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New challenges for the educational activities of midwives, gynaecologists and general practitioners

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ABSTRACT

One of the basic tasks of midwives' and other sexual and reproductive care professionals' work is to help people fulfil their family plans. An important tool for achieving this is to offer reliable and relevant information. The aims of this paper are: (1) to map topics currently understood under the term "family planning"; (2) to assess their relevance to the current European situation; (3) to uncover other missing important topics, if needed. Secondary analysis of various documents (e.g. WHO definitions, demographical and medical statistics, relevant research data) showed that the term "family planning" is still being understood only in its negative connotation; thus as a way how not to have children. However, the current situation in developed countries shows that fulfilling parental desires is a similarly important issue. Reproductive healthcare professionals should have a good knowledge of medically assisted reproduction options, their procedures, benefits and risks. They should also be familiar with the causes of infertility (mainly with the avoidable ones), and support their clients on their journey to having a child.

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Introduction

Starting a family and parenting still maintains a very high place on the lists of values across cultures and time periods [1]. In achieving these goals, general practitioner, gynaecologist and a midwife play an important role; the midwives' contribution is increasingly bigger as their qualification rises. The International Confederation of Midwives (ICM) defines the profession of a midwife as

follows: "The midwife is recognised as a responsible and accountable professional who works in partnership with women to give the necessary support, care and advice during pregnancy, labour and the post-partum period, to conduct births is the midwife's own responsibility and to provide care for the new-born and the infant. This care includes preventative measures, the promotion of normal birth, the detection of complications in mother and child, the accessing of medical care or other appropriate assistance and the carrying out of emergency measures.

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The midwife has an important task in health counselling and education, not only for the woman, but also within the family and the community. This work should involve antenatal education and preparation for parenthood and may extend to women's health, sexual or reproductive health and child care." [2, p. 1].

The goals of our paper were: (1) to map the topics currently understood under the term "family planning" ("preparation for parenthood" according to the definition of ICM); (2) to assess its relevance to the current European situation; (3) to bring up other missing important topics, if needed.

Material and methods

Documents focusing on family planning, created by important organizations such as World Health Organization, European Society of Human Reproduction and Embryology, International Planned Family Federation, Fertility Europe, etc. were used as the source of data on the definition of "family planning" and understanding the recent important policies in this area. We used demographic statistics and ART registers as a source of demographic data on reproductive behaviour (births, abortions) and infertility treatment (assisted reproduction, ART). We used documents relevant to the region of the Czech Republic and Central Europe. Additionally, we used other applicable research studies on fertility age limits. The relationships between age (both men and women) and the ability to conceive and give birth to a healthy baby are already very well studied; PubMed shows more than 21 thousand studies for the keywords "fertility" and "age". The results are very consistent; there is a general agreement on these topics. We refer to some of them, with preference for quality resources and also regional relevance. A secondary analysis of these documents was undertaken. Methods of systemic analyses and logical generalization were used to systematize the obtained information.

Results

For WHO, family planning and reproductive health (both being included within WHO interests) are important topics. The WHO definition of family planning is as follows: "Family planning allows individuals and couples to anticipate and attain their desired number of children and the spacing and timing of their births. It is achieved through the use of contraceptive methods and the treatment of involuntary infertility. A woman's ability to space and limit her pregnancies has a direct impact on her health and well-being as well as on the outcome of each pregnancy" [3]. In 2011, WHO published the 388 pages long "Family planning: a global handbook for providers" [4]. It is available in several languages: Arabic, Chichewa, English, Farsi, French, Hindi, Portuguese, Romanian, Russian, Spanish, and Tajik. Its chapter titles are: 1. Combined oral contraceptives; 2. Progestin-only pills; 3. Emergency contraceptive pills; 4. Progestin-only injectables, 5. Month-

ly injectables; 6. Combined patch; 7. Combined vaginal ring; 8. Implants; 9. Copper-bearing intrauterine device; 10. Levonorgestrel intrauterine device; 11. Female sterilization; 12. Vasectomy; 13. Male condoms; 14. Female condoms; 15. Spermicides and diaphragms; 16. Cervical caps; 17. Fertility awareness methods; 18. Withdrawal; 19. Lactational amenorrhea method; 20. Serving diverse groups; 21. Sexually transmitted infections, including HIV; 22. Maternal and newborn health; 23. Reproductive health issues (family planning in postabortion care, violence against women, infertility); 24. Family planning provision. Even though the WHO family planning definition speaks about both sides of family planning, the handbook works with family planning exclusively in its negative connotation (the subchapter "Infertility" is only three pages long). Similar outcomes had analyses of websites of the International Planned Parenthood Federation [5] and the Czech Society for Family Planning and Sexual Education [6].

Education about the importance and possibilities of contraception and especially the availability of reliable and user-friendly alternatives in developed countries has huge positive effects. A current study on induced abortions, published in May 2016 in the *Lancet* [7] states, showed that between 1990–1994 and 2010–2014, the abortion rate declined markedly in developed regions, from 46 to 27 per 1000, and that across regions, Eastern Europe experienced the largest decline in abortion rates, from 88 in 1990–1994 to 42 in 2010–2014 [7]. In the Czech Republic, the number of induced abortions in 2013 dropped to 9.2 compared to 11.6 in 2003 [8]. Slovakia also registered a decrease: "The general extent of artificial abortion rate reached a value of 5.5 abortions per 1000 women of reproductive age with an annual decrease of 0.4 percentage points" [9, p. 9]. It is interesting that globally, 73% of abortions were obtained by married women in 2010–2014 compared with 27% obtained by unmarried women [7]; one would expect a higher rate of abortion among young unmarried women. Statistics also point to an increasing incidence of spontaneous abortions, for example, in the Czech Republic: 4.6 spontaneous abortions per 1000 women in childbearing age in 2003 increased to 5.6 spontaneous abortions per 1000 women in childbearing age in 2013 [8]. The likelihood of spontaneous abortion clearly positively correlates with the age of both women and men: "The risk of miscarriage was higher when the woman was aged ≥ 35 years, as has already been reported in a number of studies. However, the increase in risk was much greater for couples composed of a woman aged ≥ 35 years and of a man aged ≥ 40 years" [10, p. 1649].

The likelihood of becoming pregnant is also related to age. Charts showing the relations of woman's age to various indicators of fertility created by different studies, different authors and in different countries, concede the variability among individual women, but at a negligible percentage. Statistically, fertility drops are clearly defined. The age between 20 and 30 years is considered to be the most fertile period in a woman's life; followed by the period up to 35 years, characterized by a moderate decline in fertility. Around the 35th year, statistics clearly show a big drop in fertility; with the chances of giving birth to a healthy child

being very small at the age of over 41 [11, 12]. Diagnostic classifications are also very clear regarding the relation of fertility to age, whether Czech: “Premature ovarian insufficiency is characterized by a loss of ovarian function before age 40” [13, p. 170]; or international: “Premature ovarian insufficiency is a clinical syndrome defined by the loss of ovarian activity before 40 years of age” [14]. Various studies also show that with age comes an increased risk of miscarriage, pregnancy and obstetric risks, incidence of congenital malformations of the child and economic costs [15, 16, 17].

Plans for parenthood unfortunately are not consistent with biological factors. “The total fertility rate among the countries of the EU is very low, having declined from 2.6 in early 1960 to 1.4 in 1995–2005. Meanwhile, the mean age of women bearing children increased in at least two years in the period 1995–2006, meaning women are giving birth later and having fewer children,” states the EU document “Woman Report” [18, p. 12]. During recent years there has been a distinct trend in the deferral of birth to older ages, which is particularly visible in the Czech Republic, the Baltic countries, Hungary and Slovenia. The mean age for child bearing increased at least two years in the period 1995–2006. In 2006, the average age of women bearing children increased to over 30 years in Spain, Italy, the Netherlands, Sweden, and Denmark and ranged from 29 to 30 years in an additional 10 EU countries [18]. The mean age of EU woman experiencing their first birth was 28.8 in 2013 in comparison to 24.4 in 1980 (for CR 28.1/22.4, for SR 27.7/22.7, Hungary 27.7/22.4, Poland 26.7/23.4) [19, p. 1].

The media report about dramatically decreasing fertility, especially in men; worst-case scenarios are presented. Experts, however, refuse these claims, calling it a myth. Researchers Zvěřina and Pohanka [20] from the Institute of Sexology compared the spermiogrammes of men examined in the Institute since 1954. They comment: “Our recent experience has shown that healthy young men have – as true today as years ago – mostly very good spermiogrammes. Most of today’s subaverage spermatological parameters among men from infertile marriages are fairly well explained by their average age, which is about 10 years higher today than 20 years ago.” Trávník [21, p. 719] reached the same conclusion: “Decreasing female fertility is not such a topic in the media; research literature does not show such trends. However, the incidence of tubal infertility, which is the main reason of the development of assisted reproductive technology (ART), has been reduced in all developed countries. Simultaneously, the incidence of ovarian disorders, which are related to the woman’s age, has been increasing.” The increase in the use of ART is not caused by “civilization” loss of fertility, but clearly just by an increased age in which people decide to start a family. Also shifts in the age of women undergoing *in vitro* fertilization (IVF) prove age to be the major problem. In 2007, women at an ideal or at least good reproductive age (under 34 years) accounted for approximately 67% of patients in Czech ART centres; and women over 40 years for about 11%. In 2013, the ratio of women under 34 years to women over 40 years was 48–25% [22]. The total number of IVF cycles over the years has been significantly

increasing, but it is solely due to an increasing amount of cycles in which donated eggs are used.

Discussion

The analysis shows that the term “family planning” is increasingly seen as ensuring; one does not become a parent unless one does not want to. The other meaning of the term – what steps should be taken towards parenthood – has been lost completely. Changes in reproductive behaviour, especially in developed countries, due to the wide availability of ART (reliable contraception and effective assisted reproduction), however, require a change in the content of education and access to it, as well as improved support of people on their way to having a child. The European patient organization „Fertility Europe“ is calling for an urgent change in the approach to prevention and education in the area of family planning in their new document. Policy statements on prevention and access to treatments [23]: “Governments along with the stakeholders concerned have a responsibility to promote unbiased, rational and age adapted information about all causes, implications and treatment options to help remove the myths and misunderstandings related to infertility. Patient associations across Europe should be recognized as a driving force behind multi-stakeholder awareness campaigns to ensure that education programmes happen. Education for the next generation about infertility and its implications needs to start now. This material should be widely available, free from any form of indoctrination and evidence-based medicine orientated. Male infertility needs to be highlighted as a growing factor in the condition of infertility. Infertility can no longer be considered a ‘woman’s’ problem.”

In its scope, this article does not allow thorough discussion on the choice of themes, in which a midwife should be well-oriented; it does not even allow their detailed description, only some notes:

- ART has brought great hope and in many cases is successful. But it is usually a long run; success seldom occurs at the first attempt. Patients should be prepared.
- There are gender specific paths in experiencing infertility and its treatment. These should be acknowledged and handled sensitively.
- ART is not limited to IVF; it includes much less demanding intrauterine insemination (IUI). It should be indicated at the firm diagnosis as a method of first choice; however, it rarely is so.
- In their plans for parenthood, people rely on hi-tech medicine, which is probably encouraged by marketing-focused presentation in the media. Unfortunately, a lot of people have very naive expectations of its outcomes, as well as of what the treatment actually entails. While ART is able to overcome many obstacles, age is not one of them. “Any result trying to show the effectiveness of ART that does not take into account the age of the woman, mostly always lacks real information value and instead leads to confusion,” reads a comment on tables and graphs of the “National Registry of Assisted

Reproduction” [24, p. 9]. The only option for older couples is using donated eggs, sperm or embryo, which provides additional financial, ethical, psychological problems, etc. It's better to have children early.

- With the increasing success of treating serious diseases such as cancer in children and adolescents, there is a possibility to maintain their hope of genetic parenthood. These procedures are called “fertility preservation”. Professionals from the field of reproductive medicine should be familiar with these options.
- With the possibility of egg freezing, originally developed for fertility preservation, came also an offer to freeze eggs for social reasons; so-called “social freezing”. The method is offered on a commercial basis with usually insufficient information. The midwife or gynaecologist should discuss such plans with their patient.
- The intention to donate an egg should also be thoroughly discussed (if the patient confides such an intention). Hormonal stimulation is indeed very safe, but not completely. A serious risk is hyper-stimulation ovarian syndrome, which occurs primarily in young women.
- It is very likely that a professional in the field of reproductive medicine will encounter a surrogacy procedure. Such a plan and potential treatment should be thoroughly discussed with the surrogate mother as well as with intended parents, depending on who is in their care.
- A discussion on alternative ways to become parents in the case of involuntary childlessness should not be neglected. Therefore, foster care and voluntary childlessness should be discussed.

Conclusion

Our society has been changing rapidly, and so too has our reproductive behaviour. People's lives are greatly affected by technology, including medical technology. Although almost everyone in developed countries has access to the Internet, meaning that we have all information within reach, not everyone looks in reputable and reliable places, or understands them. In the case of family planning, the midwife can play a crucial role, if she is motivated and if she offers a sufficient amount of quality information, not only about methods of contraception, but also about the procedures of assisted reproduction. Often infertility cannot be avoided, but “age related infertility” is increasingly being diagnosed, and therefore shifting parenting plans beyond the biologically appropriate reproductive limit. This diagnosis is avoidable; its prevention is to a certain extent up to specialists in reproductive medicine.

Conflict of interest

The authors have no conflict of interest to declare regarding this article.

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