

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	1	Title
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	2-3	Abstract
Introduction				
Background/ rationale	2	Explain the scientific background and rationale for the investigation being reported	5	Paragraphs 1-2
Objectives	3	State specific objectives, including any prespecified hypotheses	5	Last sentence of 2 nd paragraph
Methods				
Study design	4	Present key elements of study design early in the paper	6	1 st paragraph, 1 st sentence
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	6-7	Sections-Study design and data sources through conclusion of Electronic Health Record Data section
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	6-7	Sections-Study design and data sources through Electronic Health Record Data section
		(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	N/A	N/A
Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	6-7	Section- Electronic Health Record Data
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	6-7	Section- Electronic Health Record Data
Bias	9	Describe any efforts to address potential sources of bias	16-17	Last paragraph on page 16 extending to conclusion of that paragraph on pg 17

Study size	10	Explain how the study size was arrived at	9	1 st sentence, Quantitative Results section
Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	6-7, 8-9	Sections- Electronic Health Record Data, Analysis

Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding	8-9	Section-Analysis
		(b) Describe any methods used to examine subgroups and interactions	8-9	Section-Analysis
		(c) Explain how missing data were addressed	8-9	Section-Analysis, 4 th sentence
		(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	N/A	N/A
		(e) Describe any sensitivity analyses	N/A	N/A
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	N/A	N/A
		(b) Give reasons for non-participation at each stage	N/A	N/A
		(c) Consider use of a flow diagram	N/A	N/A
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders		N/A
		(b) Indicate number of participants with missing data for each variable of interest	N/A	N/A
		(c) Cohort study —Summarise follow-up time (eg, average and total amount)	N/A	N/A
Outcome data	15*	Cohort study —Report numbers of outcome events or summary measures over time	N/A	N/A
		Case-control study —Report numbers in each exposure category, or summary measures of exposure	N/A	N/A
		Cross-sectional study —Report numbers of outcome events or summary measures	9-10 Table 1, Table 2	Section-Quantitative Results, Table 1, Table 2

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	9-10 Table 1, Table 2	Section-Quantitative Results, Table 1, Table 2
		(b) Report category boundaries when continuous variables were categorized	N/A	N/A
		(c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period	N/A	N/A
Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	N/A	N/A
Discussion				
Key results	18	Summarise key results with reference to study objectives	13	Section-Discussion, 1 st paragraph
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	16-17	Last paragraph on page 16 extending to conclusion of that paragraph on pg 17
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	14-16	Section-Discussion
Generalisability	21	Discuss the generalisability (external validity) of the study results	17-19	Section-Conclusions
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	18	Acknowledgements

Standards for Reporting Qualitative Research (SRQR)*

<http://www.equator-network.org/reporting-guidelines/srqr/>

	Page/section
Title and abstract	
Title - Concise description of the nature and topic of the study Identifying the study as qualitative or indicating the approach (e.g., ethnography, grounded theory) or data collection methods (e.g., interview, focus group) is recommended	Pg. 1, Title
Abstract - Summary of key elements of the study using the abstract format of the intended publication; typically includes background, purpose, methods, results, and conclusions	Pg. 2-3, Abstract
Introduction	
Problem formulation - Description and significance of the problem/phenomenon studied; review of relevant theory and empirical work; problem statement	Pg. 5, Paragraphs 1-2
Purpose or research question - Purpose of the study and specific objectives or questions	Pg. 5, Last sentence of 2 nd paragraph
Methods	
Qualitative approach and research paradigm - Qualitative approach (e.g., ethnography, grounded theory, case study, phenomenology, narrative research) and guiding theory if appropriate; identifying the research paradigm (e.g., postpositivist, constructivist/ interpretivist) is also recommended; rationale**	Pg. 9, First full paragraph, 1 st sentence

<p>Researcher characteristics and reflexivity - Researchers' characteristics that may influence the research, including personal attributes, qualifications/experience, relationship with participants, assumptions, and/or presuppositions; potential or actual interaction between researchers' characteristics and the research questions, approach, methods, results, and/or transferability</p>	<p>Pg. 7, semi-structured interviews section, 2nd sentence Pg. 8, first full paragraph, 2nd sentence</p>
<p>Context - Setting/site and salient contextual factors; rationale**</p>	<p>Pg. 6, 1st paragraph under Study Design and Data Sources</p>
<p>Sampling strategy - How and why research participants, documents, or events were selected; criteria for deciding when no further sampling was necessary (e.g., sampling saturation); rationale**</p>	<p>Pg. 7-8, Semi-Structured Interviews section, 1st two paragraphs</p>
<p>Ethical issues pertaining to human subjects - Documentation of approval by an appropriate ethics review board and participant consent, or explanation for lack thereof; other confidentiality and data security issues</p>	<p>Pg. 6, last sentence of 1st paragraph, pg. 7, last full sentence on the page, pg 8, 2nd to last sentence of first full paragraph, pg. 8 last paragraph before Analysis section</p>
<p>Data collection methods - Types of data collected; details of data collection procedures including (as appropriate) start and stop dates of data collection and analysis, iterative process, triangulation of sources/methods, and modification of procedures in response to evolving study findings; rationale**</p>	<p>Pg. 7-8, Semi-structured interviews section</p>
<p>Data collection instruments and technologies - Description of instruments (e.g., interview guides, questionnaires) and devices (e.g., audio recorders) used for data collection; if/how the instrument(s) changed over the course of the study</p>	<p>Pg. 7-8, last sentence of each of the 1st two paragraphs of the Semi-Structured interviews section</p>

Units of study - Number and relevant characteristics of participants, documents, or events included in the study; level of participation (could be reported in results)	Pg. 10, 1 st sentence of Qualitative results section, Table 3
Data processing - Methods for processing data prior to and during analysis, including transcription, data entry, data management and security, verification of data integrity, data coding, and anonymization/de-identification of excerpts	Pg. 9, First full paragraph
Data analysis - Process by which inferences, themes, etc., were identified and developed, including the researchers involved in data analysis; usually references a specific paradigm or approach; rationale**	pg. 8 last paragraph before Analysis section Pg. 9, First full paragraph
Techniques to enhance trustworthiness - Techniques to enhance trustworthiness and credibility of data analysis (e.g., member checking, audit trail, triangulation); rationale**	Pg. 9, last sentence of first full paragraph

Results/findings

Synthesis and interpretation - Main findings (e.g., interpretations, inferences, and themes); might include development of a theory or model, or integration with prior research or theory	Pg. 10-13, Qualitative Results Section
Links to empirical data - Evidence (e.g., quotes, field notes, text excerpts, photographs) to substantiate analytic findings	Table 4

Discussion

Integration with prior work, implications, transferability, and contribution(s) to the field - Short summary of main findings; explanation of how findings and conclusions connect to, support, elaborate on, or challenge conclusions of earlier scholarship; discussion of scope of application/generalizability; identification of unique contribution(s) to scholarship in a discipline or field	Pg. 13-16, Discussion
Limitations - Trustworthiness and limitations of findings	Pg. 16-17, Limitations paragraph

Other

Conflicts of interest - Potential sources of influence or perceived influence on study conduct and conclusions; how these were managed	Pg. 19, Footnote
Funding - Sources of funding and other support; role of funders in data collection, interpretation, and reporting	Pg. 19, Acknowledgements

*The authors created the SRQR by searching the literature to identify guidelines, reporting standards, and critical appraisal criteria for qualitative research; reviewing the reference lists of retrieved sources; and contacting experts to gain feedback. The SRQR aims to improve the transparency of all aspects of qualitative research by providing clear standards for reporting qualitative research.

**The rationale should briefly discuss the justification for choosing that theory, approach, method, or technique rather than other options available, the assumptions and limitations implicit in those choices, and how those choices influence study conclusions and transferability. As appropriate, the rationale for several items might be discussed together.

Article information: <https://dx.doi.org/10.21037/mhealth-22-43>
*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.