doctor", and 5.9% gave the answer "other". Compared with the pregnant group, the midwives' and students' responses were similar, especially with the factor "fear of pain". It has a leading position in all three groups of respondents. (Table 23)

<i>Factors</i>	<i>Answer "YES"</i>	<i>Answer "NO"</i>
Factor 1 - fear of pain	86 (85,1%)	15 (14,9%)
Factor 2 - Childbirth is faster and easier	35 (34,7%)	66 (65,3%)
Factor 3 - On doctor's advice	25 (24,8%)	76 (75,2%)
Factor 4 - Because friends gave birth like this	34 (33,7%)	67 (66,3%)
Factor 5 - Nowadays, cesarean delivery is very relevant	27 (26,7%)	74 (73,4%)
Factor 6 - other	6 (5,9%)	95 (94,1%)

Table 23. Factors influencing the choice of operative delivery without medical reasons (opinion of midwives and students)

The data indicates that there is knowledge of the attitudes of pregnant women and there is an understanding of their requests for elective delivery. With experience, midwives are more willing and confident in providing information about operative birth. It should not be overlooked that the physician is still the referent whom expectant mothers trust to the greatest extent. Collaboration within the medical team and mutual respect and professional recognition is the foundation of a well-established network of information related to pregnancy and childbirth.

5. Approaches to reduce operative deliveries

In order to determine the ways to reduce the share of operative births, a comparative analysis of the approaches proposed by pregnant women, midwives and students was made. The obtained results are presented in summary in the abstract.

Awareness is the main factor for solving the problem under consideration. This conclusion is supported by the answers of all three groups - pregnant women, midwives and students. The largest relative share of responses are related to **raising awareness about birth methods, complications and risk assessment.** For the group of midwives, it reaches 78%, and for pregnant women it is 58%. The relative share of answers given by female students is smaller - 56.9%, which is explained by their lower awareness of the problem during their studies.

In second place in terms of importance is the holding of **courses for pregnant women, information campaigns related to pregnancy and birth**

methods. 10% of pregnant women indicated this possibility as such, midwives - 2%, students - also 2%.

Psycho-physical preparation for childbirth in the Pregnancy advisory service is also a significant direction. It is mentioned by pregnant women with a relative share of 4%, by midwives with 6%, and students with a relative share of 5.9%.

It is also important to note the suggestions given regarding the reduction of operative births when open-ended.

Pregnant women gave the following suggestions:

- "improving technology in hospitals";
- "reduction of the clinical pathway";
- "pregnant women to go through a doctors' committee ";
- "more good doctors that would suggest normal births";
- "avoid reading unreliable articles on the Internet."

Midwives have given the following guidelines:

- "to work to reduce the fear of a normal birth";
- "to follow the best practices of EU countries";
- "to have more autonomous midwifery care"
- "midwives to devote more time to pregnant women".

Students gave the following suggestions:

- "to advise expecting women that natural childbirth is preferable";
- "more lectures on this topic";
- "to use more effective pain relievers."

In our opinion, **strengthening the feedback relationship with pregnant women and the medical staff serving them is important to improve the relationship between them.** More effective interaction and greater awareness will contribute to the reduction of operative births without medical indications.

Regarding the responses of the female students, it should be noted that they need more in-depth clinical practice during their training and more knowledge related to the promotion of natural childbirth.

II. CONCLUSIONS, CONTRIBUTIONS AND RECOMMENDATIONS

2.1. Conclusions

The results obtained from the study are the basis for formulating the following conclusions and recommendations, consistent with the tasks set by the researcher:

Regarding the progress and monitoring of pregnancy

- The pregnancy is most regularly monitored in the PAS in women with their first pregnancy;
- The youngest pregnant women, aged 18-24, are the most likely to visit the PAS;
- Pregnant women with their third pregnancy reported the fewest visits to the PAS;
- Women with primary education were more likely to visit the office.
- Most of the pregnant women (85%) planned their pregnancy (most often first and second pregnancy);
- The most common concerns during pregnancy are related to the condition of the baby.

Factors having a positive impact on the emotional and mental health of pregnant women are:

- The term of pregnancy, (positive emotions are more common among second trimester pregnant women);
- Order of pregnancy (women for whom the current pregnancy is the first);
- Order of birth (women for whom the current birth will be the first)

58% of surveyed pregnant women feel happy.

Factors influencing pregnant women's choice of elective delivery.

- **Fear of pain is the main reason for requesting an elective delivery** (highest levels of fear are among the youngest pregnant women with primary education, pregnant for the first time);
- In our study, a relationship was found between the order of pregnancy and preferences for elective delivery. This relationship is strongest in first pregnancy and first birth.
- There is a correlation between age and order of upcoming birth.
- There is a correlation between pregnant women's preferences for delivery and the trust in the physician. One in four women in the present study will listen to their doctor's advice and comply with his or her recommendations for mode of delivery.
- Women giving birth for the first time, aged 18-24, with primary education are most afraid;

Study of awareness among pregnant women about elective delivery

- Women with lower awareness are those with primary education, in the age group 18-24 years, whose upcoming birth is their first.
- Women are aware of the proportion of operative births in Bulgaria;
- 91% of pregnant women believe that they should be informed about the dangers associated with C-section by the maternity ward teams;
- According to 60% of pregnant women, attending courses would have a positive effect on their psycho-emotional state. Women with primary education were more likely to visit pregnancy courses.
- Opinions regarding the presence of the father during childbirth among pregnant women are divided. A fifth of them could not determine the benefit, and 18% thought it would make childbirth more difficult.

Survey of awareness and willingness of midwives and female-students to provide information on SC

- The majority of respondents (midwives and students) - 63.4% are not familiar with the classification and its purpose.
- Midwives and students believe that courses for pregnant women are suitable for providing information to women about the risks of an upcoming operative delivery.
- Only half (48.5%) of working midwives indicated that they always take the time to provide information about pregnancy, birth and the postpartum period. These are mostly practitioners with over 20 years of work experience;
- There is knowledge of the attitudes of pregnant women and there is an understanding of their requests for elective delivery.

Approaches to reduce operative deliveries

- The three groups of respondents shared the need to provide more information about methods, complications and risk assessment for C-section.
- Courses for pregnant women are an appropriate place to access information related to operative births, which is underappreciated by the pregnant women surveyed;
- Maternity ward teams are a reliable source of information related to the choice of method of delivery.

2.2. Contributions

Contributions of a theoretical nature:

1. The factors related to the increasing rate of operative births in Bulgaria have been identified;
2. The level of awareness of each of the three groups of respondents – pregnant women, students and midwives included in the study was analyzed;
3. The midwife's role in reducing the number of elective operative births was evaluated;
4. The relationship between awareness of the method of birth and reduction in operative birth rates has been established;
5. The leading reasons that correlate with the choice of elective delivery of pregnant women in our country have been identified;

Contributions of a practical nature:

1. The deficiency of information among pregnant women related to the risks of cesarean delivery has been proven;
2. An education module for pregnant women has been developed that informs expectant mothers about delivery methods, potential risks and complications of cesarean section (*Appendix 2*);
3. An information leaflet has been prepared, informing women admitted to a maternity ward about the benefits of normal birth. The information leaflet can also be provided in an electronic version on social networks. (*Appendix 3*)

2.3. Recommendations

1. Recommendations to the Bulgarian Association of Health Care Specialists and the Alliance of Bulgarian Midwives

- Continuing education, which is part of the priorities of professional organizations in Bulgaria, can be directed to the mission of reducing the number of operative births in the long term. According to the World Bank, if perinatal obstetric care were to cover 80% of the world's population, the disadvantages associated with childbirth would decrease by 40%. The World Bank offers an appropriate intervention program that emphasizes information, education, communications, local obstetric and hospital structures. Knowing and adapting these programs for our conditions can

be the main task of the Bulgarian Association of Health Care Specialists and the Alliance of Bulgarian Midwives in the field of midwifery care.

- To develop Standards for safe, high-quality midwifery care. The introduction of service quality standards and methodological consistency in the field of parental training programs in our country will motivate more midwives to provide consulting services and thus increase awareness among pregnant women.

2. Recommendation to Higher Education Institutions training midwives and nurses

- To update the thematic plan of the study programs in "Midwifery" and "Special care for women with normal and pathological childbirth", with an emphasis on discouraging elective childbirth. The training of students should focus on skills to promote normal birth and deepening of knowledge related to non-drug methods of labor pain relief.
- To study and popularize the TENS method as a highly successful non-drug pain reliever used by midwives in developed countries.

3. Recommendations to the management of the OG-departments of the regional hospitals and the Specialized Obstetrics and Gynecology Hospitals

Each OG-department/maternity ward to organize courses for pregnant women, which include comprehensive information related to the risks accompanying operative delivery. To inform patients about the benefits of normal delivery. This can also be achieved by offering leaflets and brochures, talks, discussions, webinars and seminars. The information may also be provided in an appropriate electronic medium.

"Pros" and "cons" of birth by operation (Caesarean section) without medical indications



	 <p style="text-align: center;"><i>Benefits of C-section</i></p>	 <p style="text-align: center;"><i>Dangers/risk of C-section</i></p>
For the mother	<ul style="list-style-type: none"> ✚ Reduces the risk of injuries in the vagina (vaginal lacerations); ✚ Reduces perineal and abdominal pain during and after childbirth; ✚ The exact time of birth can be planned when the necessary hospital resources are available; ✚ Less risk of incontinence and sexual dysfunction after delivery. 	<ul style="list-style-type: none"> ✚ Greater maternal mortality; ✚ More infections; ✚ More risk of amniotic embolism/thromboembolism; ✚ Possible reaction to anesthesia; ✚ Longer hospital stay; ✚ Difficulties in the subsequent initiation of breastfeeding; ✚ Slower recovery after childbirth.
For the baby	<ul style="list-style-type: none"> ✚ Lower risk of trauma compared to a normal birth. 	<ul style="list-style-type: none"> ✚ Babies born with C-section are more prone to type 1 diabetes; ✚ They have a higher risk of developing asthma and allergies; ✚ C-section is associated with immune deficiency; ✚ More problems with breastfeeding .
For society	<ul style="list-style-type: none"> ✚ Deterioration of important health and demographic indicators; ✚ Reduced fertility of women of childbearing age; ✚ Prolonged incapacity of women of working age; ✚ Increasing the cost of care for mothers giving birth with C-section and for their children; ✚ C-section places a financial burden on families, governments and insurance companies; 	

Table 38 Appendix 3

Програма за бременни

Tests during pregnancy

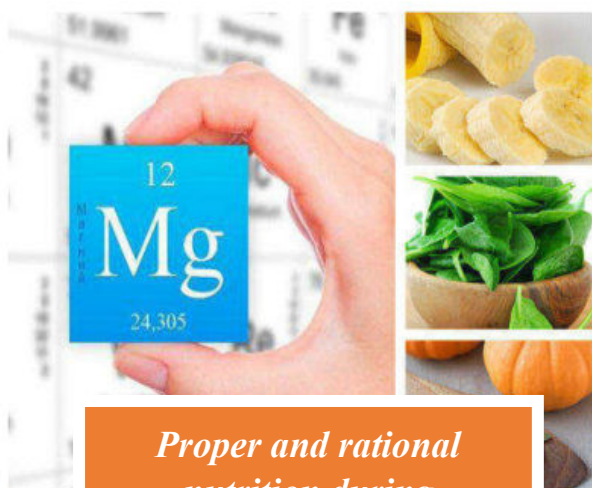


*Ask your midwife;
First meeting with the*

Benefits of natural birth



Preparing the home for the newborn



*Proper and rational
nutrition during
pregnancy*



*Methods of pain relief
during childbirth*



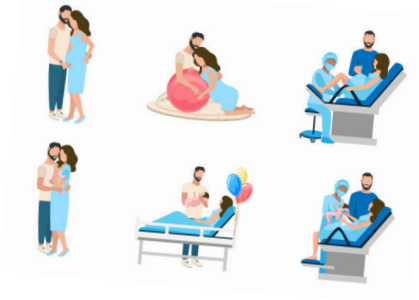
Recommendations and guidelines for pregnant women

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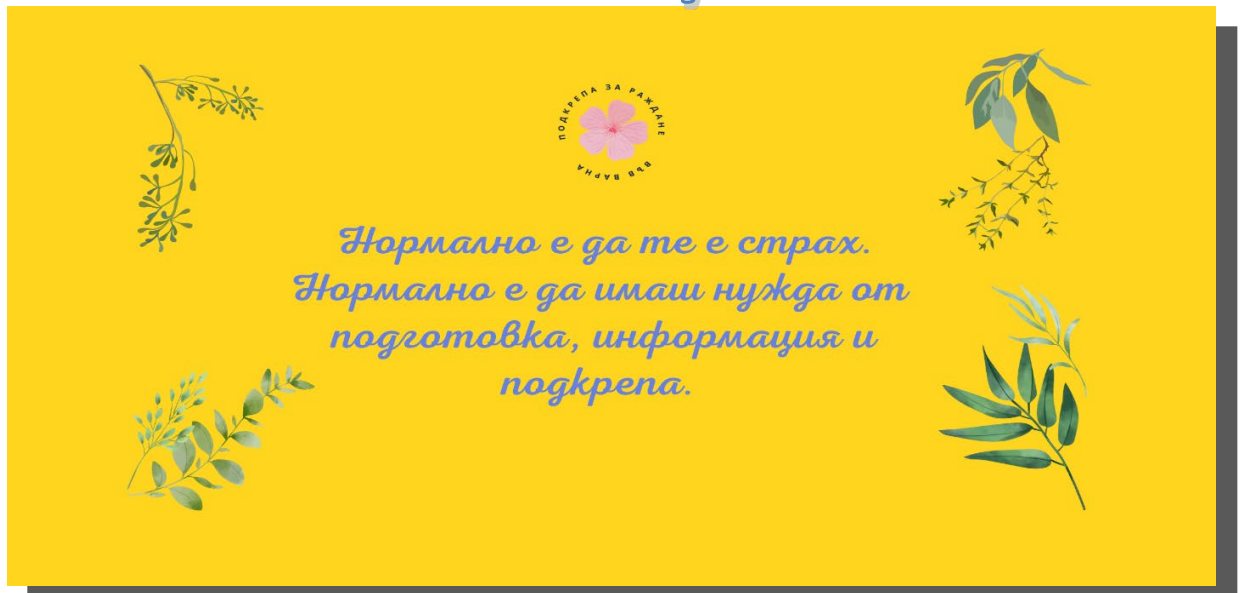
Recommendations and guidelines for pregnant women

We suggest:

- 1) Organizing seminars, webinars, talks in order to prepare for the upcoming birth;
- 2) Informing pregnant women about matters of interest to them;
- 3) Promoting a healthy lifestyle during pregnancy;
- 4) Psychoprophylaxis and preparation for normal childbirth;
- 5) Discussion "for" or "against" operative delivery without a medical reason
- 6) Popularization of the TENS—method of pain relief during childbirth.



Midwifery care



When: *Every last Saturday of the month*

Where: *in the town of Sliven; 30 "General Stoletov" str*

Sliven branch of the Varna medical University

Contact person: *Assistant Polina Dragneva*

Phone for questions and bookings:

PUBLICATIONS RELATED TO THE DISSERTATION

1. Dragneva P., Communication in the work of health professionals. Third international conference "Health care - contribution to the quality of life" 07-08 June 2021, city of Varna, Collection of reports, pp. 265-271
2. Dragneva P., Cesarean section as a modern alternative in women's choice for upcoming birth. Approaches to the increasing rate of elective childbirth. XXXII International online scientific conference "70 years of "Mines Maritsa-east" - energy independence and national security" June 02-03, 2022, city of Stara Zagora, Collection of reports, p. 19
3. Dragneva P., Study of the opinion of pregnant women in Bulgaria regarding elective operative delivery. XXXII International online scientific conference "70 years of "Mines Maritsa-east" - energy independence and national security" June 02-03, 2022, city of Stara Zagora, Collection of reports, p. 20
4. Dragneva P., Survey of the opinion of midwives and midwifery students regarding the provision of information to pregnant women giving birth by caesarean section. XXXII International online scientific conference "70 years of "Mines Maritsa-east" - energy independence and national security" June 02-03, 2022, city of Stara Zagora, Collection of reports, p. 20
5. Dragneva P., Experiences of women who gave birth by caesarean section. Assessment of pain and physical discomfort. XXXII International online scientific conference "70 years of "Mines Maritsa-east" - energy independence and national security" June 02-03, 2022, city of Stara Zagora, Collection of reports, p. 21