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RESPONSE TO LETTER

On Exposure Definition and Temporal Interpretation in the Reported Association Between Number of Pregnancies and Rheumatoid Arthritis [Response to Letter]

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Dear editor

We thank Wang et al for their interest in our article and for their thoughtful comments.

We agree that the exposure in our study is best understood as a broad measure of pregnancy history, rather than parity or postpartum exposure itself. In NHANES, this variable is based on the self-reported question, "How many times have you been pregnant?" It therefore reflects lifetime pregnancy count, but does not distinguish live birth, miscarriage, induced abortion, or other pregnancy outcomes. This is an important point, and we agree that these reproductive factors should not be treated as interchangeable.

We also acknowledge that our outcome was self-reported rheumatoid arthritis rather than clinically confirmed incident RA. As with other questionnaire-based analyses, some misclassification is possible, and this should be considered when interpreting the size of the association.

We further agree that the cross-sectional design limits temporal interpretation. Our study was designed to examine the association between self-reported pregnancy history and self-reported RA in a nationally representative sample, not to establish a causal relationship. For this reason, the findings should be interpreted with appropriate caution.

Regarding the pattern observed when the number of pregnancies exceeded three, we agree that it should not be taken as a definitive clinical threshold. We view this as an empirical pattern observed in this dataset, which may be useful for generating hypotheses, but which requires confirmation in prospective studies.

At the same time, we would like to note that these issues were acknowledged in our original article. We discussed the cross-sectional nature of the study, the use of self-reported RA, the possibility of recall bias, and the lack of detailed information on pregnancy outcomes such as miscarriage and induced abortion. Within these limitations, we believe our study still adds useful population-level evidence showing that a higher lifetime number of pregnancies was associated with higher odds of self-reported RA in women in NHANES 2015–2018.

We appreciate the opportunity to clarify these points. We agree that future studies with validated RA outcomes, clearer pregnancy outcome data, and better information on timing will be important for refining the interpretation of this association.

Disclosure

The authors report no conflicts of interest in this communication.

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