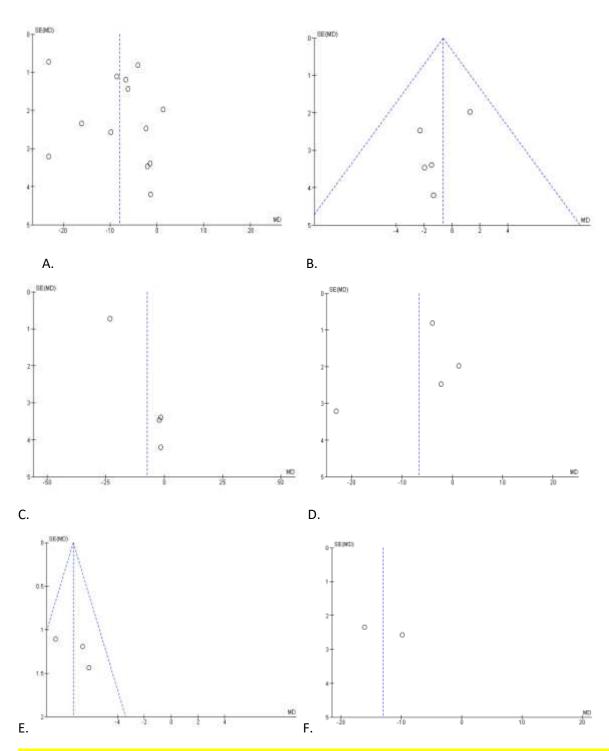
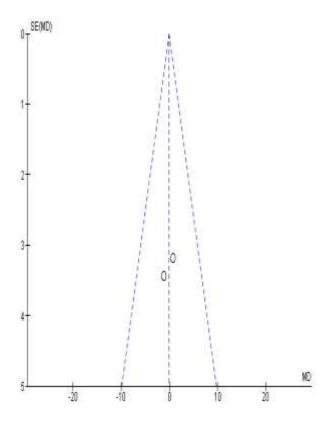


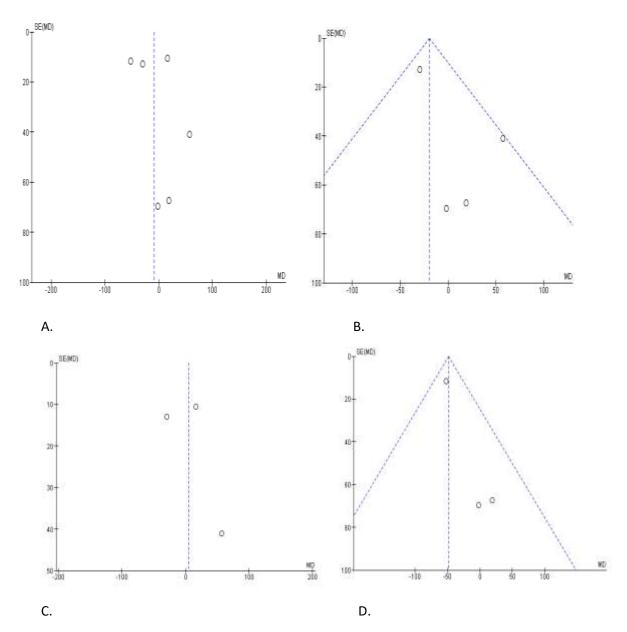
Supplementary F1: Funnel's plot showing the publication bias of studies included for ejaculate volume after meta-analysis (A), sensitivity analysis (B), subgroup analysis among men in China (C), and subgroup analysis among men in Japan (D).



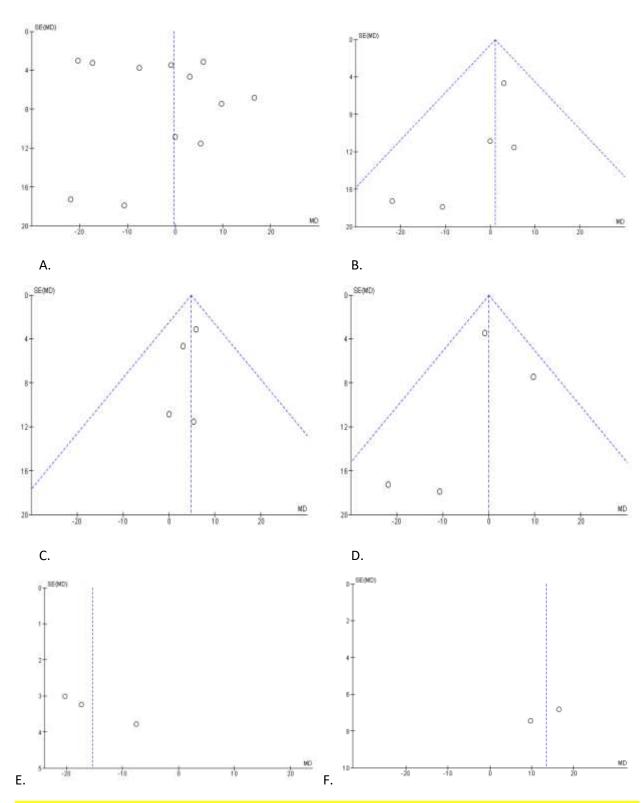
Supplementary F2: Funnel's plot showing the publication bias of studies included for sperm motility after meta-analysis (A), sensitivity analysis (B), subgroup analysis among men in China (C), subgroup analysis among men in Japan (D), , subgroup analysis among men in Poland (E), and subgroup analysis among men in USA (F).



Supplementary F3: Funnel's plot showing the publication bias of studies included for sperm viability



Supplementary F4: Funnel's plot showing the publication bias of studies included for sperm count after meta-analysis (A), sensitivity analysis (B), subgroup analysis among men in China (C), and subgroup analysis among men in Japan (D).



Supplementary F5: Funnel's plot showing the publication bias of studies included for sperm concentration after meta-analysis (A), sensitivity analysis (B), subgroup analysis among men in China (C), subgroup analysis among men in Japan (D), , subgroup analysis among men in Poland (E), and subgroup analysis among men in USA (F).