Checklist to evaluate the quality of scientific publications

Design

Is the aim of the study clearly described? □ □ □

Are the study population(s) and the inclusion and exclusion criteria described in detail? □ □ □

Were the subjects allocated randomly to the different arms of the study? □ □ □

If yes:

Is the method of randomization described? □ □ □

a. Is the number of cases discussed? □ □ □

b. Were sufficient cases enrolled (e.g. Power ≥50%)? □ □ □

Are the methods of measurement (e.g. laboratory examination, questionnaire, diagnostic test) suitable for determination of the target variable (with regard to scale, time of investigation, standardization)? □ □ □

Is there information regarding data loss (response rates, loss to follow-up, missing values)? □ □ □

Study inception and implementation

Are treatment and control groups matched with regard to major relevant characteristics (age, sex, smoking habits etc.)? □ □ □

Are the drop-outs analyzed for differences between the treatment and control groups? □ □ □

How many cases were observed over the whole study period? □ □ □

Are side effects and adverse events during the study period described? □ □ □
Analysis and evaluation

Have the correct statistical parameters and methods been selected, and are they clearly described? □ □ □

Are the statistical analyses clearly described? □ □ □

Are the important parameters (prognostic factors) included in the analysis or at least discussed? □ □ □

Is the presentation of the statistical parameters appropriate, comprehensive, and clear? □ □ □

Are the effect sizes and confidence intervals stated for the principal findings? □ □ □

Is it apparent why the given study design/statistical methods were chosen? □ □ □

Are all conclusions supported by the study’s findings? □ □ □

By using a checklist such as this, the statistical and methodological soundness of a study can be assessed and improvements considered.

Not all of the points in this checklist can be used to evaluate all study types; for example, randomization is particularly applicable to clinical studies.

Source: Modified of checklist from