Commentary

Why we need to teach everyone about reproductive health

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Abstract

Reproductive health is a topic that concerns everyone but its coverage in schools worldwide is patchy. Given current falls in total fertility rate and rises in the age at which women have their first child, there is an urgent need to ensure that teenagers and young adults understand fertility and reproductive health. This would help them to make informed choices about family building. Recent research has shown that even in England, one of the few countries that explicitly incorporates reproductive health education into its school curriculum, teenagers report being taught little about reproductive health and fertility. We conclude that there is an urgent need to improve the quality of the education that school students receive about reproductive health.

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Commentary

Reproductive health concerns us all, regardless of whether or not we intend to have children. From puberty, our bodies undergo changes in preparation for conception. Men typically remain fertile for their entire adult lives, while women experience a finite reproductive lifespan, concluding before menopause. A woman's fertility typically starts to decline substantially around her mid-30s and most women are infertile by their early 40s (American College of Obstetricians and Gynecologists Committee on Gynecologic Practice and Practice Committee, 2014; British Fertility Society, 2025).

The World Health Organization (2025) sees sexual and reproductive healthcare as referring to 'a broad range of services that cover access to contraception, fertility and infertility care, maternal and perinatal health, prevention and treatment of sexually transmitted infections (STIs), protection from sexual and gender-based violence, and education on safe and healthy relationships'. Reproductive health can therefore be understood as a part of 'sexual and reproductive health', with fertility awareness a part of reproductive health.

Globally, the total fertility rate (the average number of children a woman has over the course of her reproductive life) has plummeted. A few decades ago, many countries had fertility rates of two or more; now, rates are well below two children per woman in many countries, with Europe as a whole averaging 1.53 (European Commission, 2024). However, studies in the UK show that adults and teenagers typically express a desire to have two or three children (Biswakarma et al., 2024). Concurrently, the average age for a woman having her first child has risen above 30 in several countries (UNECE, 2024), which matches the age at which women wish to have their first child (Harper and Botero-Meneses, 2022, Harper et al., 2021). Even teenagers report wanting to have their first child from ages 26-35 (Maslowski et al., 2024a). These statistics call for an urgent need to ensure that everyone understands fertility and reproductive health, in order to make informed choices about family building. Too many people find that they are unable to have children years later than they start trying to have children.

Fertility awareness can be defined as 'the understanding of reproduction, fecundity, fecundability, and related individual risk factors (e.g. advanced age, sexual health factors such as sexually transmitted infections (STIs), and lifestyle factors such as smoking, obesity) and non-individual risk factors (e.g. environmental and workplace factors); including the awareness of societal and cultural factors affecting options to meet reproductive family planning, as well as family building needs' (Zegers-Hochschild et al., 2017, p. 400). Unfortunately, studies have shown that many people of reproductive age have low fertility awareness which can impede informed decision-making (Bunting et al., 2012; Daniluk and Koert, 2013; Hammarberg et al., 2013; Vassard et al., 2016; Pedro et al., 2018). Unintended childlessness is a cause of considerable, long-lasting stress, unhappiness and anxiety to people around the world — which effective education about reproductive health, including fertility and the reproductive lifespan, can help to prevent (cf., Littleton, 2012, 2014).

While globally, sex and sexuality education are commonly taught in schools, England is one of the few countries that explicitly incorporates reproductive health education into its curriculum. In 2019, the Department for Education published statutory guidance on

relationships education, relationships and sex education (RSE) and health education. This states that schools are required to teach 'the facts about reproductive health, including fertility, and the potential impact of lifestyle on fertility for men and women and menopause' (Department for Education, 2019). Encouragingly, this has recently been updated, in line with our arguments, to include teaching 'About menstrual and gynaecological health, including: what is an average period; period problems such as premenstrual syndrome; heavy menstrual bleeding; endometriosis; and polycystic ovary syndrome (PCOS). When to seek help from healthcare professionals' (Department for Education, 2025).

Our research team has studied the sex education and reproductive health education curricula in England specifically (Maslowski et al., 2022) and across the UK more generally (Maslowski et al., 2023). We have recently published two papers from our school survey with 16–18-year-olds in the UK, asking them about their intentions to family building (Biswakarma et al., 2024) and their knowledge of reproductive health (Maslowski et al., 2024). It needs to be acknowledged that, of course, teenagers do not always remember what they have been taught about earlier in their school careers. Nevertheless, it is worrying to see that fewer than 3% of teenagers reported learning about endometriosis or polycystic ovary syndrome (PCOS) when these disorders affect 1 in 10 women and can significantly impact on a woman's ability to conceive in a timely manner; furthermore, only around 10% of teenagers say they have learnt about infertility, miscarriage and menopause (Maslowski et al., 2024). This study has been repeated in Belgium (Delbaere et al., 2024), Greece and Japan, with some findings similar to those in the UK but also some differences, and is being undertaken in a number of other countries.

In 2023 we conducted eight focus groups with 49 girls in England, aged 14-15 years, to ask them about the education that their schools provided about periods, whether this was in biology lessons, sex and relationships lessons, or personal, social and health education lessons (Brookes et al., 2025a). Schools usually teach a lesson about menstruation when girls are about 9 years old and then again at when they are 11-12 years old. The girls in our study were in the COVID-19 lockdown when they were 11-12 years old and mostly reported that their period lesson had been missed. But even those who said that they received 'the lesson' felt that two lessons on menstruation throughout their school life was inadequate. It is also common in England for girls to have these lessons without boys being present and the girls felt very strongly that everyone needs to be taught about menstruation. Girls pointed out that males were brothers, fathers and husbands, and they need to understand what women experience. They also reported a lack of menstruation support in schools, with inadequate toilet facilities, and not being allowed to leave lessons to change their period product. Lack of enough education for women and men were issues confirmed in our focus group studies on adult women aged 18 to 40 who felt their male partners and male work colleagues had a lack of understanding about menstruation (Musulin et al., 2025b). In 2023 the British Standards Institution (BSI, 2023) produced a guide on menstruation, menstrual health and menopause in the workplace but this needs to be extended to include schools.

Following the formation of the UK Fertility Education Initiative (FEI) in 2015 by the first author of this commentary and colleagues (Harper et al., 2017, Cheshire et al., 2024), in 2019, the lead author and Karin Hammarberg set up the International Fertility Education

Initiative (IFEI) (Harper et al., 2021; Hammarberg et al., submitted). In 2023, the initiative was rebranded as the International Reproductive Health Education Collaboration (IRHEC) (www.eshre.eu/IRHEC). The FEI has produced a teacher's resource (Cheshire et al., 2024d) and the IRHEC has used the data from our research and others to produce their own educational materials. The IRHEC aims to be a repository for evidence-based educational resources and to conduct studies in different countries.

The latest United Nations World Fertility report points out that 'Discrimination and legal barriers often restrict women's and adolescents' autonomy in making decisions about their sexual and reproductive health' (United Nations Department of Economic and Social Affairs Population Division, 2024, p. ix). While it is important not to overstate what schools can do, it is likely that better reproductive education would help adolescents and adults make autonomous and informed decisions about their sexual and reproductive health.

However, successful education, on any topic, generally requires an alignment of what Oates (2010) refers to as 'control factors'. One needs alignment between such control factors as the curriculum, textbooks, support materials, pedagogy, student assessment, school inspection, initial teacher education, teacher professional development and funding. There are encouraging examples for some of these control factors in relation to reproductive health education in a number of countries. For instance, teacher confidence to provide sexual and reproductive health education is higher in a number of countries in those schools where training and resources are provided, where there is adequate time on the curriculum for sexual and reproductive health education and where the school policies and environment are positive (Walker et al., 2021). There is on-going work to improve, for instance, educational resources for teachers about reproductive health (Larsen at al., 2023; Cheshire et al., 2024; Hamilton and Harper, 2024). Nevertheless, the reality is that we know of no country where all these control factors are well-aligned for reproductive health education.

There therefore remains much to do. With diverse global needs for reproductive health education, further work is needed to tailor approaches so that cultural and educational specifics are addressed. With declining fertility rates and rising ages of childbirth, the time is ripe for better reproductive health education delivery in all countries particularly via secondary schools. The need is perhaps particularly acute given recent signs, in a number of countries, of more conservative approaches to women's reproductive health issues.

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