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**Dynamics of Some Medical and Demographic Indicators in St. Petersburg During the Period from 2018 to 2023**

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***Background.*** *There have been negative trends in the birth rate and population growth decline in recent years. Forecasts from demographers are also not so encouraging as the next generation of childbearing age is one from the end of the last century which is characterized by low birth rate. Population mortality exceeded the birth rate during the years of challenging and questionable economic reforms. Moreover, there was a high level of chronic morbidity in child population, and physical development had the trend to retardation. Meanwhile under these circumstances, the President of Russian Federation and the Government adopted regulatory documents (decrees, dedicated programs) that determined the directions of state social policy on improving the situation with children in Russian Federation until 2000.* ***Objective. The aim of the study is to*** *evaluate the dynamics of several medical and social indicators of 2018-2023 characterizing demographic trends direction, with proposals on improving medical care in the maternal and child health care system.* ***Methods.*** *The study has covered reporting form №19 of Russian Federal State Statistics Service (Rosstat) for children's outpatient clinics, form №14 for children's hospitals, form №030/у "Check-list of dispensary observation". The study has used the materials of the Presidential Coordination board meeting from November 15, 2016. Statistical data was obtained from the "Office of the Federal State Statistics Service for Saint Petersburg and the Leningrad Region" (Petrostat) and the Center for Analysis and Forecast of Mother and Child Health at Health Committee of Saint Petersburg, Medical Information and Analytical Center ("Major results in the field of health care in Saint Petersburg" from 2019, 2020 2021, 2022). Statistical processing was carried out via variational statistics methods (Pearson's criterion, Fisher's angular transformation criterion) and data from the automated system of prophylactic medical examination, registration certificate FSR №2009/05279, corresponding to the order of the Ministry of Health of Russian Federation №514n dated 10.08.2017.* ***Results.*** *The analysis of study results confirms the negative demographic patterns in Saint Petersburg like the all-Russian. Increase assisted reproductive technologies was noted alongside with birth rate decrease. There are still high rates of stillbirth and perinatal mortality, as well as increased infant mortality rate. The correlation of depopulation processes with children's health worsening and increasing disability is emphasized.* ***Conclusion.*** *The problems raised in this paper do not have an straightforward solution and require multimodal approach.*

***Keywords:*** *birth rate, perinatal and infant mortality, stillbirth rate, morbidity, disability*

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**Table 1.** Birth rates in Saint Petersburg in 2018-2023

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№ п/п** | **Years****Indicators** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** |
| **1.** | Number of births, abs. | 63990 | 56007 | 55350 | 53347 | 50437 | 50251 |
| **2.** | Of these, using ART, abs./% | 3007/4,7 | 2720/4,6 | 2646/4,8 | 2414/4,5 | 2484/4,9 | 2699/5,4 |
| **3.** | Birth rate (per 1000) | 12,0 | 11,0 | 10,3 | 9,9 | 9,4 | 8,97 |

*Note.* ART (ВРТ) — assisted reproductive technologies.

**Table 2.** Infant mortality rate in 2018-2023

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **№ п/п** | **Years****Indicators** | **2018** | **2019** | **2020** | **2021** | **2022** | **2023** |
| 1. | Infant mortality, ‰ | 3,7 | 3,59 | 3,42 | 3,67 | 3,49 | 4,1 |
| 2. | Early neonatal mortality, ‰ | 1,32 | 1,34 | 1,05 | 1,03 | 1,05 | 0,52 |

**Fig. 1.** Dynamics of fetal and infants losses over the studied years

Невынашивание – miscarriage

**Fig. 2.** Children's morbidity in different age groups (per 1000)

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**Fig. 3.** Age-related dynamics of average level of physical development, %

**Fig. 4.** Urogenital morbidity in children (0-17 years old) by gender and study years (per 1000)

Заболеваемость – morbidity

**Table 3.** Incidence of various reproductive system pathologies in girls and boys (0-17 years old) (2022)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **№ п/п** | **Pathology type in girls** | **Rank** | **№ п/п** | **Pathology type in boys** | **Rank** |
| 1. | Menstrual disturbances (N91–93, 94.3–94.6) | 72,0%(1) | 1. | Redundant prepuce, phimosis and paraphimosis (N47) | 28,9%(1) |
| 2. | Inflammatory diseases of vulva and vagina (N75–77) | 15,3%(2) | 2. | Varicocele (I86.1) | 23,1%(2) |
| 3. | Non-inflammatory female genital organs diseases (N80–98) | 8,3%(3) | 3. | Other disorders of penis — leukoplakia, balanoposthitis, balanitis, etc. (N48) | 14,1%(3) |
| 4. | Breast diseases (N60–64, С50, D24) | 3,0%(4) | 4. | Hydrocele and spermatocele (N43) | 11,05%(4) |
| 5. | Others | 1,4%(5) | 5. | Cystitis, bladder dysfunction, other bladder lesions (N30–33) | 4,4%(5) |

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**DISCLOSURE OF INTERESTS**

Not declared.