Editorial
Developments in Reproductive Health Education in India

Whereas the Millennium Development Goals 4 and 5 have focussed attention on maternal and child health, the importance of adolescent health education and, in particular, reproductive health education is emerging. In India, poor sexual health exists across all socioeconomic groups and in both rural and urban settings. Girls have little understanding of pubertal changes, menstrual hygiene, reproductive tract infections (RTIs), contraception and sex itself. The associated stigma causes mothers to avoid this discussion, other than to prohibit pre-marital sex and teach traditional customs. In schools, most teachers do not address the subject because of embarrassment and the absence of a curriculum. This allows the information that is received by girls and passed through peer networks to be incomplete, out of date, entangled with myths and inaccurate [1]. Many girls marry and bear children before the end of adolescence, thus allowing this misinformation to influence their health behaviour and outcomes. In this editorial, we present the evidence on the negative health impacts of poor reproductive health education and how improved awareness can be achieved.

Current Adolescent Reproductive Health Education

The mean age of menarche in India is between 11.95 and 13.4 years [1, 2]. Studies show that many girls are unaware of menstruation before attainment of menarche; true of almost one-third of girls in rural West Bengal [3]. This is not just a rural phenomenon: pupils in urban West Bengal schools showed even greater (58%) ignorance [2], whereas in Rajasthan, the figure is 92%. The usual sources of this information are mothers [4] and friends [5], which can lead to inaccurate ideas about puberty and unfavourable psychological and behavioural responses. For example, natural occurrences within menstruation, such as irregularity, dysmenorrhoea and headache, can be frightening without the correct support and knowledge. This may alter perception of health; in Kerala, the self-reported menstrual disorder prevalence fell from 21.1% to 13.1% after medical evaluation [1].

Currently, many mothers or female relatives are unaware of sexual intercourse, infection, to the next generation. Many girls entering marriage more likely to carry forward their poor knowledge and practices are not ubiquitous and rather depend on societal attitudes, gender imbalances and female sense of autonomy [8]. In the matriarchal society of Thiruvananthapuram city, 45.5% of adolescent girls only use sanitary pads and 38.2% combine pads and cloths. Even among those solely using cloth, the majority dried them in sunlight and only reused the cloth for 2–3 cycles [9].

Lack of knowledge about common sexually transmitted infections (STIs) is also concerning; in eastern India, only 4 of 520 10–19-year-old girls interviewed were able to name an STI other than the well-known HIV. There is greater awareness of RTIs and STIs among men than women in 15/20 states. Although the available statistics show that STI incidence among young unmarried men is increasing [10], this pattern is not replicated in women; unsurprising, as national surveys for STI data do not even include unmarried women [11]. Further surveys show that only 22% of symptomatic rural women sought treatment compared with 40% of symptomatic men [10]. De-stigmatization and better understanding of STI risk could improve treatment-seeking [11, 12].

Despite the legal age of marriage being 18, 60% of females are married before this age and 73% of these have their first child before 18 years of age [1]. Girls who marry earlier tend to be from poorer socio-economic backgrounds, have less schooling and are more likely to carry forward their poor knowledge to the next generation. Many girls entering marriage know very little about sexual intercourse, infection,
contraception or pregnancy, making them very vulnerable. For those below the age of 14 who are married, the mean age of first pregnancy was 16 [13]. This group is at greater risk of anaemia, unplanned pregnancies, complicated pregnancies or deliveries, premature delivery, spontaneous abortions and death in pregnancy [13].

**Evidence-Based Intervention**

Formal education empowers people and improves general health behaviour; nonetheless, specific reproductive health education before puberty is additionally clearly necessary. Not only would this prepare adolescents for pubertal changes, but also improve their long-term health and equip them with skills to care for children. Short-term studies have demonstrated that changes in attitude and awareness can be achieved [14], so the lessons learnt can be used to format long-term sustainable programmes. The International Center for Research on Women has led a 10-year research programme looking at the impact of tailored programmes in different parts of India on measures in knowledge, attitudes and health outcomes [15]. Some state governments have implemented schemes to encourage girls to stay longer in education by providing financial support and scholarships. Interventions must be appropriate, culturally sensitive and delivered alongside education to be effective. State subsidisation of sanitary towels is not always coupled with awareness campaigns, leading to reduced uptake. In Gujarat, an alternative, fallen cloth, was taken up more readily than pads because girls were less fearful about acceptability, supply and disposal [6]. An intervention in Maharashtra that began with qualitative and quantitative needs assessment, used guidelines to develop a pre-tested flipbook and was delivered through community-led monthly meetings led to a significant rise in menstruation awareness and sanitary pad use [16].

Education of youths, parents and teachers is important to allow accurate information dissemination [6, 15]. Health workers can be used: STI/RTI knowledge and clinic attendance improved through one-to-one interactions at home visits, as well as talks at village clinics and health camps [14]. Men and boys should be involved in these programmes to challenge gender norms and promote gender equality. Incorporating sexual health modules within school curricula and training teachers to deliver current information will aid this [1]. Some political leaders suggest these lessons will lead to promiscuity and currently oppose sex education. This is despite 87% of adolescents explicitly expressing a preference for its introduction, because teaching about reproduction is currently restricted to optional biology lessons, in which sexual content is often avoided [17].

Adolescent health is not currently a strategic healthcare priority, and so when tackling this issue, objectives must be clearly identified and the appropriate departments involved [1]. Partnerships between the states, non-governmental organisations and research centres such as the International Center for Research on Women would maximise the specialism, reach and research capacity available. Non-governmental organisations operate in small areas, and are limited by funding, but their focus and creative approaches could inform effective policy change [1]. State governments are able to provide funding and links between sectors, e.g. health and education, and ensure implemented changes are publicised. A good example is the Maharashtra state government, which is currently implementing a module called ‘Building Life Skills to Improve Adolescent Girls’ Reproductive and Sexual Health’, developed by a smaller regional institute [15]. Such integration will help identify optimal strategies for tackling the current gaps in reproductive health knowledge, thus promoting a preventative approach to this important health need.

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**References**

8. Jejeebhoy SJ, Elias C. Investigating Reproductive Tract Infections and Other Gynaecological Disorders: A
17. McManus A, Dhar L. Study of knowledge, perception and attitude of adolescent girls towards STIs/HIV, safer sex and sex education: (A cross sectional survey of urban adolescent school girls in South Delhi, India) BMC Women’s Health, 2008;8:12.