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Obstetric care for women after childbirth – approaches and opportunities for optimization the role of the midwife

ABSTRACT
of a dissertation for the award of the educational degree "Doctor"

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Health Care Management

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The dissertation contains 190 pages and is structured in five chapters. Includes 81 figures, 15 tables and 10 appendixes.

The bibliographic list includes 178 literature sources, of which 110 are in Cyrillic, 50 in Latin and 18 are online sources. The dissertation is discussed and directed for defense in front of the extended department council of the Department of Health Care at the Medical University "Prof. Dr. P. Stoyanov", Varna, on December 6, 2021.

The public defense of the dissertation will be held on February 21, 2022. from …… till…… in the hall .... …… ..... in the Medical College of the Medical University "Prof. Dr. P. Stoyanov "- Varna in front of an open meeting of the Scientific Jury.

The materials on the defense are available in the scientific department of MU-Varna and are published on the website of MU-Varna.

Contents

ABBREVIATIONS USED

ABM	Alliance of Bulgarian Midwives
AG	Obstetrics and gynecology
BAHP	Bulgarian Association of Healthcare Professionals
DCC	Diagnostic and Consulting Center
EU	European Union
WC	Women's consultation
HIA	Health Insurance Act
HCS	Health Counseling Stations
MH	Ministry of Health
MC	Medical Center
NHIF	National Health Insurance Fund
NCPHA	National Center for Public Health and Analysis
GP	General Practitioner
PP	Pathology of pregnancy
MW	Maternity ward
WHO	World Health Organization
UNICEF	United Nations Children's Fund
ACOG	American College of Obstetricians and Gynecologists
NMS	Board of Nursing and Obstetrics

I. INTRODUCTION

The postpartum period (puerperium), regardless of parity, is always associated with many changes. The need of recovery of the mother is on one hand, and on the other is the development of her new role as a mother. Preparing to raise a child at home after discharge from the maternity ward is a process that must begin long before birth. Caring for a newborn at home requires parents to acquire new knowledge and skills that are often underestimated when monitoring pregnancy. The training of women during hospitalization in the MW is not effective enough due to the emotions associated to childbirth, the short time (usually 72 hours after a normal birth) and the inability of women to make a realistic assessment of their information deficit, which is most evident after discharge. According to a number of studies in our country, the role of the midwife in the hospital is more often related to medical documentation and the implementation of the doctor's appointments, rather than preventive care and consulting. In the course of the reforms in our country after 2000, the possibilities of the midwife to be close to the pregnant woman and the mother were systematically limited, and the practice of home care was stopped. The organization of postnatal care in our country at the moment does not guarantee the participation of a midwife in their implementation in the puerperium. In most cases in Bulgaria, the midwife's contact with the patients ends with their discharge from the maternity hospital. Leaving the ward, most women need ongoing obstetric care at home, but it remains to a curtain extent unclearly directed. This need provoked us in choosing the thesis of the dissertation and prompted us to study the attitudes among mothers and midwives to create an opportunity to introduce home obstetric visits after childbirth. The competencies of midwives acquired during the training are an underutilized resource for the benefit of the community and are systematically underestimated in the care of women in the puerperium. In a number of developed Western European countries, midwifery care for the mother and child after a normal birth is provided through home visits by a midwife, which guarantees them the support, confidence and peace of mind they need during this period. The World Health Organization and the International Confederation of Midwives recommend at least 3 visits to the mother's home: up to 48 hours after discharge from the hospital, between 7 - 14

days after birth and around 42 days, which ensures the application of individual approach in the care of the mother and the newborn.

1.1. Structure of the literature review

The first chapter of the dissertation includes a literature review, presenting in a structured form various aspects of obstetric care for women after childbirth (Fig. 1).

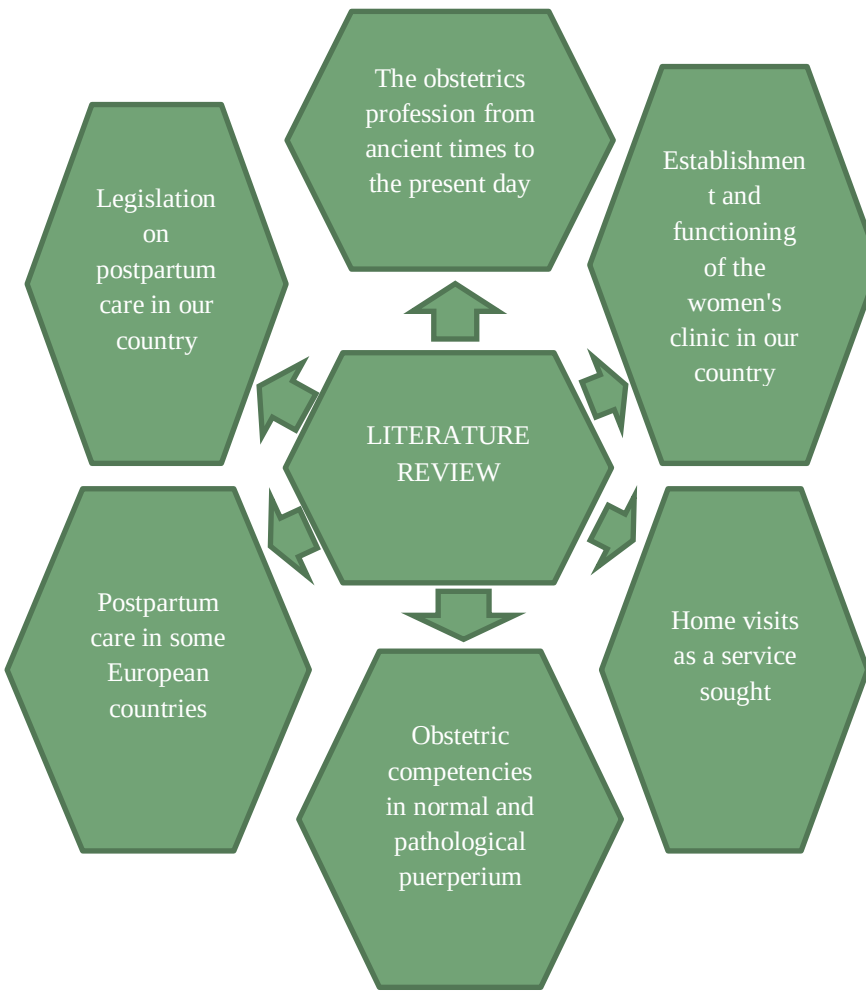


Fig. 1 Structure of the literature review

II. METHODOLOGY OF SCIENTIFIC RESEARCH

2.1. Purpose and targets of the study

Purpose

To study the medical and social aspects of obstetric care for women after child birth in outpatient care and to look for opportunities to optimize the role of the midwife.

To achieve our goals we set the **following targets**:

1. To study the medical aspects of care for women after childbirth.
2. To study the social aspects of care for women after childbirth.
3. To study international experience in providing care for women after childbirth.
4. To analyze the current legislation in our country concerning the provision of obstetric care after birth.
5. To analyze and study the opportunities created by the modern training of midwives to provide care for women after childbirth.
6. To study the opinion of midwives working in hospital care on the possibilities for providing continuing obstetric care.
7. To establish the opinion of patients about the need for continued obstetric care.
8. To create and test an experimental program for consulting women after childbirth, based on an obstetric model for continuing obstetric care for women after childbirth.
9. To study and analyze the effects of the implementation of the experimental program.
10. To propose an approach for continuing obstetric care.
11. Propose an approach to continuing obstetric care.

2.2. Working hypotheses:

- The lack of obstetric monitoring of women after childbirth, in outpatient care, leads to deficits in care after discharge from the maternity ward.
- Regulating the consultative, prophylactic, promotional and preventive activities of the midwife will improve the quality of life of women after childbirth.
- The positive results of the experiment will prove the need to reorganize obstetric care in the puerperium.

2.3. Organization, time and place of research

Object

- *Pregnant women* who are about to give birth in the medical establishments of the city of Varna, Shumen, Dobrich and Targovishte
- *Women, who have given birth* from the medical establishments of Varna, Shumen, Dobrich and Targovishte
- *Midwives* working in the hospital of Varna, Shumen, Dobrich and Targovishte

The subject of the study *is obstetric care in outpatient care for women after childbirth*.

Scope of the study

The current survey covers a total of 672 respondents, distributed as follows:

- ***The first group of patients, pregnant and having given birth to birth to their first child,*** the patients at the time of the study; hospitalized in maternity ward or ward /sector pathology of pregnancy - 382, which represent 66% of the hospitalized, (Table 1);

Table 1. Distribution of the respondents from the first group by cities

Town	***Medical centre***	***Number of respondents***
Pregnant and having given birth to their first child		
Varna	Specialized hospital for obstetrics, gynecology and *neonatology "Prof. Dr. D. Stamatov"* Ltd. and Multidisciplinary hospital for outpatient treatment " St. Anna - Varna " JSC	169
Shumen	Multidisciplinary hospital for outpatient treatment Shumen JSC	77
Dobrich	Multidisciplinary hospital for outpatient treatment *Dobrich* JSC	56
Targovishte	Multidisciplinary hospital for outpatient treatment *Targovishte* JSC	80
Total		382

❖ ***The second group consists of patients who have given birth to a second or next child*** hospitalized in a maternity ward - 196, representing 45% of the patients hospitalized at the time of the study (Table 2);

Table 2. Distribution of the respondents from the second group by cities

Town	***Medical centre***	***Number of respondents***
Pregnant and having given birth to their second and next child		
Varna	Specialized hospital for obstetrics, gynecology and *neonatology "Prof. Dr. D. Stamatov"* Ltd. and Multidisciplinary hospital for outpatient treatment " St. Anna - Varna " JSC	*87*
Shumen	Multidisciplinary hospital for outpatient treatment Shumen JSC	*39*
Dobrich	Multidisciplinary hospital for outpatient treatment *Dobrich* JSC	*30*
Targovishte	Multidisciplinary hospital for outpatient treatment *Targovishte* JSC	*40*
Total		196

❖ ***The third group*** - ***midwives*** working in the maternity ward and pathological pregnancy sector - 94, which forms 94% of all midwives working in the specified sectors at the designated medical institutions (Table 3).

Table 3. Distribution of the respondents from the second group by cities

Town	***Medical centre***	***Number of respondents***
Midwives		
Varna	Specialized hospital for obstetrics, gynecology and *neonatology "Prof. Dr. D. Stamatov"* Ltd. and Multidisciplinary hospital for outpatient treatment " St. Anna - Varna " JSC	*39*
Shumen	Multidisciplinary hospital for outpatient treatment Shumen JSC	*20*
Dobrich	Multidisciplinary hospital for outpatient treatment *Dobrich* JSC	*15*
Targovishte	Multidisciplinary hospital for outpatient treatment *Targovishte* JSC	*20*
	Total	*94*

Logical units of research

- **The first logical unit** - any pregnant or having born her first child woman admitted to the Maternity Ward or the Pathology of Pregnancy Ward;
- **The second logical unit** - each mother (after the second or next birth);
- **Third logical unit** - each midwife working in the Maternity Ward and Ward / Sector Pathology of Pregnancy.

Characteristics of logical units

Characteristics of the first and the second logical units

- related to the needs of patients for obstetric care after birth;

- related to the expectations and attitudes of women regarding obstetric care in solving problems in the postpartum period.
- related to the needs for counseling activities at home after discharge - methods and means by which problems have been overcome.

Characteristics of the third logical unit

- related to the readiness of the midwife to provide health care within her professional competencies in consulting women in the postpartum period;
- concerning the attitudes and motivation of the midwife to apply autonomous activities and care in the puerperium;
- related to the search for opportunities for the establishment of autonomous obstetric practices in the puerperium.

Technical units

- Maternity ward
  - In the town of Varna- Specialized hospital for obstetrics, gynecology and neonatology "Prof. Dr. D. Stamatov" Ltd. and Multidisciplinary hospital for outpatient treatment " St. Anna - Varna " JSC
  - In the town of Shumen- Multidisciplinary hospital for outpatient treatment Shumen JSC
  - In the town of Dobrich- Multidisciplinary hospital for outpatient treatment Dobrich JSC
  - In the town of Targovishte- Multidisciplinary hospital for outpatient treatment Targovishte JSC

- Ward/sector for pathological pregnancy
  - In the town of Varna- Specialized hospital for obstetrics, gynecology and neonatology "Prof. Dr. D. Stamatov" Ltd. and Multidisciplinary hospital for outpatient treatment "St. Anna - Varna" JSC
  - In the town of Shumen- Multidisciplinary hospital for outpatient treatment Shumen JSC

- In the town of Dobrich- Multidisciplinary hospital for outpatient treatment Dobrich JSC
- In the town of Targovishte- Multidisciplinary hospital for outpatient treatment Targovishte JSC

Admission criteria in the study

The first group - voluntarily filled in a declaration of informed consent, expressed their consent to participate, who at the time of the survey are adults;

The second group - voluntarily filled in a declaration of informed consent, expressed their consent to participate, who at the time of the survey are adults;

The third group - voluntarily filled in a declaration of informed consent.

2.4. Tools

In order to achieve the research goal and to realize the previously set tasks, self developed tools were used. Three questionnaires have been developed for pregnant and first-time mothers, respectively; for mothers with more children; for midwives, creating opportunities for comparison of results and subsequent analysis.

❖ **Questionnaire № 1 to study the opinion of the pregnant women and women who have given birth to their first child.**

The questionnaire surveys the opinions, expectations and attitudes of pregnant women and women having born their first child about obstetric care after giving birth at home. The questionnaire contains 32 questions, of which 23 are closed and 9 of them are semi-open. In accordance with the set tasks, the questionnaire puts in focus:

- the provision and access to quality health care in the puerperium;
- the social aspects of motherhood and the need for personal support;
- women's need for ongoing obstetric care;
- the attitudes of women to receive patronage by a midwife;
- the readiness of women to cope with postpartum care.

❖ **Questionnaire № 2 for patients who have given birth to a second / next child.**

The questionnaire examines the opinion of pregnant women related to the postpartum period of their previous birth, the needs and the projection of potential problems in connection with the forthcoming birth, in order to specify the means and ways to cope at home. The questionnaire contains 38 questions, of which 28 are closed and 10 are semi-open. The study in this group focused on:

- expectations for obstetric care;
- potential problems related to the need for specialized care;
- social aspects of motherhood and the need for personal support;
- women's need for ongoing obstetric care;
- women's attitudes towards the provision of home care by a midwife.

❖ **Questionnaire № 3 for midwifes working in the obstetrics and gynecology sector with pregnant and postpartum women.**

The questionnaire aims to examine the position related to the attitudes and role of the midwife in the implementation of outpatient care for women who have given birth. The questionnaire contains 31 questions, of which 23 are closed and 8 are semi-open. The questionnaire surveys the opinion of healthcare professionals on:

- the ability of midwives to provide ongoing obstetric care in the puerperium;
- medical aspects of care for women after childbirth;
- women's need for ongoing obstetric care;
- women's attitudes towards home care.
- the social aspects of care for women after childbirth;
- introduction of medical documentation for obstetric care in the puerperium.

❖ **Informed consent**

An informed consent for participation in the study has been prepared, containing detailed data on the nature of the study. The anonymity of the

participants is guaranteed. The research team and contacts are presented in case of additional questions or need for information.

❖ **Information about the respondents**

Each participant in the study was provided with information about the subjects, describing the purpose of the study, benefits for the participant in the study, confidentiality of information. Participation in the study is voluntary and the person can withdraw at any time

2.5. Research methods

The aim of the present study was to use a set of sociological and statistical methods:

- ❖ *Historical method* - study of literature sources in the field.
- ❖ *Documentary method* - study of normative documents, documents from international literature sources related to the provision of health care to women who have given birth at home.
- ❖ *Sociological methods*:
- *survey method* - direct individual anonymous survey with midwives working in the field of hospital care, pregnant and postpartum women;
- *in-depth interview* - a quality method for data collection, to reach the depth of the research subject.
- ❖ *Statistical method* for processing and analysis of the received information. The data in the survey were processed with the statistical package **IBM Statistics-SPSS** for Windows, ver. 19. The following were used in the processing of the results:

- *correlation analysis* - to establish the degree of correlation between two variables. Measurement of Pearson's coefficient to establish and determine the degree of linear correlation between quantitative variables and Studant's coefficient for qualitative.

- *chi-square* (parametric and non-parametric tests) - for evaluation of hypotheses - relationship between qualitative variables. The critical level of dependence in the research is $\alpha = 0.05$;
- *comparative analysis* - to compare the changes in the indicators of the variables.
- *graphical analysis* - shows graphically processed data from the survey. MS Excel 2019 and IBM Statistics 19.0 were used for the graphical analysis
- *Alpha of Cronbach.*

❖ *Experimental method* - a model for prospective study of care for women who have given birth after discharge from the maternity ward.

2.6. . Description of the experiment

In parallel with the sociological survey, it was planned to conduct a controlled experiment *"Midwives in support of motherhood"* with 100 patients in the maternity ward from the observation nests in Varna (experimental group - 50 women and control group - 50 women) with the inclusion criteria and excluding its participants. The experimental work provided that after obtaining written consent to participate in the experimental program to gather information about the patient's needs for obstetric care after birth through a self-developed and completed "Obstetrics Planning Card" by the leading researcher.

The card was filled in at the first home visit and is a model check card containing questions and answers aimed at collecting and analyzing information on:

❖ anamnestic data on the course of pregnancy, childbirth and puerperium (in the maternity ward), establishing the specific needs of the patient;
❖ the current state of the woman giving birth in terms of adaptation at home, recovery process and anxiety in the postpartum period;
❖ condition of the newborn and needs of special skills of the mother;
❖ social status of the mother - the presence of another child in the family and family support;
❖ data on aggravated marital status;
❖ financial stability and living conditions.

In the card, based on the initial data and analysis of the collected information, medical activities were planned through an obstetric care plan in the postpartum period, including a minimum number of home visits of the experimental group and the possibility of continuous contact with the leading researcher.

In order to assess the needs of patients and the effectiveness of the performed obstetric care, it was planned to complete the "Anxiety Test" (adapted from the Zung test by Duke University) - entry level. At the end of the experimental period (42 days after birth), each woman underwent a re-examination of the degree of anxiety - baseline, with the possibility of comparability of results both in the experimental and between the two groups included in the experiment.

The detailing of women's problems after childbirth and the individualization of obstetric care was achieved by conducting an in-depth interview with pre-set questions, according to the specifics of each case, by keeping detailed notes. During the postpartum follow-up, the following were provided:

- ❖ initial visit to the patient's home by a midwife (leading researcher) within 48 hours after discharge from the maternity ward;
- ❖ intermediate visit to the patient's home depending on the specifics of the case and the desire of the participants in the experiment;
- ❖ final visit to the patient's home at the end of the participation in the experiment - 42 days after birth;
- ❖ possibility for continuous consultation by phone (if necessary).
- ❖ **Criteria for inclusion of persons in the experiment:**

- women having given birth;
- declared written Informed consent for inclusion in the experiment;
- age over 18 years;
- living in Varna.

- ❖ **Criteria for exclusion of persons from the experiment**

- persons who have not signed an informed consent;
- persons under 18 years of age;
- persons living outside the region of Varna.

2.7. Stages of the study

The study among midwives was conducted in a natural working environment - maternity ward and ward/sector pathology of pregnancy in the designated observation nests, in the period September 2020 - February 2021.

The study among patients was conducted during hospitalization in the relevant wards, the day before discharge.

The experimental work proceeded with variable intensity, within the planned period, in connection with the requirement for voluntary inclusion of patients in the experiment. The stages of the study are shown in *Table 4.*

Research bodies

The main part of the study was conducted independently by the author. Associates are involved - head and senior nurses and midwives from the designated medical institutions. All collaborators were acquainted in advance with the purpose and methodology of the study and trained to work with the tools.

Table 4. Stages of planning and conducting the study

Stages	Activity	Place	Tools	Period
1	Analysis of specialized literature in connection with the relevance of the studied problem	Varna	Specialized literature, publications	November 2019- January 2020
2	Preparation of the methodology of the dissertation research	Varna	Informed Consent Questionnaires	January 2020
3	Notification of the heads of the monitoring nests	Varna	Letters to the heads of the observation nests	March 2020
4	Experiment	Varna	Patient information; Supervision for intervention under the program "Midwife in support of motherhood"	42 days
5	Conducting research	Varna Shumen Dobrich Targovishte	Patient information; Questionnaires	September 2020- February 2021

	Processing and analysis of results		SPSS v.20.0 Microsoft Excel	March 2021
	Formulation of conclusions			March 2021
	Announcement of results, formulation of recommendations and contributions			May-October 2021

2.8. Terms used

- *Approach* - a set of ways and means to approach a particular problem;
  Model - a new object (real, informational or imaginary), different from the original, which has essential properties for the realization of the set goals and within these goals completely replaces the original object;
- *Standard* - a document created by consensus or approved by a recognized standardization body, which sets out for general and repeated application rules, guidelines or characteristics for activities or their results in order to achieve optimal order in a given set of circumstances;
- *Consulting* - a two-way communication process in which the consultant helps the person consulted to identify certain needs and make optimal decisions on a particular problem;
- *Anxiety* - an emotional state that arises in a situation of uncertain danger and manifests itself in anticipation of adverse developments. Anxiety is a generalized, diffuse, or pointless fear that is localized in the future;
- *Fear* is a reaction to a threat, the temporal localization of which is in the personal present. It is one of the most common emotional reactions in healthy people and has a protective function;
- *Stress* is a state of strong physical, nervous tension caused by negative factors or negative physical or emotional impact and sensation. This is especially true of high and even very high levels of stress, which can have a negative effect on physique, emotions and mental concentration, while lower levels can be factors of adaptation and coping;
- *Patronage care* - providing health care at home;
- *First time mother* - a woman who gave birth for the first time;
- *Second and next time mother* - a woman who gave birth to more than one child.

III. Results and discussion

3.1 Socio-demographic characteristics of the studied groups

- **pregnant women and women having given birth for the first time**

The opinion of women with no experience regarding childbirth and the postpartum period in the indicated medical establishments was studied (Table 5).

Table 5. Characteristics of pregnant and first-time mothers

Characteristics	*Number of persons (n)*	*Relative share (%)*
Age		
To 25	n=119	31,2%
26-36	n=226	59,2%
Over 37	n=37	9,7%
Education		
higher	n=181	47,4%
secondary	n=163	42,7%
basic	n=27	7,1%
primary	n=11	2,9%
Settlement		
city	n=291	76,2%
village	n=80	20,9%
villa area	n=11	2,9%
Residence by districts		
Varna	n=169	44,2%
Shumen	n=77	20,2%
Dobrich	n=56	14,7%
Targovishte	n=80	20,9%

Taking into account the influence of the age of the women in the sample in the context of the accumulated experience and the need for education and training, it was necessary to determine the age characteristics of the respondents. Despite the very wide limits of biological reproductive age, as expected, the largest share is women aged 25 to 36 years and this group forms more than half of the sample (59.2%). It is followed by the group of respondents.

The educational status of the respondents has a direct impact on the general and medical culture and the effectiveness of the communication process. Postpartum consulting is a process of intensive communication with

patients to identify the individual needs of each case. In terms of education, women with higher education form the largest share (47.4%). Respondents with secondary education are 42.7% and with basic education are 7.1%. The share of respondents with primary education is the smallest (2.9%). The educational status of the women in the sample is an indication of effective communication with patients and extraction of valuable information for the study.

The place of residence of the respondents in the sample is important in connection with the establishment of opportunities for access to qualified long-term care and provision of the settlement with specialized offices for outpatient care. Most of the respondents from this group live in a city (76.2%), followed by those living in a village (20.9%) and 2.9% live in villa areas.

❖ **Women having given birth to a second and next child**

The parity of the women in the sample is important both in terms of past experience and related problems and their solution, and as a factor in shaping the expectations of patients in the current pregnancy and childbirth (Table 6).

Table 6. Characteristics of the women who gave birth to the second and next child

Characteristics	***Number of persons (n)***	***Relative share (%)***
Age		
To 25	**n=34**	**17,3%**
26-36	**n=125**	**63,8%**
Over 37	**n=37**	**18,9%**
Education		
higher	**n=84**	**42,9%**
secondary	**n=89**	**45,4%**
basic	**n=18**	**9,2%**
primary	**n=5**	**2,6%**
Settlement		
city	**n=159**	**81,1%**
village	**n=34**	**17,3%**
villa area	**n=3**	**1,5%**

Residence by districts		
Varna	**n=87**	**44,4%**
Shumen	**n=39**	**19,9%**
Dobrich	**n=30**	**15,3%**
Targovishte	**n=40**	**20,4%**

The results show that the largest share of the surveyed women giving birth is from Varna 44.4% (n = 87), followed by those who gave birth in Targovishte - 20.4% (n = 40), Shumen 19, 9% (n = 39) and the city of Dobrich - 15.3% (n = 30). Regarding the age distribution, it was found that the largest share of respondents is in the age group from 26 to 36 years (63.8%), followed by mothers over 37 years of age (18.9%). The youngest group of women with more than one child is under 25 form 17.3% of the sample. Regarding education, the share of female patients with secondary education is almost half of the respondents (45.4%), followed by the respondents with higher education (42.8%). The share of women with basic education is relatively small - 9.2%, and only 2.6% with primary education. The distribution by settlement overlaps with the demographic peculiarities of the reproductive behavior of women in our country, establishing a high share of women with more than one child living in cities - 81.1% (n = 159) and a lower share of women giving birth in rural areas - 17.3% (n = 34) and villa zones - 1.5% (n = 3).

- **Midwives**

In the process of planning the design of the research, a thorough study was made of the obstetrics and gynecology office operating in the city of Varna, as executors of postnatal care in outpatient care. From the public register of Regional Health Inspectorate it became clear that on the territory of the city there are 33 individual and group outpatient clinics for specialized outpatient obstetric care, which lack appointed midwives as well as 14 diagnostic consultative centers and medical centers. After additional consultation with the management of these structures, it turned out that they employ 95 doctors and only 21 midwives, with a significant turnover of staff. On the other hand, the midwives in the medical institutions (maternity ward) are the health specialists who must supplement the knowledge and skills of the mothers received during pregnancy and be a corrective to the preparation of

women for coping at home after discharge. These requirements for obstetric care in the hospital and the low supply of midwives in outpatient care led us to select health care professionals from the Maternity Ward and / or Pathological Pregnancy as specialists who last contact patients before discharge and have the most accurate assessment possible about the knowledge and skills of women who have given birth (Table 7).

Table 7 Characteristics of the examined midwives

Characteristics	***Number of persons (n)***	***Relative share (%)***
Age		
To 30	*n=14*	*14,9%*
31-50	*n=48*	*51,1%*
Over 51	*n=32*	*34,0%*
Experience		
To 3 years	*n=14*	*14,9%*
3-20 years	*n=26*	*27,7%*
Over 21 years	*n=54*	*57,4%*
Residence by districts		
Varna	*n=38*	*40,4%*
Shumen	*n=20*	*21,3%*
Dobrich	*n=16*	*17,0%*
Targovishte	*n=20*	*21,3%*

More than half of the midwives in the sample are between 31 and 50 years old (51.1%), and slightly more than 1/3 are midwives over 51 years of age (34.0%), which indicates accumulated personal and professional experience and is a prerequisite for valuable information in connection with the objectives of the study. The share of midwives under the age of 30 is 14.9%. Significant parts of working midwives have more than 21 years of work experience (57.4%). About 1/3 is the share of the surveyed midwives with work experience between 4 and 20 years and it is 27.7%, and those working with up to 3 years of experience are 14.9%. The largest is the relative share of the respondents from the city of Varna (40.4%), which is understandable, as proportionally most health care professionals work in the largest city from the nests of the survey. The share of the surveyed midwives from Targovishte and Shumen is (21.3%), and from Dobrich the respondents form 17% of the sample.

3.2. Factors influencing postnatal observation

From a medical point of view, it is logical to assume that pregnant women and first-borns have similar experiences with the puerperium, so we have put them in one group. For a more in-depth analysis of the study, we asked the respondents how their birth ended. The manner of delivery is important for planning the necessary care in the recovery period after birth. Almost half of the respondents indicated natural childbirth as the outcome of their pregnancy 47.6% (n = 182). The share of women with operative delivery is significant - 35.3% (n = 135). The share of respondents who did not answer this question is formed by pregnant women who are about to give birth (17.0%) (n = 65) (Fig. 1).

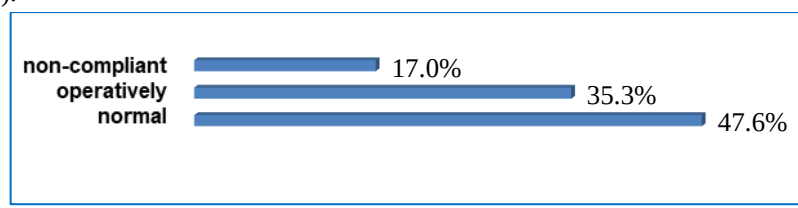


Figure 1. Manner of delivery - pregnant women and firstborns

The mothers of the second and next child were studied in one group due to the presence of past experience in connection with their previous birth and the impact of the problems they had on the expectations for obstetric care in the current pregnancy and childbirth. The study of parity of women having given birth more than once shows that a significant part of the respondents gave birth to a second child (83.2%), and the share of those who gave birth to a third child was 15.8%. Extensive experience in the course of postpartum care is a prerequisite for obtaining valuable information about the needs of patients, the most common problems they have encountered, their expectations and satisfaction. This information can be considered as a starting point when planning changes in the organization of postnatal care (Fig. 2).

Figure 2. Sequence of births of women having given birth more than once

The method of delivery is crucial both for the recovery of the mother and for the identification of obvious and potential problems in the postpartum period. The data obtained show that more than half of the respondents gave birth in a normal way (62%), and in just over 1/3 a cesarean section was performed (37.8%). The large proportion of women after a normal birth indicates the need for routine care for them during the puerperium. The answer of the respondents also indicates a significant share of women who needed more intensive care after childbirth in connection with operative delivery *(Fig. 3).*

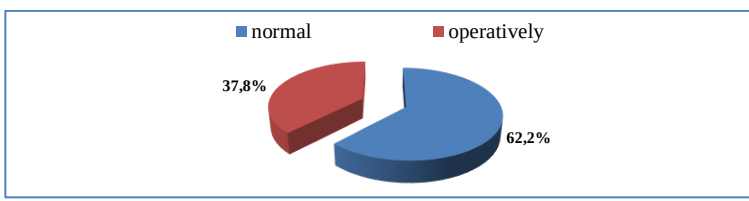


Figure 3. Manner of delivery for women having given birth more than once

Another factor that is crucial for the intensity of care during puerperium is the length of pregnancy in which the birth occurred. The share of the respondents who gave birth around the probable term of birth is significant - between 37 and 42 week (80.6%). The results show that premature births are less than 1/6, and those with unclear terms are 3.6% of all responding patients. The answer of the respondents confirms the conclusion that most of the women need routine obstetric care in the puerperium *(Fig. 4).*

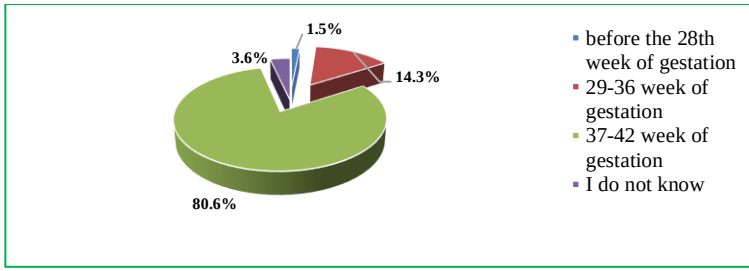


Figure 4. Term of pregnancy at birth *(multiple births)*

The implementation of effective postnatal care requires the establishment and maintenance of a network of outpatient care facilities to consult the mother after her discharge from the maternity ward. During the monitoring of the pregnancy, the women's consultation has the task of preparing the pregnant woman for the forthcoming birth and the postpartum period. The answers of the two groups of respondents - pregnant and first-born and multi-born in terms of security with opportunities for prenatal and postnatal observation overlap. Almost 3/4 of the respondents answered positively (pregnant and first-born 71.5%, multi-born 77.6%). The share of respondents who claim that they have difficult access and answer negatively is insignificant (13% with more than one pregnancy and 16% were pregnant and giving birth for the first time) The deepening of the analysis on the issue shows that in about 1/10 of the women's consultations at the place of residence the team is not in the typical composition and there is no participation of a midwife (7.7% of women with more than one pregnancy and 11.3% of pregnant and giving birth for the first time) *(Fig. 5).*

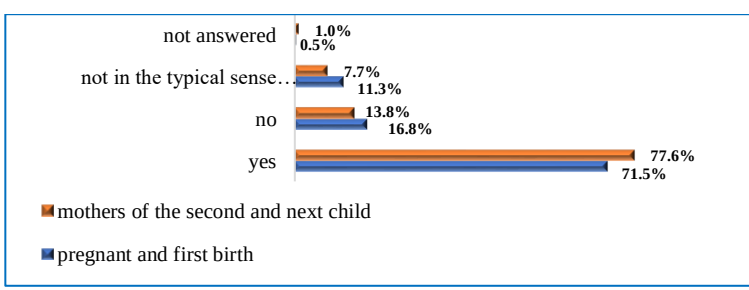


Figure 5. Existence of a women's consultation at the place of residence

To identify the need for reorganization of obstetric care after childbirth, we sought information about the participation of midwives in monitoring pregnancy. In the majority of respondents, pregnancy consulting was provided by a doctor and midwife (72% of pregnant and first-born and 59% of having more than one child). A midwife did not participate in the monitoring of pregnancy in about 1/3 of women (pregnant and first-born 23% and of having more than one child 38%). The share of the respondents, in which the observation of the pregnancy is carried out only by a doctor, is insignificant, according to their personal wish (pregnant and first-born 6% and having more than one child - 3%). The answer of the respondents testifies that most of the patients have impressions of obstetric care during pregnancy and postpartum, which gives us reason to consider their opinion significant in terms of the need for changes in obstetric care in our country *(Fig. 6).*

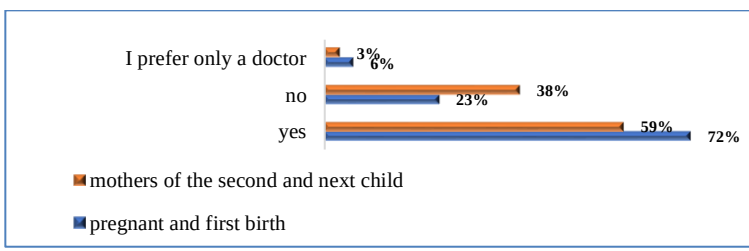


Figure 6. Participation of a midwife in the monitoring of pregnancy

It is known that the choice of a specialist for monitoring pregnancy in our country is free and every pregnant woman can decide who and where to do it. We asked for information about women's preferences for a specialist to advise them on pregnancy and childbirth. Almost 2/3 of pregnant women and first-borns have preferred consultation with a doctor and midwife (62.8%), which can be considered as having significant expectations for the work of the midwife in the team. Only about 1/3 of the mothers preferred a standard woman`s consultation (28.1%), which can be seen as a discrepancy with the expectations they had regarding the role of the midwife in the team. The results in the preferences for monitoring the pregnancy only by a doctor are almost a mirror image (pregnant women and first-borns - 30.6% and mothers of second and subsequent children - 59.7%). Probably due to the very limited opportunities at this stage and the lack of such structures, the share of

respondents who indicated a preference for monitoring their pregnancy by a midwife (7.1%) is extremely low. The analysis of the data shows that the leading figure in the monitoring of pregnancy at the moment in our country is the doctor and the participation of the midwife is not guaranteed *(Fig. 7).*

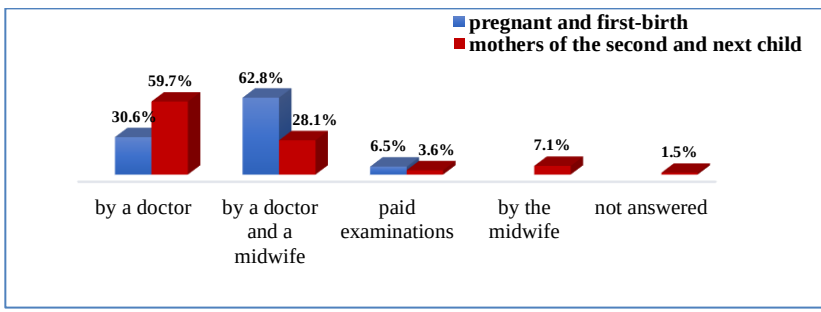


Figure 7. Pregnancy monitoring preferences

3.3. Readiness of pregnant women and parturients for the period after birth

One of the main tasks of the midwife in the women's clinic is to train and inform women on all issues related to pregnancy and childbirth. The midwife has the knowledge, skills and competence to perform such consulting activities. We asked the respondents if they had received enough information on pregnancy and the postpartum period. Slightly more than half of the respondents answered positively (pregnant and first-birth - 53.1% and gave birth to a second and subsequent child - 56.6%), which indicates reduced functions of the midwife in terms of training and informing patients. About 1/5 share the lack of information received, citing the answer "in part" (pregnant and first-born -22.5% and gave birth to a second and subsequent child - 21.9%). Nearly 15% of respondents from both groups are strongly dissatisfied with their awareness during pregnancy and childbirth, and a small part can not judge (pregnant and first-born 9.4% and gave birth to a second and subsequent child 7.1%). The answer of the respondents testified to greatly reduced functions of the team in terms of training and patient information. If we allow ourselves to interpret as a whole the share of women who claim that they did not receive information or received it in part, it will turn out that almost half of

the women surveyed were in an information vacuum, both during pregnancy and admission. giving birth and returning home after it. The opinion of the respondents is proof that the knowledge and skills of midwives for counseling and training of patients are an underused resource in defining the functions of team members in women's counseling *(Fig. 8).*

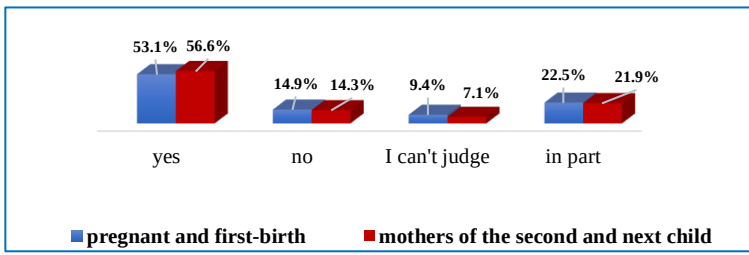


Figure 8. Adequacy of puerperium information obtained during pregnancy (patients)

For the purposes of the study, it was important to compare the opinion of patients and midwives on whether the information and preparation of women for the postpartum recovery period obtained during pregnancy monitoring was sufficient. The answers of the midwives differ significantly from those of the patients. More than half of the patients believe that they have received sufficient information about the postpartum period during pregnancy (pregnant and first-born 53.1% and given birth to a second and subsequent child 56.6%), while a negligible proportion of midwives agree - 2, 13%. The midwives' response may mean that midwives' competencies are an inefficiently used resource in relation to patient preparation and training. Proof of this is the rather categorical negative response of health care professionals on the issue (54.26%), while patients who believe that the information received is insufficient are about 14% for both groups (pregnant and first-born 14.9%). and given birth to a second and subsequent child 14.3%). Differences in the opinions of midwives and patients may mean, on one hand, that patients do not know what training they need and consider the care and training they have received very good, and midwives are aware that it is insufficient. Hesitant midwives (43.62%) are also significantly more than patients (pregnant and first-born 9.4% and second and subsequent child 7.1%), which is further evidence of patient disorientation and a greatly underestimated role of the

midwife. when training women in the women`s consultation for the period after childbirth *(Fig. 9).*

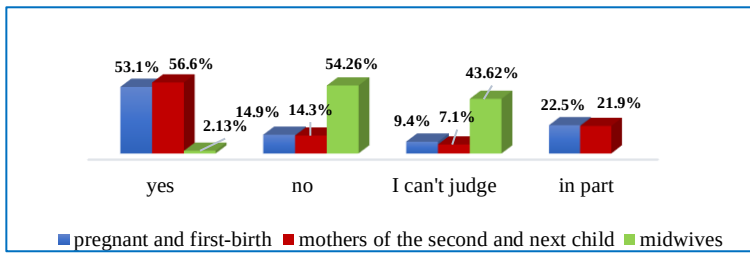


Figure 9. Adequacy of information received during pregnancy for the postpartum period *(patients and midwives)*

To get more information about the preparation of pregnant women for the postpartum period, we sought the opinion of midwives working in the maternity ward and ward / sector pathology of pregnancy. They are in direct contact with pregnant women and are able to get a good idea of the readiness of women to cope alone in the puerperium. The data obtained show that more than half of the surveyed midwives believe that women are not prepared for the postpartum period (54.26%). Less than half answered positively (43.62%) and 2.13% answered "partially". From the opinion of the midwives it follows that a significant part of pregnant women are not prepared to cope alone in the postpartum period *(Fig. 10).*

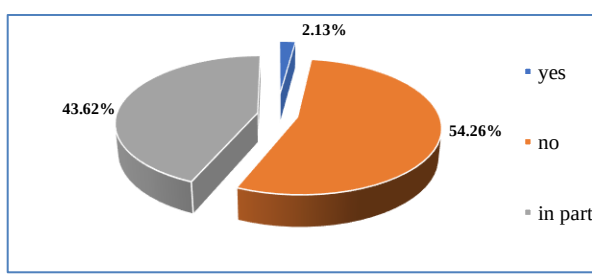


Figure 10. Opinion of the midwives on the readiness of pregnant women to cope alone in the puerperium

We tried to find out whether there is a relationship between confidence in the knowledge and skills about home care for pregnant women and those having born their first child and their education. The obtained data showed statistically significant differences in the responses ($\chi 2 = 41.095$, n = 382, r = -0.148). With the increase of the educational qualification, the feeling of security in the acquired knowledge and skills regarding home care after birth decreases - basic education (66.7%), secondary education (52.8%) and higher education (28.2%). The increase in education is also associated with an increase in fluctuations - primary education (18.2%), basic education (22.2%), secondary education (31.3%) and higher education (49.7%). Among the respondents with primary education, immaturity and total lack of readiness for motherhood are evident both from the lower share of positive answers (36.4%) and from the expressed uncertainty (36.4). The negative answers do not register significant dynamics in relation to the mother's educational qualifications. The analysis is proof that the increase of education is a prerequisite for increased responsibility and criticism of knowledge, skills and behavior *(Fig. 11).*

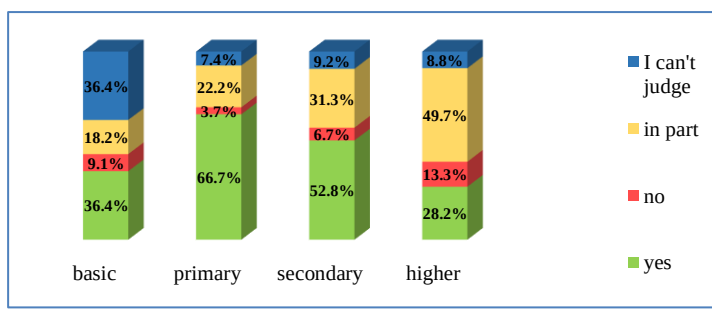


Figure 11. Confidence in knowledge and skills about home care according to education *(pregnant and first child)*

Puerperium is a period in which the care of the newborn and the care of one's own recovery after birth are superimposed. We sought the opinion of pregnant and women with first-born children about their concerns about recovery after childbirth. Almost half of the patients (41.4%) expressed a

negative answer (no worries). More than 1/3 of the respondents give a positive answer (37.4%), and about 1/5 of the women (21.2%) express hesitation. The opinion of the respondents indicates that more than half of women who have given birth have concerns about their recovery after giving birth when leaving the maternity ward, which is evidence of the need for active obstetric care during this period *(Fig. 12).*

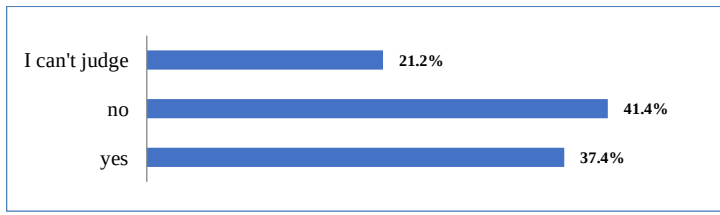


Figure 12. Opinion on concerns about post - natal recovery *(pregnant and first - born children)*

In view of the presence of past experience in the previous birth, we asked the same question to the patients who gave birth to a second and next child. Slightly more than half of the respondents (52.0%) indicated a lack of worries. There is a significant share of respondents who cannot judge (30.1%) or openly express concern (17.9%). The answers of the respondents are a proof that without support even the past experience does not allow the patients to feel completely calm and confident in the postpartum period *(Fig. 13).*

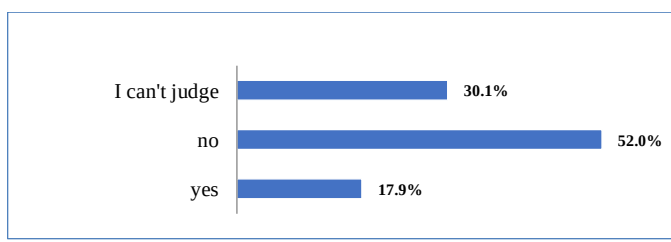


Figure 13. Opinion on concerns about post-natal recovery *(giving birth to a second and subsequent child)*

The patients in the sample express great confidence in the midwife as a specialist in the care of women in the puerperium. A significant share of respondents answered positively to the question whether they would trust midwives to care after their discharge from the maternity ward (pregnant and first-born 73.8% and given birth to a second and subsequent child 71.4%). The share of hesitants who answered "I cannot judge" is small (pregnant and first-born 11.3% and given birth to a second and subsequent child 12.2%), as well as patients who chose the answer "partially" (pregnant and first-born 11.3% and given birth to a second and subsequent child 11.7%). A negligible share of the respondents expressed a categorical refusal to trust a midwife (pregnant and first-born 3.7% and second and next child 4.6%). The opinion of the respondents can be accepted as a high assessment of the competences of the midwives in relation to the care in the puerperium and as a willingness to accept care from a midwife, if conditions are created for their care *(Fig. 14).*

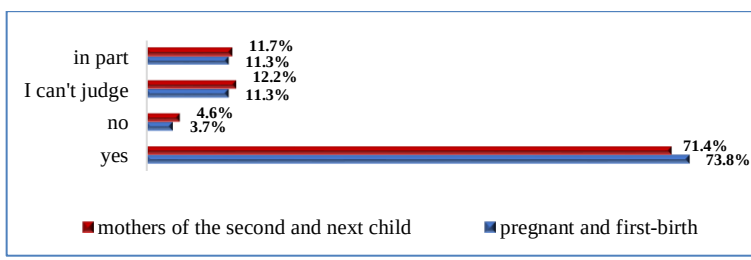


Figure 14. Patients' trust in the midwife for care after discharge from the maternity hospital

To deepen the analysis of the research, we tried to determine whether there is a relationship between the trust of pregnant women and those having born their first child in midwifery care for puerperium and patient education. Statistical dependence was found ($\chi 2$ = 19,182; n = 382; r = 0, 1680, 107): 36.4% of the respondents gave a positive answer with basic education-70.4%, with secondary education- 74,8% and higher - 75.7%. Accordingly, negative answers and those who cannot judge decrease with the level of education. In summary, with the increase of the educational qualification of women

(pregnant and giving birth to their first child) the trust in obstetric care increases (Fig. 15).

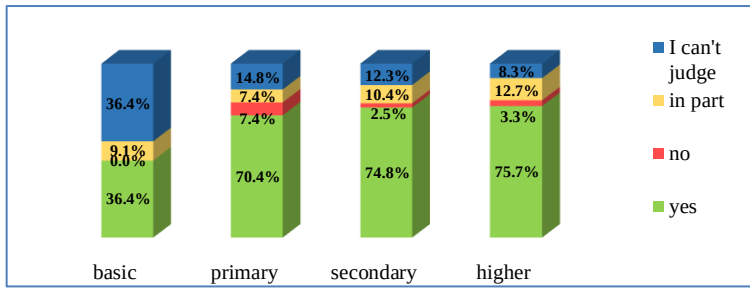


Figure 15. Trust in a midwife for care after discharge from the maternity hospital according to education *(pregnant and first child)*

Confirmation of the trust in obstetric care is the answer of the respondents to the question whether they will feel more at home after a visit by a midwife and providing the necessary obstetric care. Positive responses are indicative (pregnant and first-born 78.3% and second and subsequent child 68.9%). The share of those who gave a negative answer is insignificant (5.2% pregnant and first-born and 5.6% given birth to a second and subsequent child). The share of respondents who cannot judge is relatively low for pregnant and first-born children (16.5%) and slightly higher for second and subsequent children (25.5%). The answer of the respondents is another confirmation that obstetric care after birth will lead to increased peace of mind, confidence and satisfaction of patients, which will undoubtedly affect the quality of life *(Fig. 16).*

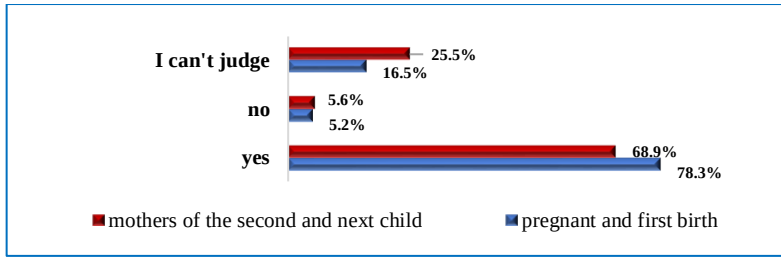


Figure 16. Presence of peace of mind after a visit by a midwife at home after discharge from the hospital

A significant number of the surveyed patients have confidence in obstetric care after discharge from the hospital and believe that this will bring them the necessary peace of mind in the puerperium. For the purposes of the study, it was important to determine the period in which mothers need postpartum support. We received the most answers from pregnant women and first-borns for a period of about 20 days (34.3%) and from those who gave birth to a second and subsequent child, who indicated a period of about 30 days (36.2%). About 1/3 of the two groups of respondents indicate a period of about 7 days. Many mothers, based on the experience they have, believe that 30 days is the optimal period in which they need support after birth. Patients without previous experience, pregnant and first-born, indicated about 20 days as needing support at home. The analysis of the obtained data shows that the opinion of most patients, especially those giving birth to more children, is quite close to the accepted by the academic theory term for observation during puerperium 42 days *(Fig. 17).*

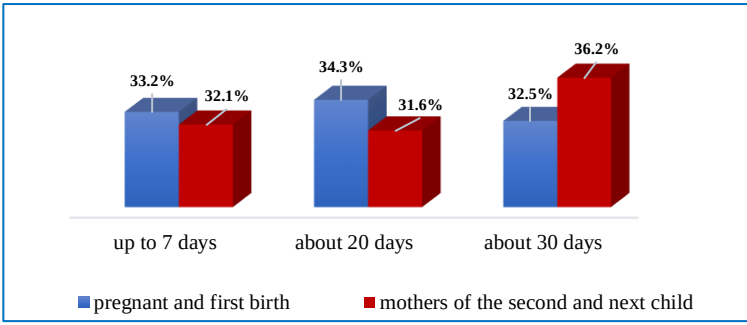


Figure 17. Patients' opinion on the length of the postpartum follow-up period *(pregnant and first born and given birth to a second and subsequent child)*

3.4. The place of home care in modern healthcare

Medical science and practice are evolving in line with the development of new technologies and increased patient requirements. This provokes us to ask pregnant and postpartum women what their preferences are for communicating with post-natal health professionals. We provided many opportunities for answers such as home visits (home patronage), where we received the most answers - pregnant and first-born (60.5%) and given birth to a second and subsequent child (76.5%). About 1/3 of the respondents preferred a visit to a doctor's office (30.4% were pregnant and gave birth to their first child and 42.3% gave birth to their second and next child). A smaller part of the respondents preferred telephone consultations. The respondents having more than one child were much more courageous. (7.6% of pregnant and given birth to a first-born child and 27% of given birth to a second and next child). Insignificant share of respondents prefer school for parents (pregnant and first-born 1.6% and second and subsequent child 4.6%) *(Fig. 18).*

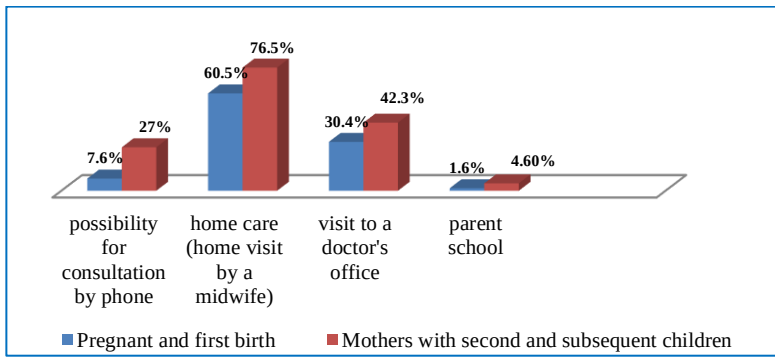


Figure 18. Preference for postpartum medical follow-up

The percentage exceeds 100% because the respondents gave more than one answer

Given the possibilities of home care to create conditions for active obstetric care in the puerperium and improving the access to this care by bringing it as close as possible to patients, the study was interested in the patients' views on regulating home care by a midwife. The answers of the respondents are categorical - the majority of pregnant women and first-borns support the idea with 79.1%, and those with more than one child- 75.5%. Insignificant share of the surveyed pregnant women and first-borns are not convinced of the need for such care (3.9%). The answers "*I count on the support of relatives*" (18.4%) and "*will not be very useful*" (6.1%) were given more by women with many children than by pregnant women and those who gave birth to their first child (14 ,1% and 2.9%). Although the proportion of patients who have indicated alternative sources of support after birth is small (less than 1/5), their opinion deserves attention. Seeking help from relatives once again confirms the needs of women for active health care in the puerperium. *Figure 34 show*s that more than 3/4 of the respondents need obstetric support after giving birth at home and define it as necessary and useful care *(Fig. 19).*

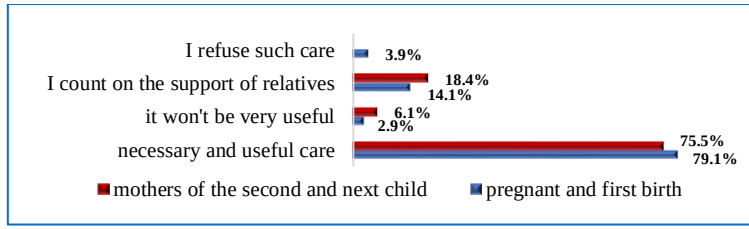


Figure 19. The opinion of the patients for the regulation of home care performed by a midwife after the birth

For the purpose of the research we asked the opinion of the midwives working in the Maternity Wards and the wards / departments Pathology of Pregnancy whether they support the idea of introducing community obstetric care. Their answers are categorically positive - midwives are almost unanimous in favor of the introduction of community obstetric care (97.9%). It is important to note that there is no negative opinion on the issue. The share of hesitants is negligible (2.1%). The interviewed midwives strongly support the establishment of patronage care in the postpartum period. Their opinion can be considered both in support of the need to create conditions for the provision of such care, and as a willingness to work in obstetric care structures in the puerperium *(Table 8).*

Table 8. Supporting the idea of introducing patronage obstetric care

Possible answers (midwives)	**Relative share**	**Number** **n=94**
yes	***97,9%***	***n = 92***
I cannot decide	***2,1%***	***n = 2***
yes	***0***	***n = 0***

Due to the increased interest in the public for the restoration of patronage obstetric care in independent obstetric practices, we decided to seek the opinion of respondents on this issue. The three surveyed groups (midwives, pregnant and first-born and given birth to a second and next child) give almost

the same positive answers - midwives (76.6%), pregnant and first-born (81.9%) and multi-born women (79.6%). Negative answers are negligible - from 1.6% to 4.3% for the three groups. Respondents who are hesitant are midwives (19.1%, pregnant and first-born 16.5% and multi-born) (16.5%) The unity of opinion of midwives and patients is an evidence of the need to regulate obstetric care with home care in the puerperium *(Fig. 20).*

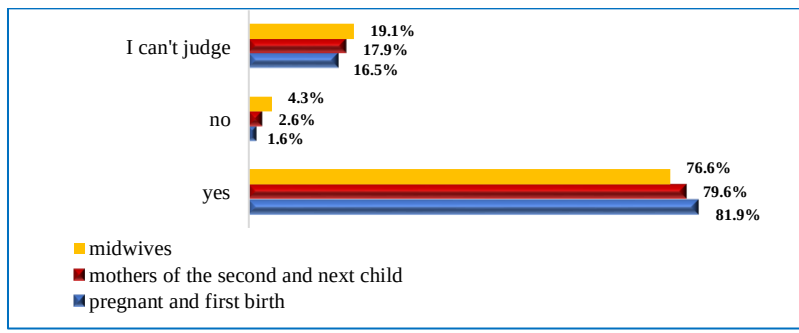


Figure 20. Place of patronage obstetric care in modern medical supervision *(midwives and patients)*

For the purpose of the research, we looked for whether there is a relationship between the age of pregnant women and those who gave birth to their first child and their opinion about the place of patronage caregivers in modern healthcare. Statistically significant differences were found ($\chi 2$ = 15,773; n = 382; r = -0,142). The largest shares of all age groups of respondents indicate a positive answer, but their share increases with age (up to 25 years - 71.4%, from 26 to 35 years - 87.2%, over 36 years. - 83.8%). The negative answer is indicated by a negligible share of respondents from the youngest age group (up to 25 years - 3.4%), decreases in the middle age group (0.9%) and is completely absent in patients over 36 years. those who gave the answer "I cannot judge" in the youngest age group is about 1/4 (25.2%), decreases in patients of the middle age group to 11.9%, then slightly increases to 16.2%. The analysis of the obtained results establishes the positive attitude

of the respondents to the patronage of obstetric care, which increases with age and the accumulation of life experience *(Fig. 21).*

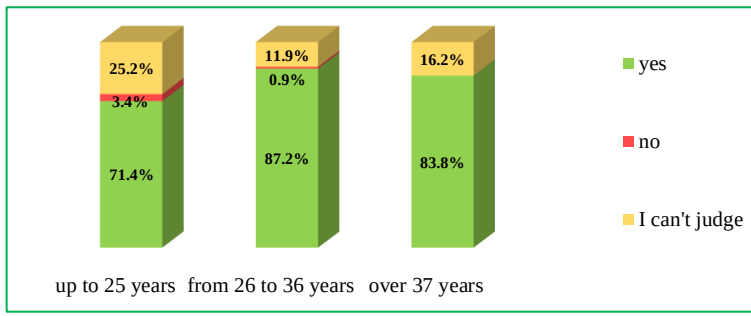


Figure 21. Place of patronage obstetric care in modern medical observation according to the age of patients

We tried to establish a relationship between the opinion of pregnant women and mothers in terms of community obstetric care and their place in modern medical surveillance according to education. The obtained data showed a statistically significant difference in the responses (n = 382, $\chi 2$ = 9,470, r = -0,031). With the increase of the educational qualification the share of the positive answers increases (primary education - 45.5%, basic - 63.0%, secondary - 82.2% and higher - 86.7%). In the opposite direction is the dynamics of the respondents "I cannot judge" (primary education - 54.5%, basic - 29.6%, secondary - 16.6% and higher - 12.2%). Respondents who gave negative answers decrease with the level of education. There are no negative answers in the primary education group. The analysis of the data shows that with the increase in the education level, the trust in obstetric care increases *(Fig. 22).*

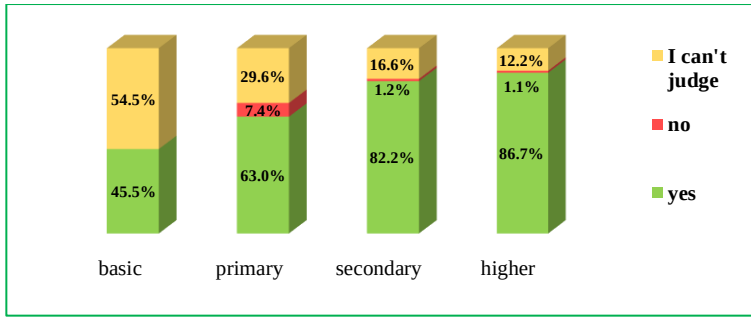


Figure 22. The place of the patronage obstetric care in the modern medical observation according to the education of the pregnant women and those having born the first child

In order to establish the attitudes of midwives towards the current regulations, we asked for their opinion on the need to optimize midwifery care. Almost all respondents (94.7%) answered affirmatively. One midwife answered negatively (1.1%) and 4.3%. expressed hesitation The answers of the respondents categorically show that it is necessary to optimize the obstetric care in the puerperium *(Table 9).*

Table. 11. Opinion of midwives on optimizing obstetric care in the puerperium

Possible answers (midwives)	*Relative share*	*Number (n)*
yes	**94,7%**	n=**89**
no	**1,1%**	n=**1**
I cannot decide	**4,3%**	n=**4**

To determine the optimal number of home visits when arranging home care, we asked patients how often they would like to be visited by a midwife at home after discharge from the maternity ward. More than half of the

respondents indicated 2-3 times as the required number of visits (pregnant and first-born 52.4% and given birth to the second and next child 58.2%) About 1/3 of the pregnant and first-born indicated the required number of visits 4 - 5 home visits (30.4%). The third proposed answer "once" is preferred by about 1/5 of those who gave birth to a second and subsequent child (22.4%). The most common answer of both groups of respondents to this question is 2-3 home visits after birth as sufficient to cover their needs *(Fig. 23).*

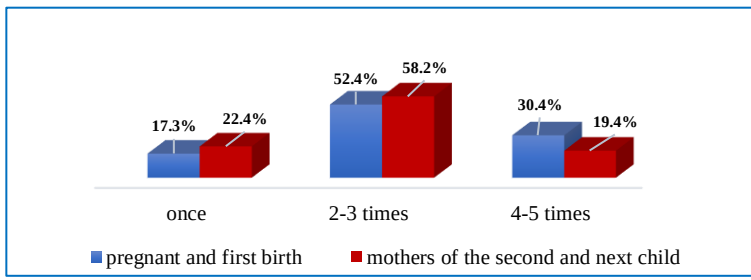


Figure 23. Frequency of visits by a midwife in the first month after birth with regulated home care
(pregnant and given birth to the first child and given birth to the second and next child)

For a more in-depth analysis of the topic, we asked the midwives the same question in order to establish their opinion and compare it with the opinion of the patients. Most answers were collected around the optimal period of 14 days (46.85), followed by 42 days with 41.5%, and the answer within 7 days was indicated by 11.7% of the surveyed midwives. The opinion of the midwives coincides with the opinion of the mothers of the second and next child regarding the longer optimal term for necessary obstetric support *(Fig. 24).*

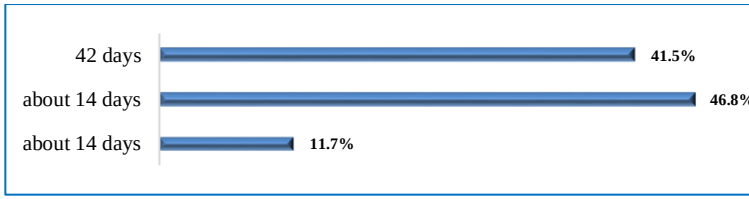


Figure 24. Optimal postpartum period in which women need support at home *(midwives)*

The study of the benefits of the reorganization of postnatal care required from us to examine the opinion of the three groups of respondents on the question of what will be the effect of regulating patronage obstetric care after childbirth. The most common answer in all three groups is "I will be calmer" - pregnant and first-born (86.6%), those who gave birth to a second and next child (87.8%), midwives (68.1%). Almost 1/3 of the midwives doubted that the patients would trust only the midwife (28.7%), which indicates a reduced self-esteem of some health professionals. A very low share of pregnant women and those who gave birth to their first child (4.5%) and those who gave birth to their second and next child (5.1%) doubt that the regulation of patronage obstetric care will benefit. A small part did not answer or gave another answer (about 1%). The analysis of the results shows that the main effect for the patients from the regulation of the patronage care will be related to ensuring their peace of mind, which in turn will increase their satisfaction and quality of life *(Fig. 25).*

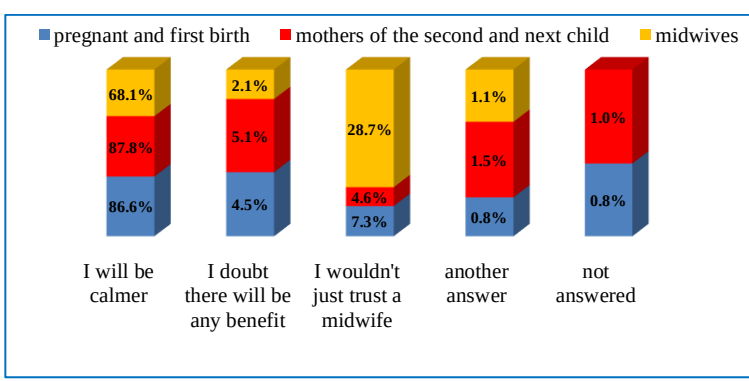


Figure 25. Effect of regulation of patronage obstetric care after birth
(patients and midwives)

We deepened the study by inviting patients to express their preferences for different forms of postpartum consulting. Most answers from the respondents were given for home care (home visit by a midwife), as it was preferred by 76.5% of mothers of second and subsequent children and 62.3% of pregnant and first-born women. 42.3% of those who gave birth to their second and next child and 25.1% of those who were pregnant and gave birth to their first child indicated a visit to a doctor's office. Another proposed option was a telephone / Viber group consultation, preferred by a small proportion of second and subsequent mothers (27.0%) and pregnant and first-born women (8.9%). The share of those who indicated "school for parents" and "video lessons" is extremely low - less than 5%. In the questionnaires of this question we gave the opportunity to the mothers of the second and next child to give more than one correct answer in order to have the opportunity to be more creative in their choice. It is noteworthy that the two groups of respondents have similar answers, as home post birth consulting stands out as the most preferred form by mothers with past experience *(Fig. 26).*

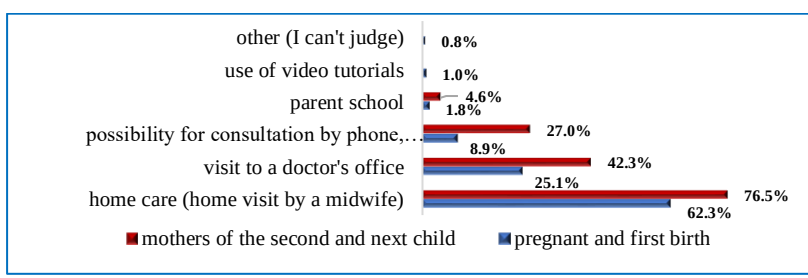


Figure 26. Preferred forms of postpartum counseling (patients)
The percentage exceeds 100, as the respondents gave more than 1 answer

We expanded the study by asking the same question to the interviewed midwives and asked their opinion on which of the proposed forms of counseling would be appropriate for the woman who gave birth and comfortable for the midwives. Definitely the answer "home care" is indicated

as the most suitable for mothers (90.4%) and the most convenient for midwives (87.2%). Midwives also identify "school for parents" (39.4%) and "outpatient examinations" (35.1%) as convenient forms for them. Healthcare professionals are aware of the advantages and disadvantages of each of the forms of consulting and determine different levels of comfort for themselves and for patients, which testifies to the professionalism and dedication to the profession *(Fig. 27).*

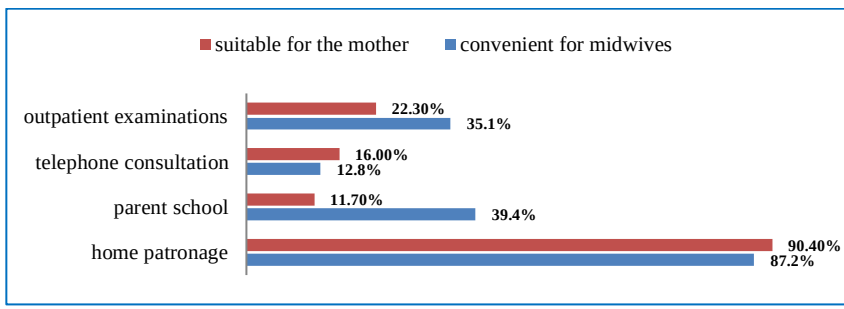


Figure 27. Forms of consulting after childbirth *(midwives)*
The percentage exceeds 100, as the respondents gave more than 1 answer

The introduction of innovations in medical practice requires the testing of different models in order to assess the benefits and risks and to take corrective action. We asked the mothers of the second and next child if they want to join an experimental program for providing obstetric care. Almost half of the respondents gave positive answers 46.9% (n = 92). About 1/5 of the patients gave a categorical negative answer (20.9%) (n = 41) and 32.1% (n = 63) could not judge. Despite the awareness of the need for change and approval of active obstetric care and home care in the puerperium, a significant proportion of respondents are not ready to join an experimental program. The answer of the respondents testifies that a significant share of the respondents do not have an attitude for active participation in the processes of change. The opinion of the respondents may indicate that so far no one has been interested in their opinion, which is a signal that it is necessary to intensify the survey of patients' opinions in order to create a culture of participation and active civil position. The hesitation of patients who said "I can't judge" is due to unclear prospects, not distrust of innovation. They are another expression of the

disorientation of patients and the need to change the way of caring for women and families after childbirth *(Table 12).*

Table 12. Desire to be included in an experimental program

Possible answers (given birth to second and next child)	*Relative share*	*Number n=196*
yes	**46,9%**	**n=92**
no	**20,9%**	**n=41**
I cannot decide	**32,1%**	**n=63**

3.5. Psycho-emotional state of women who have given birth

The psycho-emotional state of the patient is an essential component of his overall health status, it is crucial both for the success of the care provided and for their satisfaction. In order to deepen the research, we decided to seek the opinion of respondents from both groups (pregnant and first-born women and women having more than one child) about their anxiety about obvious and potential problems in the postpartum period. We also studied the opinion of midwives on the optimal levels of anxiety in patients with the same problems. The obtained data are presented digitally in the dissertation in tabular form. Problems such as "wound healing", "fever", "breastfeeding problems", "postpartum hemorrhage", "pain of various kinds", "lack of experience in caring for the newborn" and others were mentioned. The possible answers are on a five-point scale: "I'm not worried", "a little", "moderate", "significant", "I'm very worried". The anxiety of pregnant women and those who gave birth to their first child (n = 382) is more expressed and covers to a large extent all five levels of response to a large part of the stated obvious and potential problems in the postpartum period. The mothers of the second and next child are most often not worried (n = 196), and a small part of them experience low or moderate anxiety. Midwives (n = 94) predicted patients' anxiety as moderate and significant before being discharged from the maternity ward. The significant discrepancy between midwives and patients regarding the prognosis of anxiety in women who have given birth could be related to:

- Insufficient knowledge and skills for norm and pathology in the puerperium;
- lack of knowledge and skills in patients for self-monitoring;

- insufficient awareness of the main risks to one's own health in the puerperium;
- insufficient awareness of the main risks regarding the care of the newborn;
- lack of knowledge and skills for emergency self-help and seeking of help;
- a precondition for an increased share of late seeking of help;
- conducting unnecessary consultations.

Against the background of the obvious or potential problems listed above and the new role of mothers, women who have given birth need stable emotional support. Of interest to the study was who they intended to turn to when they needed emotional support. More than half of pregnant women who gave birth to their first child (57.3%) and those who gave birth to a second and subsequent child (57.7%) choose a relative (husband, relative, girlfriend) in need of emotional support. In the next position pregnant and first-born children indicate a midwife (26.4%), and the share of those who gave birth to a second and subsequent child is lower (19.9%). The demand for a doctor for emotional support is placed on the third position with the respective pregnant and first-born (14.1%) and second and next child (15.8%). By placing the midwife immediately after relatives as a person from whom they can receive emotional support, patients outline significant expectations for midwifery work. The opinion of the patients can be considered as a high assessment of the obstetric care and trust in the professional knowledge and skills of the midwife *(Fig. 28).*

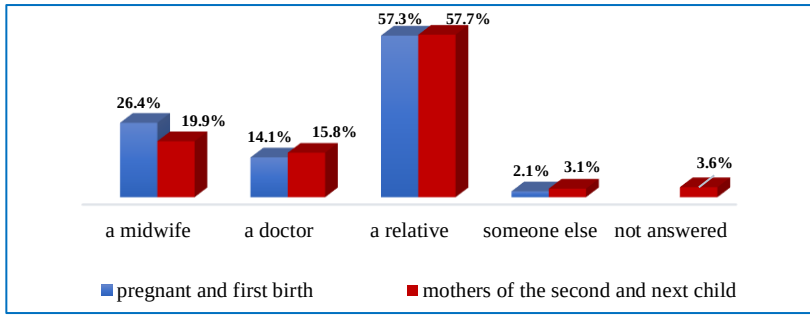


Figure 28. Choosing trust when you need emotional support

At present in Bulgaria there is no regulation for the functioning of independent obstetric practices, and the opportunities for midwives to participate in community care are very limited. We wanted to find out how patients value their relationship with midwives and whether they are aware of the need for obstetric care after birth. We asked patients if they would choose a midwife from an independent obstetric practice for advice in the postpartum period. The opinion of the midwives on this issue is also of interest. The positive answers of pregnant women and first-borns (66.0%), those who gave birth to a second and subsequent child (55.6%) and midwives (67.0%) stand out against the other answers. A very small share of the respondents express a negative opinion - pregnant and first-born (4.7%), those who gave birth to their second and next child (6.6%) and midwives (5.3%). The share of those who cannot judge is about 1/3 - pregnant and first-born (29.3%), those who gave birth to a second and next child (37.8%) and midwives (27.6%). The analysis of the data shows that Bulgarian women who have given birth would seek advice from a midwife on issues related to care in the postpartum period. The results are proof that obstetric care is an expected care in the puerperium and it is necessary to reorganize the obstetric and gynecological practice in our country by regulating autonomous obstetric functions. The hesitation of patients and especially of midwives is understandable due to the very long period of reform and the impossibility to implement some of the activities referred to in Ordinance №1/2011 of the Ministry of Health. *(Fig.29).*

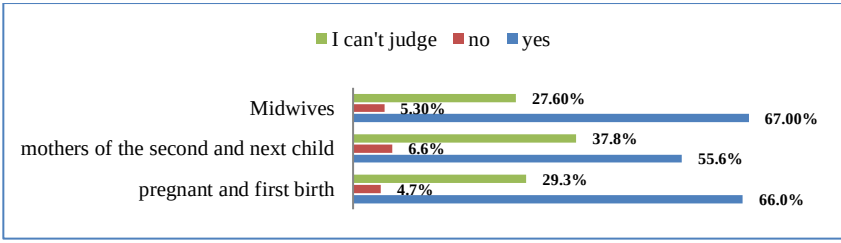


Figure 29. Selection of a midwife from an independent midwifery practice for advice in the postpartum period

3.6. Assessment of patients' health needs in the puerperium

In order to make a more in-depth analysis of obstetric care through the puerperium to present and the needs and expectations of patients, we asked pregnant women and those given birth to their first children who they will rely on for support at home after discharge from the hospital. About 2/3 of the respondents indicated their husband (68.8%), about 1/3 will rely on another relative (29.6%) and about 0.5% chose the answer "other", indicating the answer „girlfriend." The opinion of the patients that they will mainly rely on relatives is another proof that the organization of obstetric care currently contributes to the complete exclusion of midwives in their implementation. The answer proves that obstetric care in the puerperium is the missing link in meeting the needs of patients after birth *(Fig. 30.)*

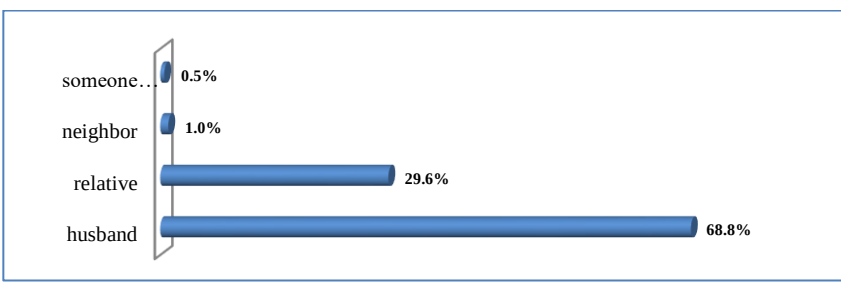


Figure 30. Opinion to support patients at home
(pregnant and first-born child)

Taking into account the past experience from the previous birth, we asked the women who gave birth to the second and next child from whom they would seek help, if necessary, after their discharge from the hospital. With the most answers, the respondents indicated a "doctor" (60.2%), the next answer was a relative (27.6%), and only 10.7% of patients would seek help from a midwife. The answer of the respondents highlights the realities of obstetric care in our country. Given that in most cases themother-midwife relationship is broken after discharge from the maternity ward, and although they trust the midwives and want their help and support, patients cannot count on the help of a midwife. Numerous studies in recent years have published data that in most outpatient clinics for specialized medical care (obstetrics and gynecology office) either a midwife is not hired or she is busy documenting the doctor's activities. In this sense, it is possible that the answer of the respondents reflects the real access of women to obstetric care in the sense of consulting a midwife (Fig. 31).

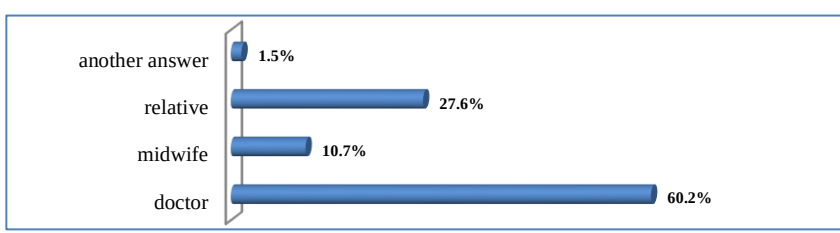


Figure 31. Opinion of patients on the choice of care if needed after discharge *(given birth to a second and subsequent child)*

The conclusion that follows from the data obtained is that pregnant women and first-borns rely heavily on support from their husbands, but in the next birth almost the same proportion prefer the help of a doctor (pediatrician).

The existence of many groups on social networks gives quick access to a very large amount of information, which is not always of the required quality and reliability. We asked the respondents if they approve of the use of information from internet forums and groups. The positive answers of pregnant women and those who gave birth to their first child are more than 1/3 (35.3%), and those who gave birth to their second and next child (28.1%). Almost 1/3 of the respondents are more moderate in their convictions and tend to seek information, but not in all cases, giving the answer "rather yes" (31.7% pregnant and gave birth to the first child and the second and next child births). 32.1%). Very few respondents do not approve of the use of forums - pregnant and first child (5.5%) and second and next child (23.5%). Those who chose the answer "rather not" realize that the information from the forums can be misleading and prefer another source - pregnant and gave birth to the first child (27.5%) and gave birth to the second and next child (16.3%). From the data obtained, it is noteworthy that 2/3 of the respondents seek or are willing to seek information about the postpartum period from forums, which shows that there is an information deficit and the need to consult patients after childbirth. This is evidence of shortcomings in the current organization of obstetric care after childbirth and the need to optimize the role of the midwife (Table 14).

Table 14. Approval of the use of Internet forums

Answers	*Pregnant and first-born child(%)*	*Pregnant and first-born child(n=3820*	*Born second and next child (%)*	*Born second and next child(n=196)*
yes	**35,3%**	***n*=135**	**28,1%**	***n*=55**
no	**5,5%**	***n*=21**	**23,5%**	***n*=46**
closer to yes	**31,7%**	***n*=121**	**32,1%**	***n*=3**
closer to no	**27,5%**	***n*=105**	**16,3%**	***n*=32**

3.7. Problems in postpartum monitoring

Identifying the existing obvious and potential problems of women in labor required us to deepen the analysis of information from patients, asking them to indicate how they coped with home care after the previous birth. Young mothers definitely relied on help from their families (76.02%), followed by the answer "alone" (21.94%). The other proposed answers, such as "help from a friend" or "others", indicated a negligible share of respondents (1%). The answers are indicative that in most cases the husband or parents of the young family are the main support of the young mother in coping at home. The lack of an alternative for women who have given birth burdens the family and, combined with the lack of support from a midwife, would inevitably lead to a reduction in the quality of life and an increase in anxiety (Fig. 32).

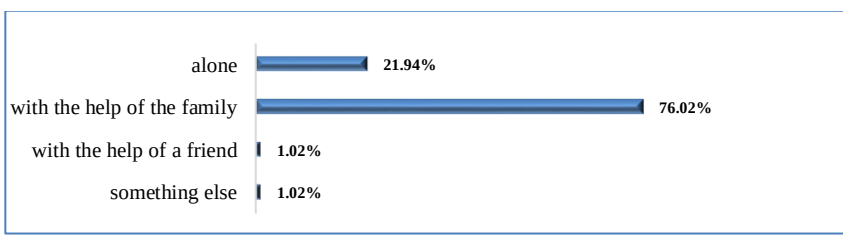
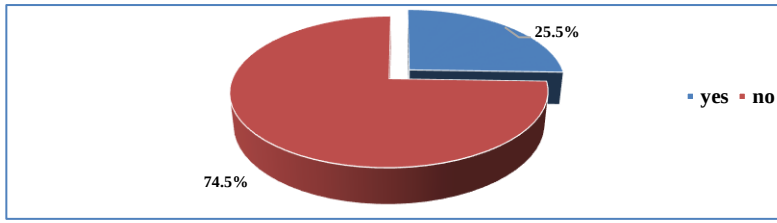


Figure 32. Coping with home care after a previous birth

The contacts of the woman who gave birth with a midwife in Bulgaria, is in most cases interrupted by the discharge from the medical institution. A common practice is to invite a well-known midwife to an informal visit in need of assistance and advice at home. We asked the respondents if they sought help from a midwife after they were discharged from the maternity ward. About ¼ of the respondents sought advice from a midwife for support at home (25.5%) Almost 3/4 of the respondents answered negatively (74.5%). The analysis of the results proves that every fourth woman who has given birth has found a way to consult a midwife. The low share of patients who made contact with a health care professional after birth is another proof of the need to reorganize postnatal care in our country and optimize the participation of midwives in them (Fig. 33).



*. **Figure 33. Asked for help from a midwife after a previous birth***

We asked the same information from the midwives in the maternity ward and the Department / Ward of Pathological Pregnancy, asking them if their help was sought from patients after discharge from the maternity ward. The majority of respondents answered in the affirmative (75%), and only 2% answered in the negative. The share of those who answered "rarely" (13%) and the answer "often" (10%) is relatively low. These data show that obstetric care is preferred by women who have given birth to continue obstetric care and after discharge from the maternity ward (Fig. 34).

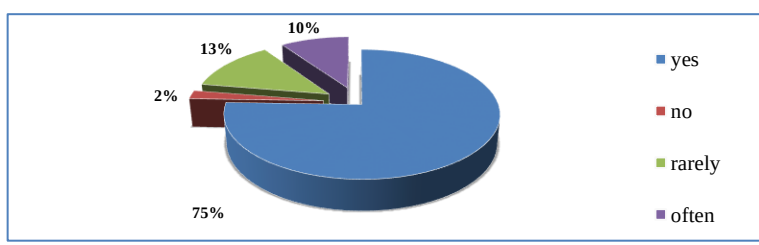


Figure 34. Obstetric assistance sought after discharge from the Maternity ward

Another aspect of the issue under consideration is the attitudes and motivation of midwives to care in the home of the woman who gave birth during the puerperium. The answers of the respondents are eloquent. The majority of the surveyed midwives answered positively (86.2%). The negative answers are 9.6% and the share of those who hesitate is negligible (4.3%). The analysis of the obtained data categorically confirms the positive attitude and

motivation of the midwives to provide patronage obstetric care after birth (Fig. 35).

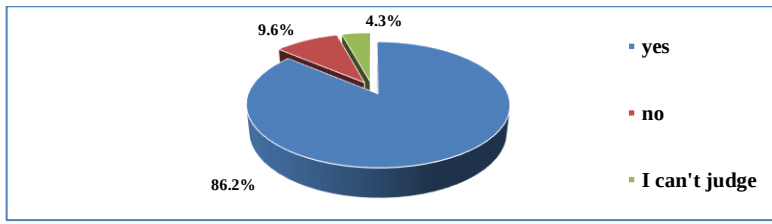


Figure 35. Desire to provide obstetric care at the mother's home after birth

IV. Experimental program

"MIDWIVES IN SUPPORT OF MOTHERHOOD"

As part of the research, an experimental program *"Midwives in Support of Motherhood*" was introduced, implemented with women who gave birth in Varna to identify the need and organizational aspects of obstetric care after childbirth and the role of the midwife in their implementation. *Figure 36* shows the steps in the implementation of patronage care within the experiment.

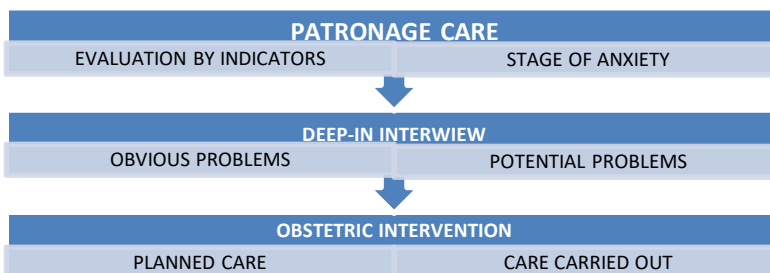


Figure 36. Model for obstetric care

4.1. Characteristics of the participants

For the implementation of the experimental program "*Midwives in support of motherhood*" were formed two groups of women - an experimental group (n = 50) with an average age of 30 years and 4 months. and a control group (n = 50) with an average age of 31 years and 4 months, living in Varna and signed an Informed Consent for inclusion in the experimental program. In the study, respondents were distributed by age in order to determine the presence of potential dependence and detail the needs for support in the postpartum period. The first age group in the experimental program is up to 25 years, which includes 10 women who gave birth, the second group (26 - 35 years) consists of 31 women who gave birth, and the third (over 36 years) 9 women who gave birth. In the experiment, according to a model for a

prospective study of care for women who gave birth after discharge from the maternity ward, obstetric care was given to 37 women who gave birth to their first child and 13 women who gave birth to their second and next child. In this group, 33 of the births took place surgically, of which 26 gave birth to the first child and 7 to the second and next birth. The remaining 17 women gave birth in the normal way, with 10 of the patients giving birth for the first time and 7 giving birth for second and next. In parallel with the experimental group, a control group was formed. The first age group up to 25 years includes 8 women who gave birth, the second group (from 26 to 35 years old) includes 32 patients and the other 10 are over 36 years old. The control group included 24 women who gave birth to their first child and 26 women who gave birth to their second and next child, who received standard care according to the current legislation *(Fig. 37).*

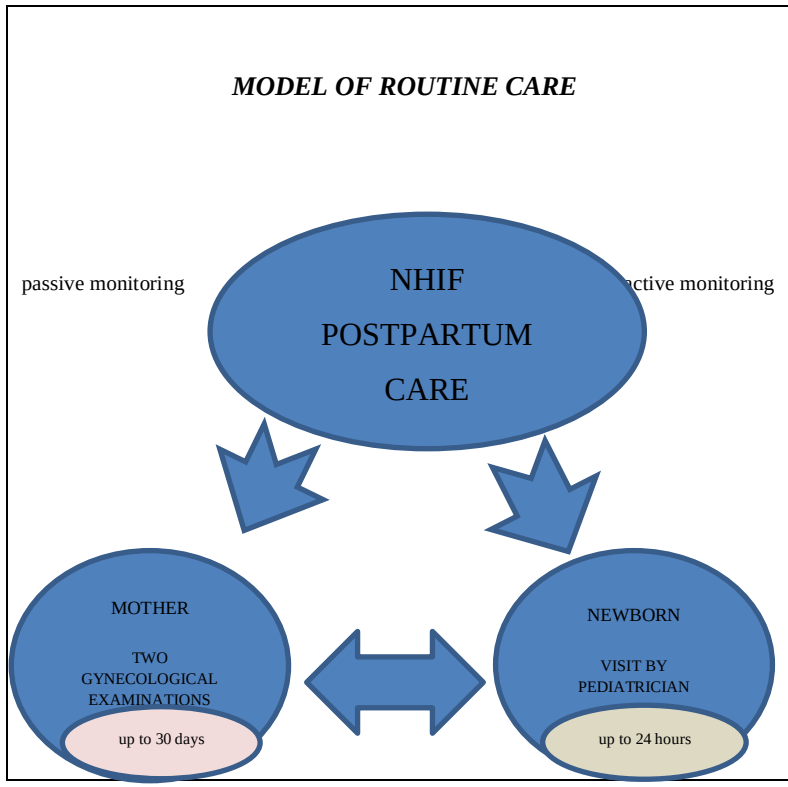


Figure 37. Model of routine care

4.2. Period of conducting the experimental program

Participation in the Experimental Program began from the moment of discharge of the woman who gave birth from the medical institution and lasted until the 42nd day from the date of birth. The experimental program started in early September 2020 and was of varying intensity due to the complication of the epidemic situation by KOVID-19 and the implementation of anti-epidemic measures. In July 2021 we achieved the planned number of patients in both groups.

4.3. Description of the experimental program

After receiving the Informed Consent for inclusion in the experimental program *"Midwives in Support of Motherhood*" a list of participants was created, which allowed the impartial and objective distribution of patients in the experimental and control group (the control group participants with even numbers were included) At the beginning of the experiment, each patient, whether in the experimental or control group, underwent an *Anxiety Tes*t, completed immediately before discharge from the hospital. For each patient in the experimental group, at the first home visit, an *Obstetrics Planning Card* was filled in within the first 48 hours after discharge from the maternity ward. The card is self-developed and is a model checklist for gathering information about the patient and identifying obvious or potential risks and related to the forecasting of the course of puerperium. The information from the card was used as a basis for deriving the individual needs of the patient and planning the observation *(Fig. 38).*

MIDWIFERY CARE PLANNING CARD

on ……..
gave birth on …… in ……..
phone ..... e-mail .....

№	Indicators	Answer		Evalu-ation
		0 point	1point	
1	Age	□18 – 35	□ over 35	
2	Marital status	□ with a partner	□ without a partner	
3	Education	□ secondary / higher	□ basic / primary	
4	Sequence of birth	□ second/third	□ first	
5	Accompanying diseases of women	□ no	□ yes	
6	Birth with cesarean section	□ no	□ yes	
7	Normal birth with complications	□ no	□ yes	
8	Problems with the breasts	□ no	□ yes	
9	Regular visits to the women`s consultation	□ yes	□ no	
10	Participation in a course for mothers to be	□ yes	□ no	
11	Additional stay at the maternity ward	□ no	□ yes	
12	Availability of support at home	□ yes	□ no	

13	Signs of maturity of the newborn	□ yes	□ no	
14	Natural baby nutrition	□ yes	□ no	
15	The newborn stayed into intensive care unit	□ no	□ yes	
16	Presence of another child in the family	□ no	□ yes	
17	Existence of financial stability	□yes	□ no	
18	Presence of a child raised in institutions	□ no	□ yes	
19	Presence of a person with medical education in the family	□ yes	□ no	
20	Family member with a disability group	□ no	□ yes	
21	Bad habits	□ no	□ yes	
22	Number of households in the dwelling	□ one	□ more	
LEVEL OF CARE -		**GRAND TOTAL:**	**points**	

Legend	*Routine obstetric care - from 0 to 9 point*	*Intensive Obstetric Care - from 10 to 22 points*
Minimum number of visits to the mother's home	*2 visits*	*3 visits*
Date		

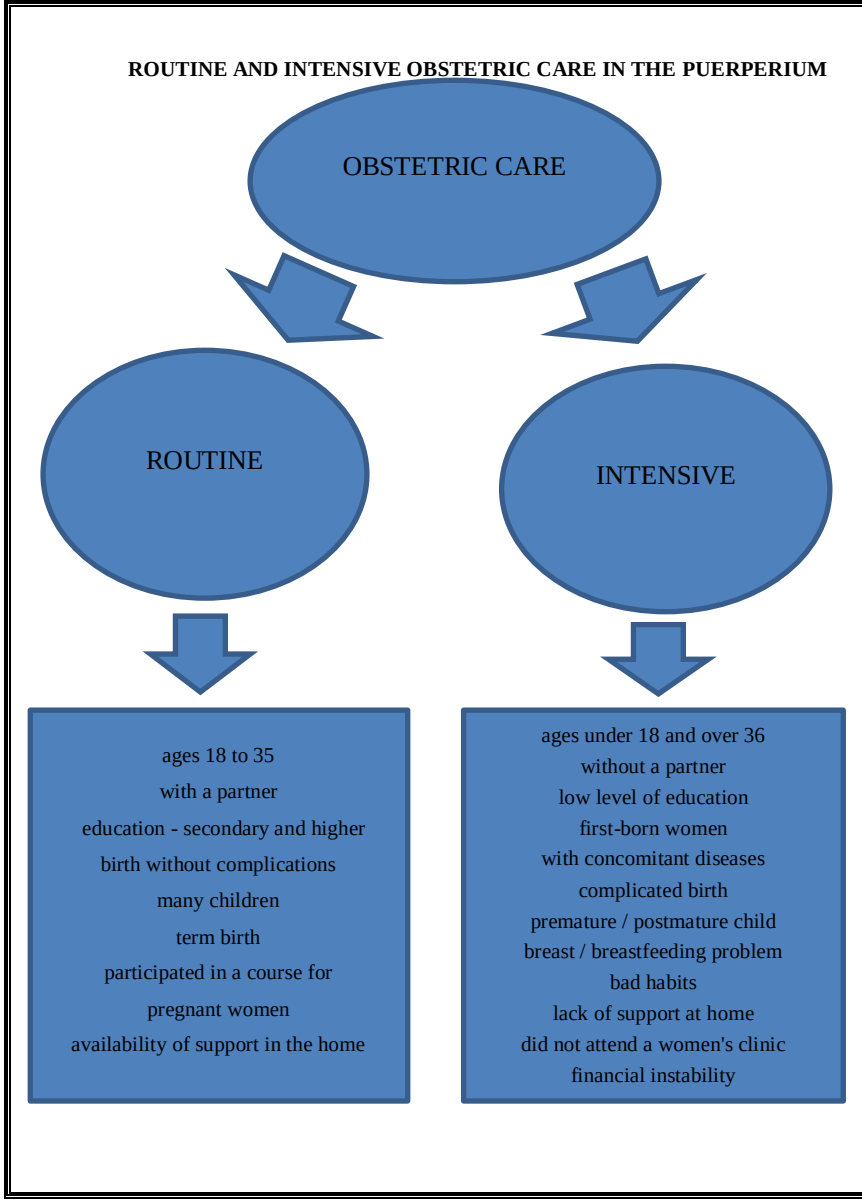


Figure 39. Planning obstetric care

There was an opportunity for 7-day, 24-hour communication by phone, e-mail, Viber, messenger for the entire period of observation. For each patient in the experimental group, a *supervision for intervention* was prepared under the program *"Midwives in support of motherhood" (Fig. 40*). During the experiment, a detailed recording was made, on paper, of all forms of communication with patients.

SUPERVISION FOR INTERVENTION

under the program "Midwives in support of Motherhood"

on …… gave birth on …….....
in ……..... phone .....
e-mail ..... other .....

Results of the Obstetrics Planning Card:

- sum of points.....
- estimated minimum number of home visits …….number

Communication with the patient	***Date/time***	***Method of survey***	***Target***	***Interventions/reccomendations***
first				
second				

Figure 40. Supervision for intervention

For 42 days, the lead researcher was at the disposal of the women included in the experimental group. In addition to the scheduled home visits, there were questions asked electronically on a daily basis. Some of the participants preferred electronic communication and sent photos to illustrate their questions. At the end of the experimental period, all members of the control and experimental groups were provided with an *Anxiety Test* (identical to the first) to compare the results.

4.4. Evaluation of the effectiveness of the experimental program

The evaluation of the effectiveness of the experimental program *"Midwives in support of Motherhood*" was achieved by continuous monitoring of the following indicators:

- manner of conducting the consultation - active or passive;
- frequency of counseling;
- formation of habits and skills;
- creating an emotionally stable and supportive home environment
- benefits and potential of the program *"Midwives in support of Motherhood"*.

4.5. Results of the experimental program

- ***Active and passive counseling***

At the start of the study until December 2020, the experimental program included 52 women who gave birth, respectively 26 in the experimental group and 26 women who gave birth in the control group. The home visits of the majority of patients (18) were conducted, but in the period there were 8 patients who explicitly insisted on the predominance of counseling electronically and by telephone due to the complicated epidemic situation of KOVID-19 infection. At the next stage, the study included other women who gave birth - until the planned number of mothers in the experimental and control group, which was achieved in July 2021. After completing the *Obstetrics Planning Card* and summing the scores on the condition assessment

scale for all patients included in the experimental program, a minimum number of home visits was planned - 2 for each patient in the sample. One week after the first home visit, the majority of patients had questions and difficulties, which resulted in communication by telephone or Viber (64%) (n = 32). The most common difficulties of patients were related to the inability to bathe the newborn and treatment of the umbilical cord, advice on pain when urinating, treatment of OP wound, and the need for emotional support, creating a regime of the newborn, breastfeeding training and more. About 1/3 of women in labor felt well and did not have difficulty caring at this time (36%). At the end of the period, when asked about Viber or a phone call, they were satisfied with the timely help and reported as positive the assistance of a midwife in the first days after their discharge from the maternity ward. The recorded interventions and the recommendations made for each woman during the visit or consultation were recorded and stored in the *Supervision for intervention.*

❖ ***Frequency of consulting***

The envisaged frequency of consultations, based on the information in the Obstetric Care Planning Card and the Anxiety Test, required the planning of a minimum number - 2 obstetric visits, distributed at the beginning and end of the period. At the explicit request of patients and in case of problems, additional home visits were provided, without limiting their number. In the analysis of the data we found that 52% (n = 26) of the women in the group had 2 consultations with a home visit by the lead researcher during the 42-day observation period. For the rest of the patients, at their request or in case of problems, a larger number (3 to 6) of home visits were made (24%) (n = 12). In a small part of the patients, due to the introduced anti-epidemic measures and at their explicit insistence, only the first visit was made (20%), (n = 10) then we switched to electronic communication. A small proportion of patients 4% (n = 2) exercised their right to subsequently withdraw from the experimental program by refusing further contact, but assisted in completing the anxiety test *(Fig. 41).*

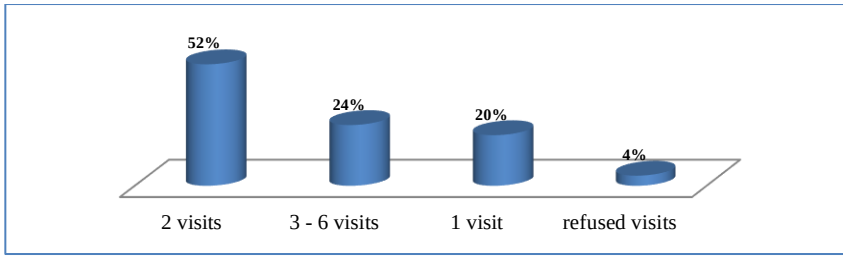


Figure 41. Home visits made

For the period of the experiment 137 consultations were conducted by phone, e-mail, viber and messenger, as a minimum number - 2 consultations per patient were applied for 76% (n = 38) of mothers, and 24% (n = 12) of patients were requested a larger number of consultations (from 3 to 8) for this period.

❖ ***Formation of habits and skills***

During the first obstetric consultation at home, 48 hours after discharge, obstetric care included blood pressure measurements, advice on diet and hygiene, sleep and rest, advice on headaches, examination for swelling of the lower extremities and relief measures, examination of the condition of the breast, examination of the fundus uteri and lochia, examination of the operative wound (if any). Another important task was to promote the development of skills in the young mother / family for newborn care such as proper care of the child in care, basic and local toilet, disinfection of the umbilical cord, skin care and skin folds, lubrication, choice of cosmetics for the newborn, room temperature during bathing and sleeping, postures during breastfeeding. Mothers needed support in developing skills for the preparation and storage of formula, breast hygiene, use and storage of breastfeeding accessories and more.

At the next obstetric visit, at the invitation of the mother, the difficulties were united around the regulation of lactation, giving advice on increasing the amount of breast milk, creating skills in women for self-monitoring and assessing the effectiveness of breastfeeding, advice on wearing a belt, performing of postpartum gymnastics, breast care for maceration of the nipples

and prevention of rashes, creating a regime for breastfeeding and supplementation of the child (Fig. 42).

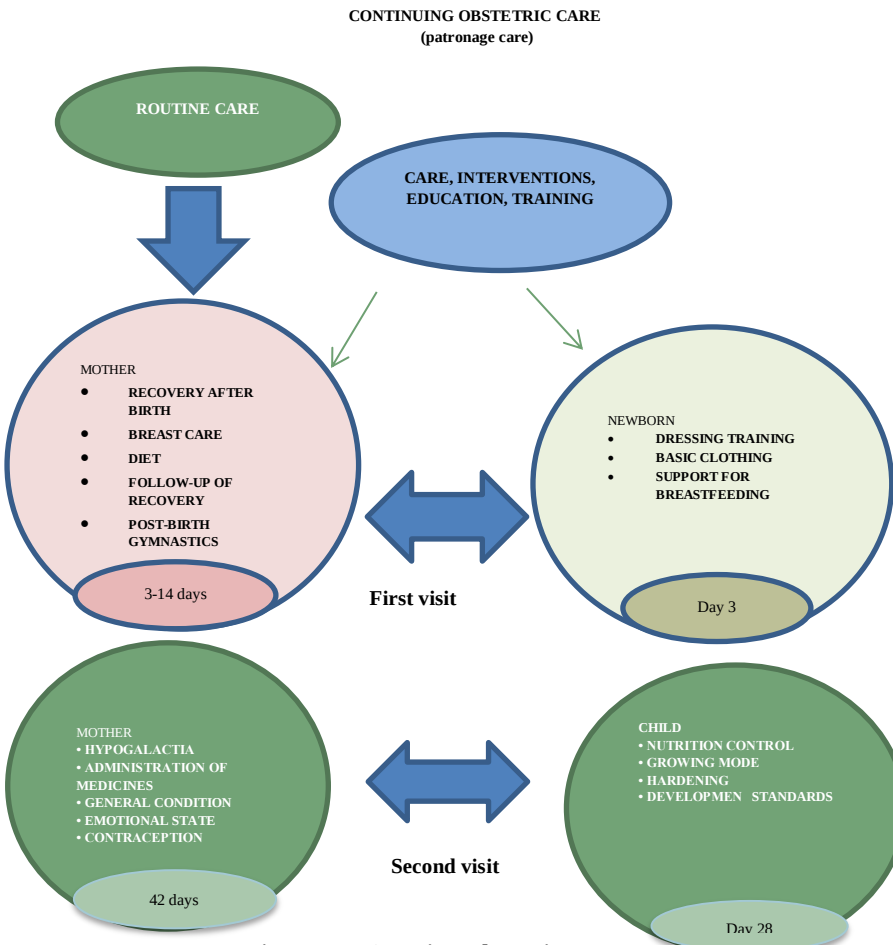


Figure 42. Ongoing obstetric care

When discharging newborns after birth, 74% (n = 37) of newborns were on natural nutrition. During the experiment, 10% of them switched to a mixed diet due to maternal hypogalactia. The remaining 26% of newborns were discharged on mixed feeding, and 15% of them switched to artificial feeding during the experimental program. All women wishing to breastfeed were encouraged and supported in times of crisis to prolong lactation for as long as possible.

❖ ***Creating emotional stability in the home environment***

The emotional stability of the mother is a key factor both for her recovery and for her successful realization in the new role of mother. The emotional state of the mother after discharge from the maternity ward depends on many endogenous and exogenous factors, difficult to measure, no clear boundaries, which requires the use of active obstetric care to identify factors that can be removed or minimize the impact

We chose the standard *Anxiety Test* as an opportunity to check the level of stress in the women in the sample. The initial *Anxiety Test* was administered to women in both groups, experimental and control, and was completed on discharge from the maternity ward. The test was borrowed from American psychiatrist Zung, who worked at Duke University. According to him, the anxiety scale has 4 levels: from 0 to 7 points is considered a "normal" level of anxiety, from 8 to 10 as "weak", from 11 to 14 points - "medium" and from 15 to 21 points as "serious" ".

The analysis of the data of women who gave birth included in the experimental program shows that 90% (n = 45) have a normal level of anxiety before leaving the maternity ward. Only 4 women who gave birth (8%) had a low level of anxiety and one patient had a medium level of anxiety (2%). The calculated average anxiety score shows 4.08 points out of 21 points. We explain the low levels of anxiety in patients with the support that women have from midwives in the maternity ward, the little experience and the lack of a clear vision for the coming period.

At the end of the experimental program, all women completed the same anxiety test again. We obtained the following results: after the recovery period 76% (n = 38) have a normal level of anxiety. There was an increase in anxiety at the other levels of 16% for low anxiety and 8% for

moderate anxiety at the end of the experiment. The average anxiety score from the completed test is 5.52 points. The analysis of the results can be explained by the lack of clarity regarding the puerperium period and the total lack of preparation. The final assessment was also reflected in the large share of first-borns (who have no past experience) in the experimental program (n = 37), who, despite low levels of anxiety, had to undergo more frequent consultations after the first week at home. Evidence of this is the increase in anxiety levels in a small proportion of women who only became aware of the risks associated with some of the problems. *(Fig.43).*

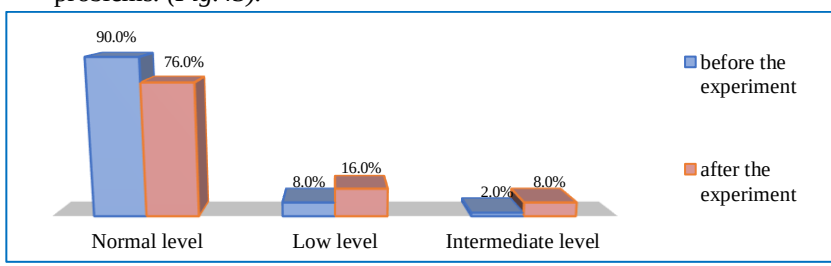


Figure 43. Anxiety levels of an experimental group

The women in the control group who gave birth also completed an Anxiety Test before being discharged from the maternity ward. The analysis of the data shows that 90% show a normal level of anxiety, 4% of women who have given birth have a low level of anxiety and 6% have a medium level of anxiety at the time of discharge from the maternity ward. At the end of the experimental program, the results of the repeated test showed a significant change. The proportion of patients with a normal level of anxiety has a significant decline - 60%. There is an increase in women with a low level of anxiety (30%), and those with a medium level fall to 10%. The results obtained are evidence of the need for support at home after birth *(Fig. 44).*

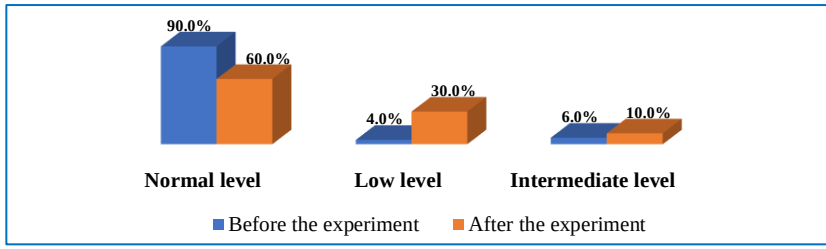


Figure 44. Control group anxiety levels

The comparative analysis of the results between the two groups (experimental and control) shows differences in the dynamics of anxiety levels during puerperium. In women who gave birth in the group in which they had the opportunity to receive obstetric care, there was a smaller decrease in the proportion of patients with normal levels of anxiety at the end of the experimental period. Patients in the control group showed a lower level of normal anxiety at the end of the period. It is noteworthy that over time during the program in the experimental group increases the proportion of patients with low and medium levels of anxiety, which is explained by the lack of previous experience and more serious entry into the problems of the postpartum period. The levels of low and medium anxiety in the control group had a higher growth at the end of the experiment.

The obtained results give us reason to conclude that before discharge from the maternity ward most of the patients have no real idea about the course of the recovery period and are relatively calm about it. Another explanation for the relatively low levels of anxiety when discharged from the maternity ward may be due to the expected release from relatives in the home, as stated by a significant proportion of respondents. The increase in the proportion of patients with low and moderate levels of anxiety after the experiment shows that the anxiety of most patients increases at a later stage after returning home, which is evidence of the need for obstetric care after birth. The effectiveness of obstetric care for women in the experimental group can be judged by the relatively low changes in anxiety levels during the recovery period *(Fig. 45).*

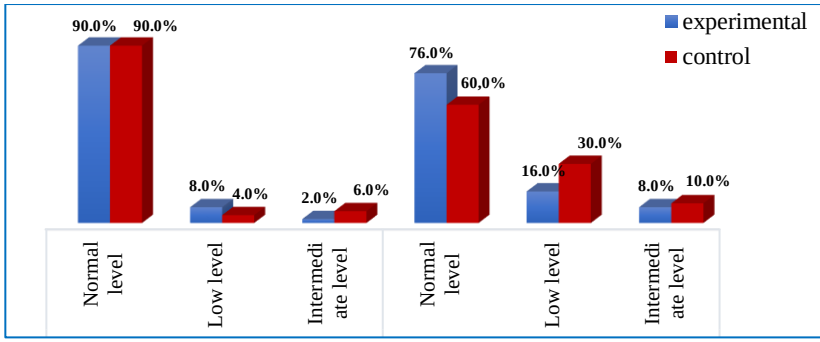


Figure 45. Anxiety levels

The need for postpartum support is largely determined by the way women give birth and their parity. We deepened the analysis by examining the distribution of women, whether a positive answer according to the method of delivery. The most significant share of support for the restoration of home care after birth was expressed by first-borns, surgeons (26.92%), which is understandable due to the lack of experience and the longer period required for recovery. The next result in the support was stated by first-borns, normal births and multiple births, cesarean births (15.38%). The smallest share is of women who supported the idea of many children who gave birth in a normal way (11.53%). Respondents' opinion on whether a positive answer and their share in the positive answer are logically distributed according to the need for support in the postpartum period, which is another evidence of awareness of the need for obstetric care in the puerperium *(Fig. 46).*

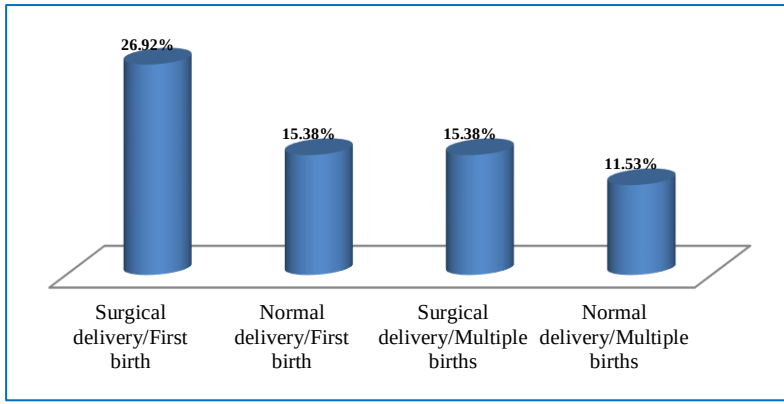


Figure 46. Distribution of mothers who have expressed a desire to restore home care according to the method of delivery

- ***Benefits and potential of the "Midwives in Support of Motherhood" program***

At the end of the program, we conducted the planned qualitative study by asking women in labor about the benefits of the "*Midwives in Support of Motherhood*" program. More than half of the participants in the program support the idea of restoring community obstetric care (70%). Patients convincingly state their need for support from a midwife as a way to achieve security and peace of mind in the postpartum period.

A qualitative study was conducted to further investigate the problems and difficulties associated with puerperium care with postpartum patients at the end of the experimental program. The questions are structured according to the identified difficulties of the mother. We sought their opinion on the benefits and potential of the program. Although mothers showed low levels of anxiety, most of them experienced varying concerns at home about caring for themselves or their children. Left alone with her newborn child, every young woman would need someone to guide her, give her confidence and self-confidence in caring.

During the experiment, we conducted an in-depth interview with patients from the experimental group. They were a starting point for clarifying the

needs of women in labor and individualizing health care. We will summarize the opinion of patients through the statements of some of them:

"I think that the postpartum period, when she is already alone with the baby, is quite stressful for every mother. In my opinion, the presence of a midwife is necessary during this period. So you can always seek advice from a professional - to explain to you, to show you what is difficult at a given time. Having such support during this period, I can say that the feeling of anxiety decreases significantly. I really hope this program continues. I think it is good that even after this period, if necessary; every mother can seek the help of a midwife. I am glad that I joined this program! I will be glad to meet you again after my next birth! " (Resp. 63).

The opinion of a participant in the experiment about his experience from a previous birth in Germany is of interest to the study: *"My previous birth was in Germany, 4 years ago. Before we were discharged on the 3rd day, we had to choose a midwife to visit us at home. I didn't know them, so the choice was random. The first week the midwife came twice a day, the second week once a day and the third week every other day. So gradually the time came for us to refuse her support. During the visits she examined the baby (skin, mouth, nutrition, weight…) and me (my recovery, blood pressure, nutrition, hygiene…). I was very happy and calm, and this care cost me nothing" (Resp. 95).*

"Thank you for your cooperation! I very much appreciate your answers and cooperation. In my opinion, it is good to have the support of a midwife to help with things that a young mother does not know or feels confused and stressed and wants to rely on someone! " (Resp. 81).

The results of the study proved the need to create conditions for active obstetric care after childbirth and the regulation of obstetric care would be a step towards improving the quality and satisfaction of both patients and midwives. From the opinion of the midwives it became clear that they approach this issue with great care and respect and the desire of many of them to get involved in various forms of postgraduate education is proof of this. The opinion of the midwives and patients prompted us to prepare a program for conducting a postgraduate course for midwives. The theoretical module

discusses the parameters of normal and pathological puerperium, drawing up a plan for obstetric care in the puerperium, the duties of the midwife at the first visit to the woman giving birth at home, assessment of mental and emotional health of the family, news in breastfeeding, etc. In the course we offer the introduction of documentation that supports the planning and implementation of obstetric care in the puerperium.

4.6. Postgraduate course

Obstetric care in the puerperium

1. Introduction

1.1. Course title**: "Obstetric care in the puerperium"**

1.2. Duration of training: **35 academic hours**

1.3. Requirements**: basic education for admission to training in the course - acquired professional qualification "Midwife**"

1.4. Course annotation: The course for postgraduate training "*Obstetric care in the puerperium*" aims to build on the already acquired knowledge and skills of health care professionals and is a set of competencies and skills for consulting women in the puerperium to apply active obstetric care aimed at early detection of pathological abnormalities and performing quality, effective, preventive, expert activities.

2. Purpose of the training

After completing the postgraduate training course, the midwife has mastered and improved the knowledge and skills inherent in a specialist in obstetric care in the puerperium and is able to provide alone or in a team with a doctor highly qualified and specialized medical care for postpartum women. period in connection with:

- ❖ improving physical condition;
- ❖ improving emotional state;

- ❖ training in newborn care;
- ❖ improving family dynamics;
- ❖ special care for concomitant diseases;
- ❖ improving general and reproductive health;
- ❖ prevention of complications.

The full program can be found in the dissertation!

V. Conclusions, recommendations and suggestions

5.1 Conclusions

The obtained results give grounds to draw the following conclusions:

1. Obstetric care during the puerperium is a well-established and successful practice in the EU countries and similar forms of observation have been developed.
2. The leading figure in the observation of women after childbirth at the moment in our country is the doctor, and the participation of the midwife is very limited.
3. An imbalance has been established between the competencies of the midwife in monitoring women with normal and pathological puerperium,

approved by Ordinance №1 and the legal regulation for performing obstetric activities and care in this period.

4. The knowledge and skills of midwives for counseling and training women after childbirth are an underused resource to meet the needs of patients.
5. The organization of postnatal care in our country is a prerequisite for omissions and disorientation of patients in the postpartum period, and most of the mothers in our country are discharged from the maternity ward without being prepared to cope at home.
6. Home care is the most preferred form of medical supervision after birth and has a place in modern medical supervision according to all participants in the study.
7. Midwives are firmly convinced of the need to regulate community obstetric care after childbirth.
8. Patients trust a midwife to provide post-discharge care, and a conscious need for postpartum obstetric support has been identified, which mothers have identified as necessary and useful care.
9. The regulation of the consultative, prophylactic, promotional and preventive activities of the midwife will improve the quality of life of women after childbirth.

5.2. Recommendations

Based on the results obtained and the conclusions made after the application of the Patronage Care Model, we make the following suggestions:

To the Ministry of Health

- To establish standards for good obstetric practices in the puerperium;
- To create conditions for organizing and financing obstetric care in outpatient care;
- To approve a Model for the application of community obstetric care for women after childbirth;
- Together with the local authoritirs to create a market for medical and social services at home on the basis of public-private partnership, provision of additional staff and material resources.

To Bulgarian Association of Health Care PROFESSIONALS and Medical Universities

- To establish a working group to develop a standard for good obstetric practices in outpatient care;
- To discuss and propose models for care for women in the puerperium;
- To approve an individual plan for home care for women who have given birth.

To the Medical Universities

- To propose a course for postgraduate training for practicing midwives for patronage monitoring in the puerperium.

5.3. Contributions:

On the basis of the conclusions, recommendations and results of our own research, contributions of theoretical - cognitive and practical nature can be outlined.

With theoretical - cognitive character:

- The medical and social aspects of obstetric care after birth and the competencies of midwives for their application through community care have been studied.
- International experience in providing care for women after childbirth has been studied.
- The current legislation in our country concerning the provision of obstetric care after birth is analyzed.
- Own developed obstetric documentation for obstetric care in the puerperium is offered.
- The need for home visits for women after childbirth is justified;
- A program for a postgraduate training course for midwives counseling women in the puerperium has been prepared.

With practical application

- A Model for patronage care for women after childbirth has been developed.
- A methodology for unified assessment of women's needs after childbirth has been introduced.
- Obstetrics Planning Card has been developed;
- Supervision for interventions under the program *"Midwives in support of motherhood"* has been developed, supporting the planning of care at home.
- An author's model of home care for women who have given birth has been tested, leading to an increase in the quality of life.

Publications related to the dissertation:

- **Лалева, Р.,** Мнението на варненските майки относно нуждата им от акушерски грижи в дома, Сборник доклади „Нови подходи в общественото здраве и здравната политика“, МУ Плевен, 2021, с. 264, **ISBN - 978-954-756-254-7**
- **Лалева, Р**., Акушерская помощь – ключевой ресурс в подготовке беременных женщин к послеродовому периоду, Сборник материалов „Исследовательский потенциал молодых ученых: взгляд в будущее“, Тула , 2021, с. 117, **ISBN 978-5-6045159-4-5**
- **Лалева, Р.,** В. Димитрова, Т. Боева, Нагласите на акушерките от североизточна България за откриване на самостоятелни акушерски практики, IX Научна сесия за преподаватели и студенти, МУ Варна, Варненски медицински форум, т 10, 2021, прил. 1, с. 411, **ISSN 2367-5519**
- **Лалева, Р**., В. Димитрова, Домашния патронаж в съвременното здравеопазване, сп. "Здравни грижи", 3, 2021, **ISSN 1312-2592**