**Research checklist**

**Source:** STROBE statement

**Reference:** von Elm E, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP; STROBE Initiative. The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. J Clin Epidemiol. 2008 Apr;61(4):344-9.

**Manuscript under analysis:** Physical activity patterns and clusters in 1001 patients with chronic obstructive pulmonary disease, by Rafael Mesquita, Gabriele Spina, Fabio Pitta, David Donaire-Gonzalez, Brenda M. Deering, Mehul S. Patel, Katy E. Mitchell, Jennifer Alison, Arnoldus J. R. van Gestel, Stefanie Zogg, Philippe Gagnon, Beatriz Abascal-Bolado, Barbara Vagaggini, Judith Garcia-Aymerich, Sue C. Jenkins, Elisabeth A. P. M. Romme, Samantha S. C. Kon, Paul S. Albert, Benjamin Waschki, Dinesh Shrikrishna, Sally J. Singh, Nicholas S. Hopkinson, David Miedinger, Roberto P. Benzo, François Maltais, Pierluigi Paggiaro, Zoe J. McKeough, Michael I. Polkey, Kylie Hill, William D-C. Man, Christian F. Clarenbach, Nidia A. Hernandes, Daniela Savi, Sally Wootton, Karina C. Furlanetto, Li W. Cindy Ng, Anouk W. Vaes, Christine Jenkins, Peter R. Eastwood, Diana Jarreta, Anne Kirsten, Dina Brooks, David R. Hillman, Thaís Sant’Anna, Kenneth Meijer, Selina Dürr, Erica P. A. Rutten, Malcolm Kohler, Vanessa S. Probst, Ruth Tal-Singer, Esther Garcia Gil, Albertus C. den Brinker, Jörg D. Leuppi, Peter M. A. Calverley, Frank W. J. M. Smeenk, Richard W. Costello, Marco Gramm, Roger Goldstein, Miriam T. J. Groenen, Helgo Magnussen, Emiel F. M. Wouters, Richard L. ZuWallack, Oliver Amft, Henrik Watz, and Martijn A. Spruit.

The STROBE statement – checklist of items that should be addressed in reports of observational studies.

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|  | Item number | Recommendation | Page number in the manuscript |
| Title and abstract | 1 | (a) Indicate the study’s design with a commonly used term in the title or the abstract  (b) Provide in the abstract, an informative and balanced summary of what was done and what was found | 6 |
| **Introduction** |  |  |  |
| Background/rationale | 2 | Explain the scientific background and rationale for the investigation being reported | 7-8 |
| Objectives | 3 | State specific objectives, including any prespecified hypotheses | 7-8 |
| **Methods** |  |  |  |
| Study design | 4 | Present key elements of study design early in the paper | 9 |
| Setting | 5 | Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow up, and data collection | 9 and 3-7 of the online suppl. |
| 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  (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 | 9 and 3-7 of the online suppl. |
| Variables | 7 | Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable | 9-10 and 7 of the online suppl. |
| 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 | 9-10 and 7 of the online suppl. |
| Bias | 9 | Describe any efforts to address potential sources of bias | 9-11 |
| Study size | 10 | Explain how the study size was arrived at | 9, and 3-7 and 22 of the online suppl. |
| Quantitative variables | 11 | Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen, and why | 10-11, and 7-21 of the online suppl. |
| Statistical methods | 12 | (a) Describe all statistical methods, including those used to control for confounding  (b) Describe any methods used to examine subgroups and interactions  (c) Explain how missing data were addressed  (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  (e) Describe any sensitivity analyses | 9-12, and 6 and 22 of the online suppl. |
| **Results** |  |  |  |
| Participants | 13\* | (a) Report the numbers of individuals at each stage of the study – e.g., numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow up, and analyzed  (b) Give reasons for nonparticipation at each stage  (c) Consider use of a flow diagram | 13 and 23 of the online suppl. |
| Descriptive data | 14\* | (a) Give characteristics of study participants (e.g., demographic, clinical, social) and information on exposures and potential confounders  (b) Indicate the number of participants with missing data for each variable of interest  (c) *Cohort study* – Summarize follow-up time (e.g., average and total amount) | 13-16 |
| Outcome data | 15\* | *Cohort study* – Report numbers of outcome events or summary measures over time  *Case-control study* – Report numbers in each exposure category, or summary measures of exposure  *Cross-sectional study* – Report numbers of outcome events or summary measures | 15 and 16 |
| Main results | 16 | (a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (e.g., 95% confidence interval). Make clear which confounders were adjusted for and why they were included  (b) Report category boundaries when continuous variables were categorized  (c) If relevant, consider translating estimates of relative risk into absolute risk for a meaningful time period | 16-23, and 23-56 of the online suppl. |
| Other analyses | 17 | Report other analyses done – e.g., analyses of subgroups and interactions, and sensitivity analyses | 16-19, and 23-56 of the online suppl. |
| **Discussion** |  |  |  |
| Key results | 18 | Summarize key results with reference to study objectives | 24 |
| 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 | 26-27 |
| Interpretation | 20 | Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence | 27-28 |
| Generalizability | 21 | Discuss the generalizability (external validity) of the study results | 26 |
| **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 | 29-31 |

\* Give such 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 websites of PLoS Medicine at http://www.plosmedi cine.org, Annals of Internal Medicine at http:/www.annals.org, and Epidemiology at http://www.epidem.com). Separate versions of the checklist for cohort, case-control, and cross-sectional studies are available on the STROBE website at http://www.strobe-statement.org.