Reviewer’s report

**Title:** Utilization of antenatal ultrasound scan and implications for caesarean section: a cross-sectional study in rural Eastern China

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**Reviewer:** Xing Lin Feng

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1. In the introduction section, the authors emphasized too much on the safety and cost issues of antenatal ultrasound examination which are redundant. Antenatal ultrasound scan is just the explanatory variable and the authors provide no evidence in their analysis addressing the comments made here. The key dependent variable addressed in this paper is Caesarean section, therefore I suggest the authors to rewrite the introduction by focusing on the abundant literature reporting rising Caesareans in China.

2. Methods
   The first paragraph should be in the acknowledgement

3. Data analysis
   The authors stated that they use self report questionnaires to collect information on “pregnancy complications (including placenta praevia, polyhydramnios, oligohydramnios uterus myoma, ovarian cyst, hypertension, diabetes, hepatitis, nephritis, acute appendicitis, anaemia, intrahepatic cholestasis of pregnancy, blood type incompatibility)”. There are two major comments warrants attention here, firstly, is self report reliable for these professional diagnosis? Secondly, are any of these causes equally related to the indication of Caesareans?

   Furthermore, the pregnant outcomes for the births investigated are not conditioned on in the analysis, which is definitely associated with the use of Caesareans.

   These issues questions the authors statement that “Having reviewed the key literature and carefully considered the situation in China, the following socio-demographic and clinical variables were selected”

4. Results
   1) Table 1, the numbers reported warrant careful attention. For some of the variables, the authors reported row proportions, for example, maternal age, while for others column proportions (eg. antenatal care) are reported.

   2) Table 1, for women who have 1-2 ultrasound scan, 72.7% of them have “NO” antenatal care, the data is questionable against logic. Should the woman have ultrasound scan without any antenatal care?

   3) Table 2, the results are unclear for review due to the absent of base group for
several explanatory variables.

4) Table 2, the definition of the key explanatory variables are not clear, particularly “Antenatal ultrasound scans”