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MEDICAL AND STATISTICAL ANALYSIS OF ABORTIONS IN THE REPUBLIC SAKHA (YAKUTIA)

The article presents the results of the study of the dynamics, structure and general description of abortions in the Sakha Republic (Yakutia) within the period 1991-2011. and decrease in reproductive potential of the population.

Keywords: abortion, reproductive health, fertility, reproductive age.

Introduction. Medical and social significance of abortions is determined by their high prevalence, significant proportion among causes of maternal mortality and gynecological morbidity, including infertility, as well as the frequency of complications, significantly reducing the level of women's reproductive health. With the continued downward trend in the total number, the frequency of abortions remains high[1,3,4]. The information about number and dynamics of abortion statistics in the Sakha Republic (Yakutia) makes it possible to evaluate the activities of health care departments and departments of abortion prevention.

The aim of the research is to analyze the dynamics, structure and general description of abortions in the Sakha Republic (Yakutia) in terms of its data 1000 women of childbearing age per 100 births.

Materials and methods. The research is based on official statistics of the Territorial Department of the Federal State Statistics Service of the Sakha Republic (Yakutia) on abortions within the period 1991-2011.; the analysis of the dynamics of abortion rates for the period has been done.

Results. The study of the reproductive function in 2011 shows that 58.3% of pregnancies end in births, 41.7% - abortion, among them 0.7% -pregnancies terminated in the period between 22-27 weeks. For the year 2011 in the Sakha Republic (Yakutia) 11,749 abortions, including 3274 mini-abortions were made (Fig. 1).

According to official statistics (statistical Form number 13, "Information on the termination of pregnancy before 28 weeks") during 1991-2011 the abortion rate in the Republic of Sakha (Yakutia) decreased twice - from 149.5 to 72.6 per 100 births and from 100.0 to 45.4 per 1,000

women of reproductive age. There is a tendency to change the structure and types of abortions. Percentage of spontaneous abortion increased on 3%. Proportion of unspecified abortion increased on 4.3%. Proportion of induced abortions decreased on 7.3% (Fig. 2.).

In the republic interruption of pregnancy before 12 weeks dominates, and its absolute number has declined over the first decade of the new century 1.2 times. The absolute number of interruptions in a period between 22 and 27 weeks has decreased by 2.7 times. As for abortion terms there is a tendency to interrupt pregnancy before 12 weeks (10.3%), while the number of interrupts between 22 and 27 weeks decreased 1.9 times (Table 1.).

The total number of abortions within the period 1991-2011 has decreased from 30062 to 10848, mainly due to the legal medical abortions, the number of which was reduced from 26389 to 8394 thousand, or 72% (Fig. 3). When analyzing the rate of decline in the number of abortions on their types the attention is paid to unequal dynamics of data. There is a maximum decline in number of abortions with the highest medical and social significance - abortion for social reasons (99.4%) and recorded criminal ones (99.2%).

The number of spontaneous abortions has been reduced on 48% in 1991-2011 - from 2262 to 1164. The prevalence of spontaneous abortion as the main feature of violations of women's reproductive health has declined since 2000-2011 from 4.6 per 1,000 women of childbearing age to 3.6 (Fig. 4). This indicator reflects the decline in reproductive health of modern women whose birth and puberty hit at distressed 90s. Trouble situation with spontaneous abortion is the most important factor in reducing the reproductive potential of the population. Today, the share of miscarriage is about 7% of the number of pregnancies that ended childbirth.

The high prevalence of spontaneous abortion is of particular importance today, when there is a decline in fertility and every pregnancy is essential for the preservation of reproductive potential of the population of Russia. Thus, prevention and successful treatment of miscarriage are real reserve to increase the birth rate[2].

Reducing abortions not only reflects the true reduction in their number, but also the absence of "commercial" abortions registration (Fig. 5).

Special attention should be paid to comparison of induced abortion on medical and social grounds. Their dynamics to the greatest extent is stipulated by socio-economic factors and reflects the state of health and the environment and quality of life. The increase in the prevalence and frequency of abortion for social or medical reasons during the 90s is due to the deteriorating health and a reduction of the social status of the population. The sharp decline in the number of abortions for social reasons occurred in 2003 in connection with the reduction of the list of social indications for abortion with 13 positions (according to the Order of the Ministry of Health of the Russian

Federation number 242 dated 11.06.1996) to 4 (Order of the Ministry of Health of the Russian Federation № 484 dated 14.10.2003) (Figure 6). The reduction of abortions for medical reasons since 2008 is also due to the introduction of the relevant order limiting the maternal indications for pregnancy (Fig. 7).

In 2011, the structure of abortions 11.7% were spontaneous abortions, 10.1, 5% 10.1% - unspecified abortions, 5% - abortions for medical reasons, 73.1 % - legitimate medical abortions (Fig. 8).

An important indicator in the abortion statistics is the number of women undergoing termination of the first pregnancy, which is the maximum risk in terms of subsequent reproductive disorders and the development of obstetric pathology, such as miscarriage or infertility. The number of primiparous among all women undergoing termination of pregnancy was 3.8% of all abortions in 1991, and increased to 10.5 in 1999 (the year of maximum distress of reproductive and demographic parameters) and decreased in 2011 to 7, 5 %.

The analysis of the abortion according to method of abortion reveals that still there is insufficient use of the safest medical methods of abortion: 1.4% in 2011 of the number legal abortions. The underreporting data of medical abortions reflects only the absence of medicinal "commercial" abortions registration made in private clinics. The share of medical abortion is a kind of a "marker" of total registration of abortions.

The analysis of abortions according to the women age became possible only in 1996. Before 1995 in the statistical form number 13 20-34 year old women had been combined into one group, which, of course, accounted for over 70% of abortions. Over the past 15 years, changes in the age structure of abortions correspond to changes in the age structure of giving birth women ("aging age fertility model"). It reflects a common tendency of reproductive and sexual activity of the female population. Among women who undergo abortion, the share of 20-24 year old women increases (22.7% of the total number of abortions in 1996 to 24.2% in 2011). Also the proportion of 25-29 year old women increases (22, 4 to 29.2% for the same years) . This age group is among "leaders" of termination of pregnancy, as well as among childbearing women. The share of 30-34 year old women in the structure of abortion has not changed (21.1 - 21%). The proportion of women aged 35-39 years decreases (15,3-14,4%).

Comparing the age-specific fertility rate (births per 1,000 women of the same age) and age-specific abortion (number of abortions per 1,000 women of the same age) it is clear that despite the same type of curves women at a younger age mainly give birth than terminate pregnancies: before 34 years SRS indicator is significantly higher than the WAC.

The curve of age-specific abortion rates is flatter, shifted to the right on the axis of the age, that

is over 35, women are more likely to terminate their pregnancies than giving birth (Fig. 9).

The most important and significant in the age structure of abortions is the reduction in number of young women (under 19 years) from 6.7% in 1996 to 5.1% in 2011 in the total abortion rate (Fig. 10).

There is a decline on 36% in number of abortion among 15-19 year old adolescents from 25.8 per 1,000 girls in 2000 to 16.5 in 2011. The rate of abortions decline calculated on the absolute number of them has been different and depends on the type of abortion.

In the structure of "forced" abortion on medical and social needs the number of adolescents (which was 16.6 and 27% in 2007) has dropped to 3 and 25% in 2011. In the structure of abortions among adolescents there is a decline in proportion of spontaneous abortions (from 6.0 to 4.8%), artificial medical abortions (from 7.5 to 4.6%), unsafe and unspecified abortions (from 10.6 to 5.6%).

Conclusion. The analysis of the dynamics and structure of abortion has revealed that the observed decrease in the number of abortions is accompanied by the transformation of the structure of the 90s. The high prevalence of spontaneous abortion determines the significance of this disease in reducing the reproductive potential of the population.

Assessing the miscarriage as the main reason of reproductive losses, it should be recognized that the prevention and successful treatment of this disease are the real reserve to increase the birth rate.

In order to reduce the negative consequences of an unwanted pregnancy it is necessary to introduce a broad practice (along with effective contraception) medical abortion as the most secure in comparison with surgery, and the need for its wider use as an alternative to surgical abortion is clear. This requires the development of an appropriate regulatory framework and health standards that don't exist now.

To obtain reliable information about the number and structure of the abortion it is necessary to improve the statistics of abortion. Above all to ensure the complete registration of artificial abortions in commercial establishments, as well as to include in the recorded spontaneous abortions abortions code ICD-X O02 (together with existing O03). Also it is necessary to introduce statistical records of information about the complications of abortion (in the form number 13) as an important measure that ensures quality control of medical care for abortion.

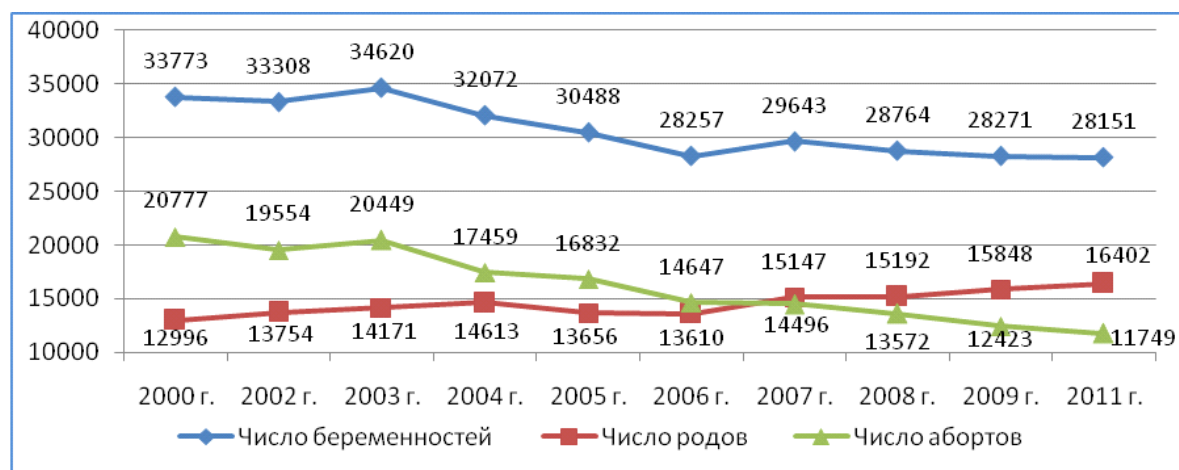


Fig.1. The implementation of the reproductive function in the Sakha Republic (Yakutia) in the dynamics within the period 2000 - 2011.

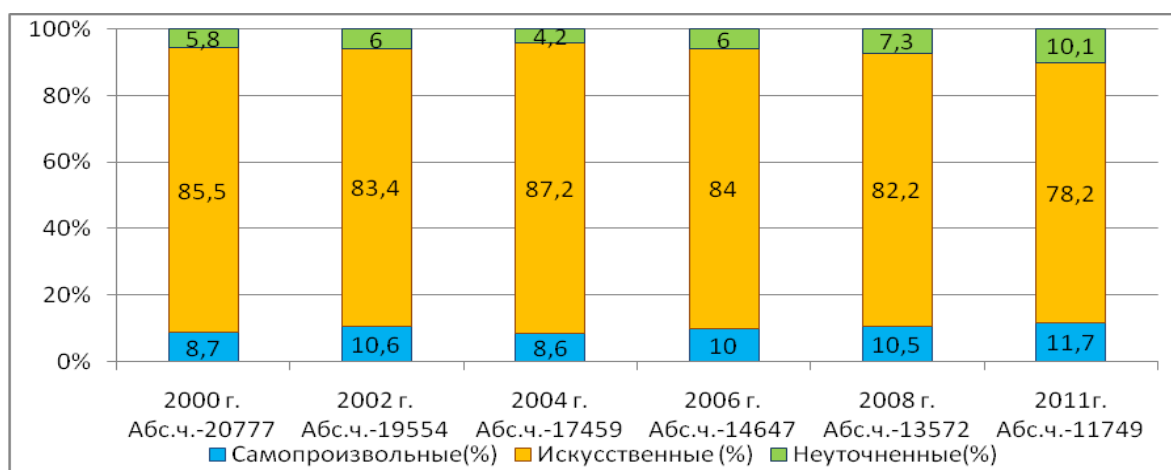


Fig.2. The structure of types of abortion (in%) in the Sakha Republic (Yakutia) in the dynamics within 2000 – 2011

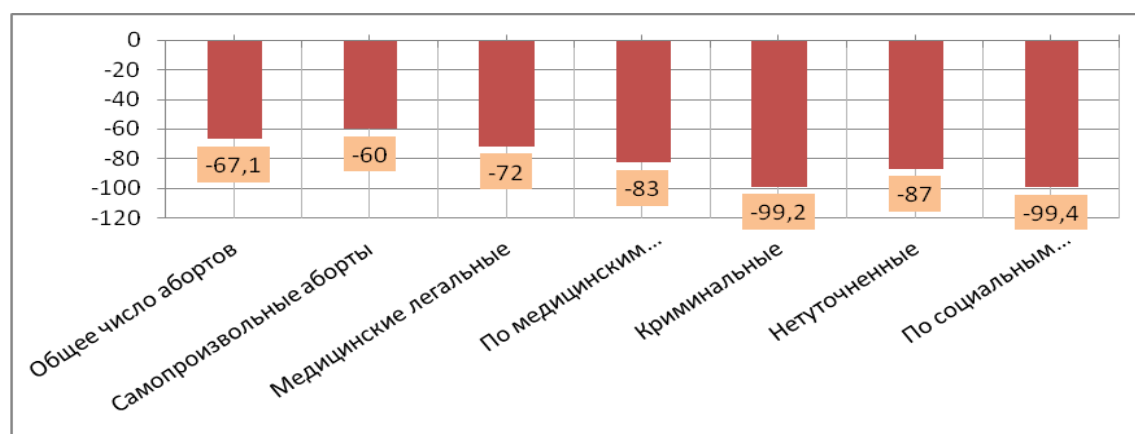


Fig.3. The rate of abortion decline in the period 1991-2011 . (% By 1991)

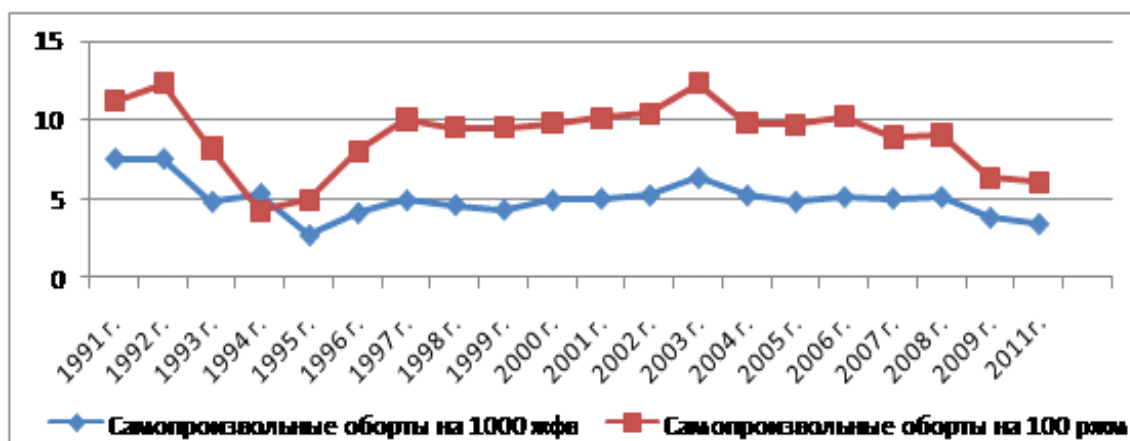


Fig. 4. The dynamics of the prevalence of spontaneous abortions (per 1,000 women aged 15-49) and frequency (100 births) in 1991 to 2011.

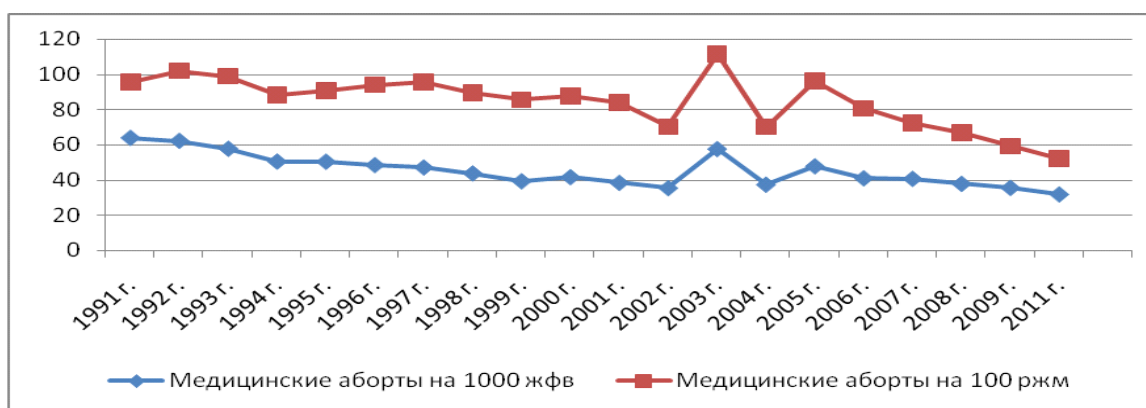


Fig. 5. The dynamics of the prevalence of medical abortions (per 1,000 women aged 15-49) and frequency (100 births) in 1991 to 2011.

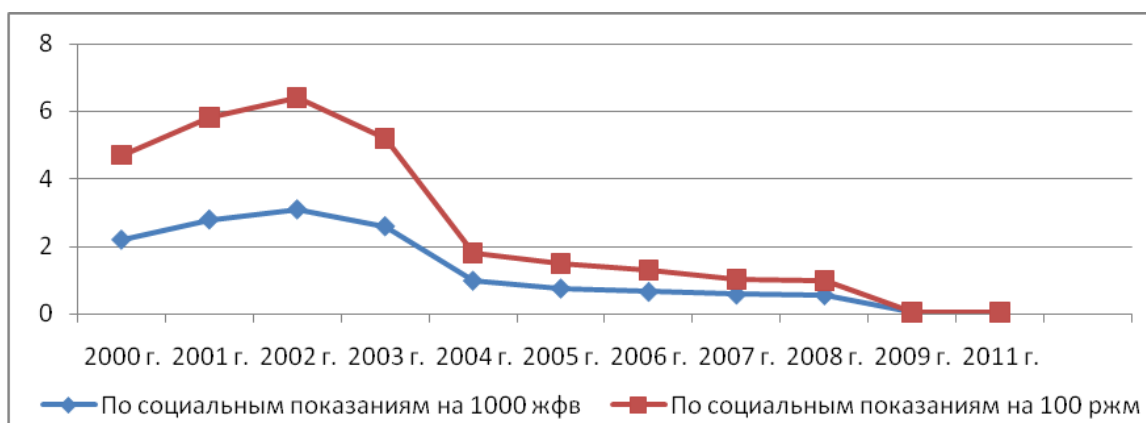


Fig. 6. Dynamics of abortion for social reasons (per 1000 women aged 15-49 years) and frequency (100 births) in 2000 to 2011.

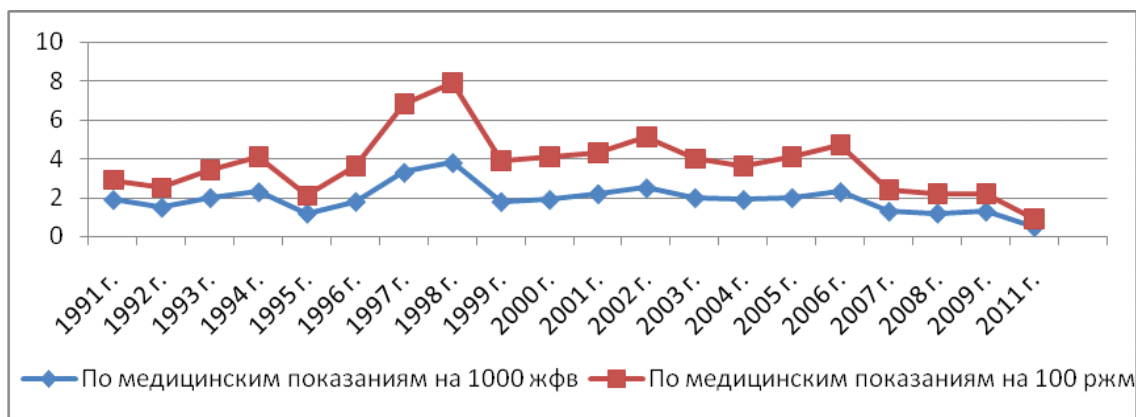


Fig. 7. Dynamics of abortion for medical reasons (per 1000 women aged 15-49 years) and frequency (100 births) in 1991 to 2011.

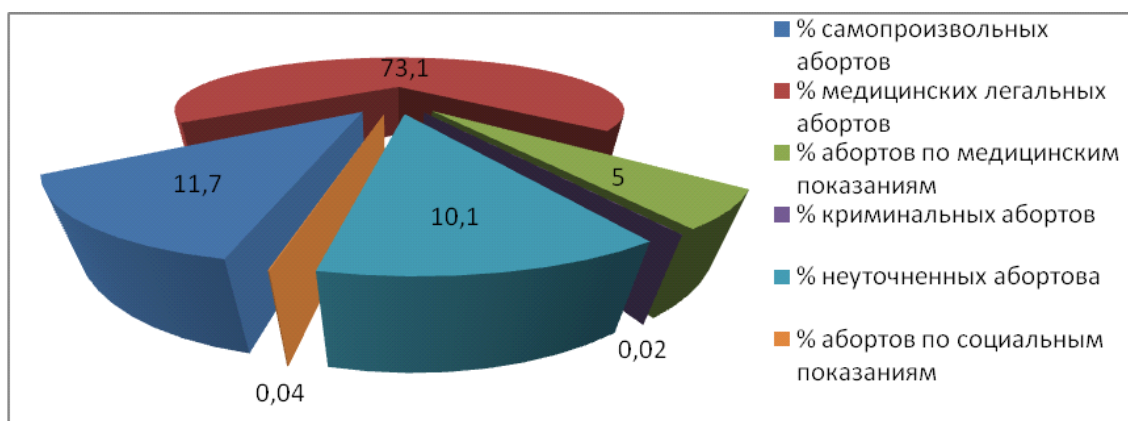


Fig. 8. Structure of registered abortions in 2011 (% of total)

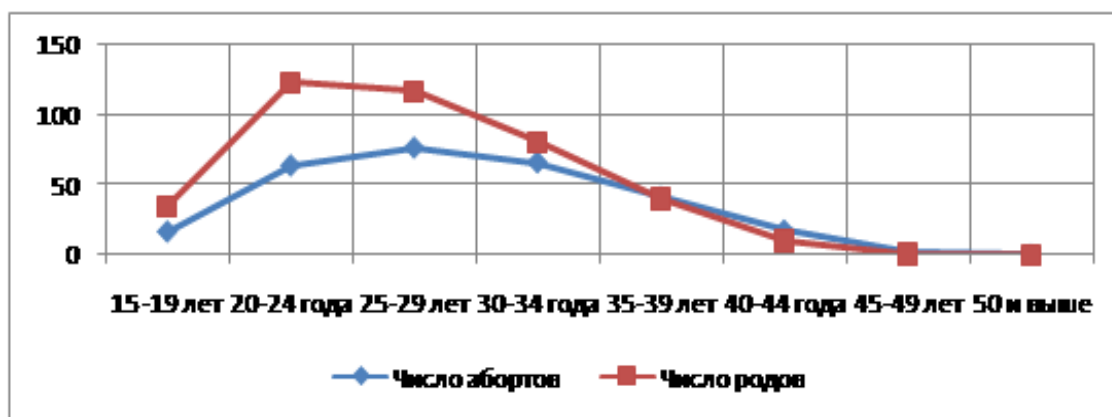


Figure 9. A comparison of age-specific fertility rates and age-specific abortion in 2011

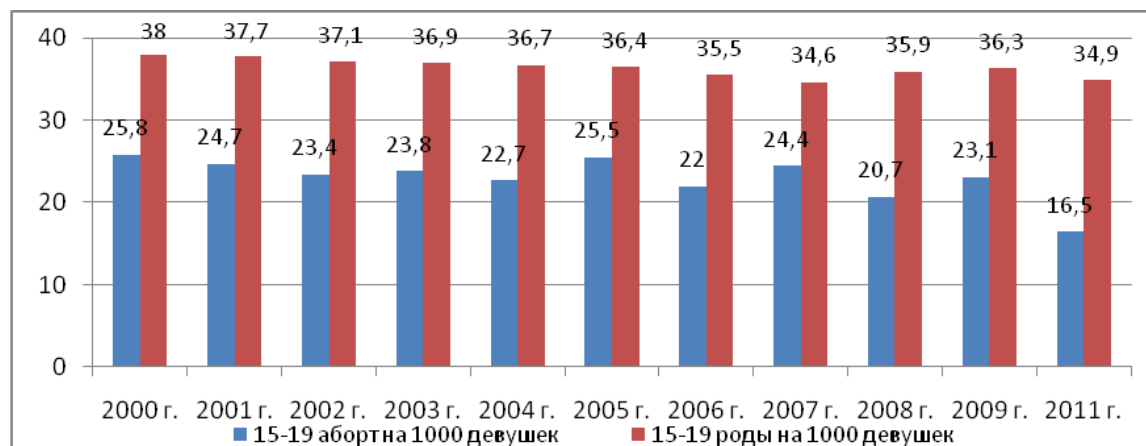


Fig 10. The ratio of prevalence births and abortions among adolescents aged 15-19 years in 2000-2011. (1000 corresponding population)

Table 1

Terms of abortion in the Sakha Republic (Yakutia) in dynamics for the years 2000-2011 (in% to the total number of terminated pregnancies)

Terms of abortion	2000	2002	2003	2004	2005	2006	2007	2008	2009	2011
Before 12 week	85.2	89.6	80.0	74.5	74.8	93.4	95.8	93.3	95.4	95.5
22-27 weeks	3.3	2.8	2.8	2.0	1.5	1.7	1.7	1.5	1.7	1.7

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