STROBE Statement—checklist of items that should be included in reports of observational studies

Section/item	Item No	Recommendation	Reported on Page Number/Line Number	Reported on Section/Paragraph
Title and abstract	1	(a) Indicate the study's design with a commonly used term in the title or the abstract	Page 2 /Line 22-32	Abstract / Paragraph 2
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	Page 2 / Line 33-44	Abstract /Paragraph 3
Introduction				
Background/ rationale	2	Explain the scientific background and rationale for the investigation being reported	Page 4-5 / Line 51-76	Introduction/Paragraph 1-2
Objectives	3	State specific objectives, including any prespecified hypotheses	Page 5 / Line 73-76	Introduction/Paragraph 2
Methods				
Study design	4	Present key elements of study design early in the paper	Page 6 / Line 78-88	Methods / Paragraph 1
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Page 6-7 9/ Line 89-104 154-157	Methods / Paragraph 2 9
Participants	6	(a) ***Cohort study***—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up ***Case-control study***—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls ***Cross-sectional study***—Give the eligibility criteria, and the sources and methods of selection of participants	Page 6 / Line 89-96 Page 9 / Line 154-157	Methods / Paragraph 2, 9
		(b) ***Cohort study***—For matched studies, give matching criteria and number of exposed and unexposed ***Case-control study***—For matched studies, give matching criteria and the number of controls per case	Page 11 / Line 186-198	Methods / Paragraph 12
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	Page 10-11 / Line 159-184	Methods / Paragraph 10-11
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	**Page 11-12 / Line 186-212**	Methods / Paragraph 12-13
Bias	9	Describe any efforts to address potential sources of bias	Page 11-12 / Line 186-212	Methods / Paragraph 12-13
Study size	10	Explain how the study size was arrived at	Page 6 / Line 79-88	Methods / Paragraph 1
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	Page 11-12 / Line 186-212	Methods / Paragraph 12-13

Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	Page 11-12 / Line 186-212	Methods / Paragraph 12-13
		(b) Describe any methods used to examine subgroups and interactions	Page 12 / Line 209-212	Methods / Para 13
		(c) Explain how missing data were addressed	Page 9 / Line 153-157	Methods / Paragraph 9
		(d) ***Cohort study***—If applicable, explain how loss to follow-up was addressed ***Case-control study***—If applicable, explain how matching of cases and controls was addressed ***Cross-sectional study***—If applicable, describe analytical methods taking account of sampling strategy	Page 9 / Line 153-157	Methods / Paragraph 9
		(e) Describe any sensitivity analyses	N/A	The study design don't need
Results				
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed	Page 12 / Line 215-218	Results / Paragraph 1
		(b) Give reasons for non-participation at each stage	page 6 / Line 86-95	Method / Paragraph 2
		(c) Consider use of a flow diagram	Page 12 / Line 215-217	Results / Paragraph 1, Fig1
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders	Page 13 / Line 216-233	Results / Para1-2, Table 1
		(b) Indicate number of participants with missing data for each variable of interest	N / A	The missing data were found
		(c) ***Cohort study***—Summarise follow-up time (eg, average and total amount)	Page 12 / Line 217-218	Results / Para 1
Outcome data	15*	***Cohort study***—Report numbers of outcome events or summary measures over time	Page 14-15 / Line 254-266	Results / Para 4
		Case-control study—Report numbers in each exposure category, or summary measures of exposure	N/A	This is not a case-control study
		Cross-sectional study—Report numbers of outcome events or summary measures	N/A	This is not a case-control study
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included	Page 14-15 / Line 254-266	Results / Para 4, Table 6
		(b) Report category boundaries when continuous variables were categorized	N / A	Continuous variables were not categorized
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	N / A	Condition not met
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Page 13-14 / Line 245-252	Results / Para 2-3
Discussion				
Key results	18	Summarise key results with reference to study objectives	Page 16-18 / Line 287-329	Discussion / Para 3-5
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Page 19 / Line 346-361	Discussion / Para 8

Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Page 14-15 / Line 268-305	Discussion / Para 3-4
Generalisability	21	Discuss the generalisability (external validity) of the study results	Page 13 / Line 251-256	Discussion / Para 1
Other information				
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	No funding for this work	

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at http://www.plosmedicine.org/, Annals of Internal Medicine at http://www.annals.org/, and Epidemiology at http://www.epidem.com/). Information on the STROBE Initiative is available at www.strobe-statement.org.

Article information: https://dx.doi.org/10.21037/jtd-23-477
*As the checklist was provided upon initial submission, the page number/line number reported may be changed due to copyediting and may not be referable in the published version. In this case, the section/paragraph may be used as an alternative reference.