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Figure 1. Proposed pathways describing potential impact of selected risk factors on fertility.

Figure shows the exposure, the potential mechanisms and the potential outcomes affected. More distal risk factors, such as education or socio-economic status are not shown on the figure, as the overarching aim of this study was to understand the effects of the new risk factors identified for examination in this study. The potential mechanisms shown in the diagrams are informed by an aggregation of the information available in the best quality reviews in the literature. Biological mechanisms refer to changes or effects to physiology or anatomy (e.g., contracting an infection or the formation of scar tissue). Behavioural mechanisms refer to an effect on the actions people take as a result of the exposure (e.g., abstaining from sex after exposure to HIV). Clinical care mechanisms refer to the clinical care required due to the exposure (e.g., obstetric care will change for a woman with Female Genital Mutilation/Cutting [FGM/C]). Outcomes are markers of fertility problems as presented in available studies and can include an inability to achieve pregnancy, gestational or delivery problems and an inability to achieve live birth or neonatal death.
Of the 57 studies included in meta-analyses, 5 were included in genital tuberculosis, 25 in consanguinity, 7 in Female Genital Mutilation/cutting, 9 in HIV and 11 in bacterial vaginosis analyses. The 4 reviewed narratively were for D&C. Reasons for exclusion at all levels are indicated in PRISMA diagrams for each SRFs in supplemental materials.
Figure 3. Association between risk factor and fertility problems according to type of evidence and proposed timing of effect in reproductive process.

Type of evidence: evidence from current meta-analysis (solid black arrow), evidence from previous meta-analysis (dashed arrow), evidence from primary studies or narrative reviews (grey arrow); CSG = consanguinity; FGM/C = female genital mutilation/cutting; GTB = genital tuberculosis; BV = bacterial vaginosis; D&C = dilatation and curettage; PID = pelvic inflammatory disease; LMIC = low and middle income countries; TFI = tubal factor infertility
Figure 4. Factors impacting fertility.

Some of these factors are included in fertility awareness programs and others were included as a result of the current review. Time trying refers to the time trying to achieve pregnancy. Reproductive and gynaecological refers to conditions or procedures affecting the reproductive tract. Medical conditions refer to both communicable and non-communicable diseases. Blue circles indicate risks that are relevant globally and green circles indicate risks that may not be relevant globally. PID = Pelvic Inflammatory Disease; FGM/C = Female Genital Mutilation/Cutting.