Do early interventions on sexual health for girls and young women in developing countries benefit mother and child health?

Education on sexual health and contraceptive interventions can improve contraceptive use and knowledge related to sexual health. Folic acid use before and during pregnancy can reduce neural tube defects, and iron-folic acid use before pregnancy can reduce anaemia.

What is this review about?
The preconception period is an ideal time to introduce interventions relating to nutrition and other lifestyle factors to ensure good pregnancy preparedness, and to promote health of mothers and babies. In adolescents, malnutrition and early pregnancy are the common challenges, particularly among those who live in low- and middle-income countries (LMICs) where 99% of all maternal and newborn deaths occur. These girls receive little or no attention until their first pregnancy, and often the interventions after pregnancy are too late to reverse any detrimental impacts on health.

This review aims to synthesise the evidence of the effectiveness of preconception care interventions relating to delayed age at first pregnancy, optimising inter-pregnancy intervals, periconception folic acid, and periconception iron-folic acid supplementation on maternal, pregnancy, birth and child outcomes.

What studies are included?
Eligible studies had to be randomised control trials or quasi-experimental trials to evaluate the impact of preconception intervention to delay the age at first pregnancy, optimising inter-pregnancy intervals, periconception folic acid and iron-folic acid supplementation compared to control/placebo or standard care, among girls/women living in LMICs.

Forty-three studies are included in the review. Of these, 26 were on delaying the age at first pregnancy, four on optimising inter-pregnancy intervals, five on periconceptional folic acid supplementation, and 10 on periconceptional iron-folic acid supplementation.
What are the findings of this review?
Overall, interventions to delay the age at first pregnancy and optimising inter-pregnancy intervals have a positive effect on the uptake and usage of contraceptives. Folic-acid supplementation and iron-folic acid supplementation have shown beneficial impacts on reducing neural tube defects and anaemia, respectively. In all cases, the evidence is of very low to moderate quality.

Delay the age at first pregnancy: Education on sexual health and contraception interventions to delay the age at first pregnancy may show improvements in the use of condoms. However, it did not show any improvement in reducing the risk of unintended pregnancy.

Optimising inter-pregnancy intervals: Education on sexual health and provision of contraceptives, along with involvement of male partners on optimising interpregnancy intervals showed improvement in the uptake of contraceptive method. However, it makes little or no difference on the risk of unintended pregnancies when compared to education on sexual health only.

Periconceptional folic-acid supplementation may reduce the incidence of neural tube defects.
Periconceptional iron-folic acid supplementation may reduce anaemia when supplemented weekly and in school set-ups. However, gastrointestinal side effects were commonly reported.

What do the findings of this review mean?
Our review highlights improvements in the uptake of contraceptives through education on sexual health interventions to delay the age at first pregnancy and increase the interval between pregnancies. Similarly, the review underscores a reduction in neglected tropical diseases and anaemia through periconceptional folic-acid and iron-folic acid supplementation.

However, the evidence was of very low to moderate quality and therefore further good quality research is recommended.