



Quality of reporting of CKD cohort studies before and after STROBE: A Systematic Review.



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1. Background:

- Inadequate reporting is associated with potentially biased estimates of treatment effects and limits the assessment of a study's strengths, weaknesses and generalizability.
- The Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement was published in October 2007 to address quality of reporting of observational studies, however to date only two of the 60 journals in nephrology have endorsed this recommendation.

2. Aim:

To assess the impact of the publication of the 2007 STROBE statement on the quality of observational study reporting in the nephrology literature.

3. Methods:

3a. Data Selection:

Database: Medline and Embase (Ovidsp interface)

Criteria: Study design: Cohort studies, Age: elderly (age > 65), Exposure: CKD, Outcome: Mortality

Time period: pre-STROBE- (1/1/2002-31/12/2007) post-STROBE- (1/1/2008-31/12/2013)

3b. Data abstraction:

Double sifted
STROBE cohort checklist, NOS, SIGN and CASP

3c. Outcome measure:

STROBE question score (SQS): Number of articles adequately reporting a criterion divided by the number of articles in which this criterion was applicable, expressed as a percentage.

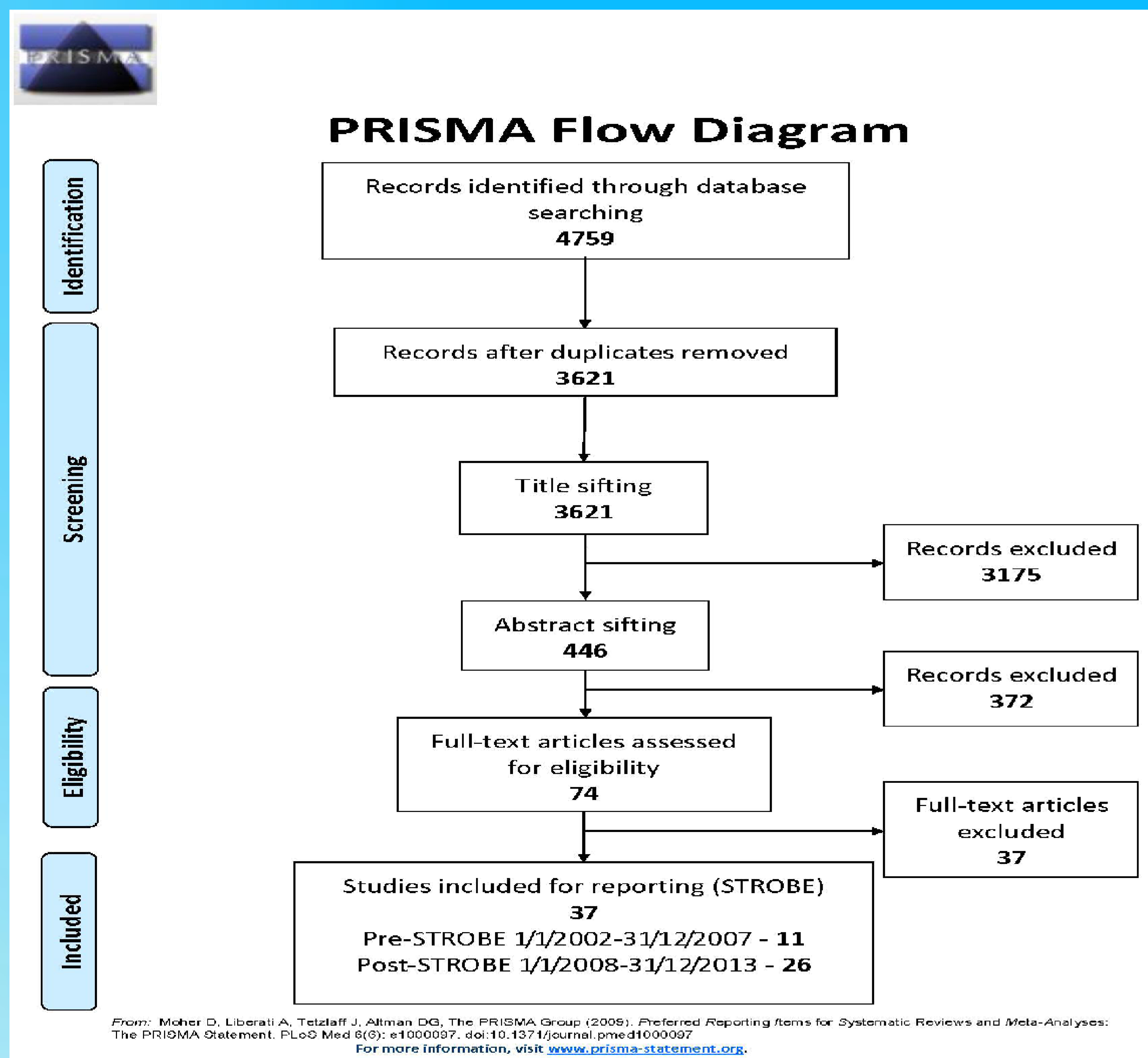
Manuscript STROBE score (MSS): defined as the number of the 55 questions adequately reported in the article divided by the number of applicable items, expressed as a percentage.

3d. Analysis:

Weighted Kappa, Z test with 95% CI, Mann Whitney (MW) Test, Segmented Linear regression model.

4. Results:

4a. Inclusion & Exclusion criteria:

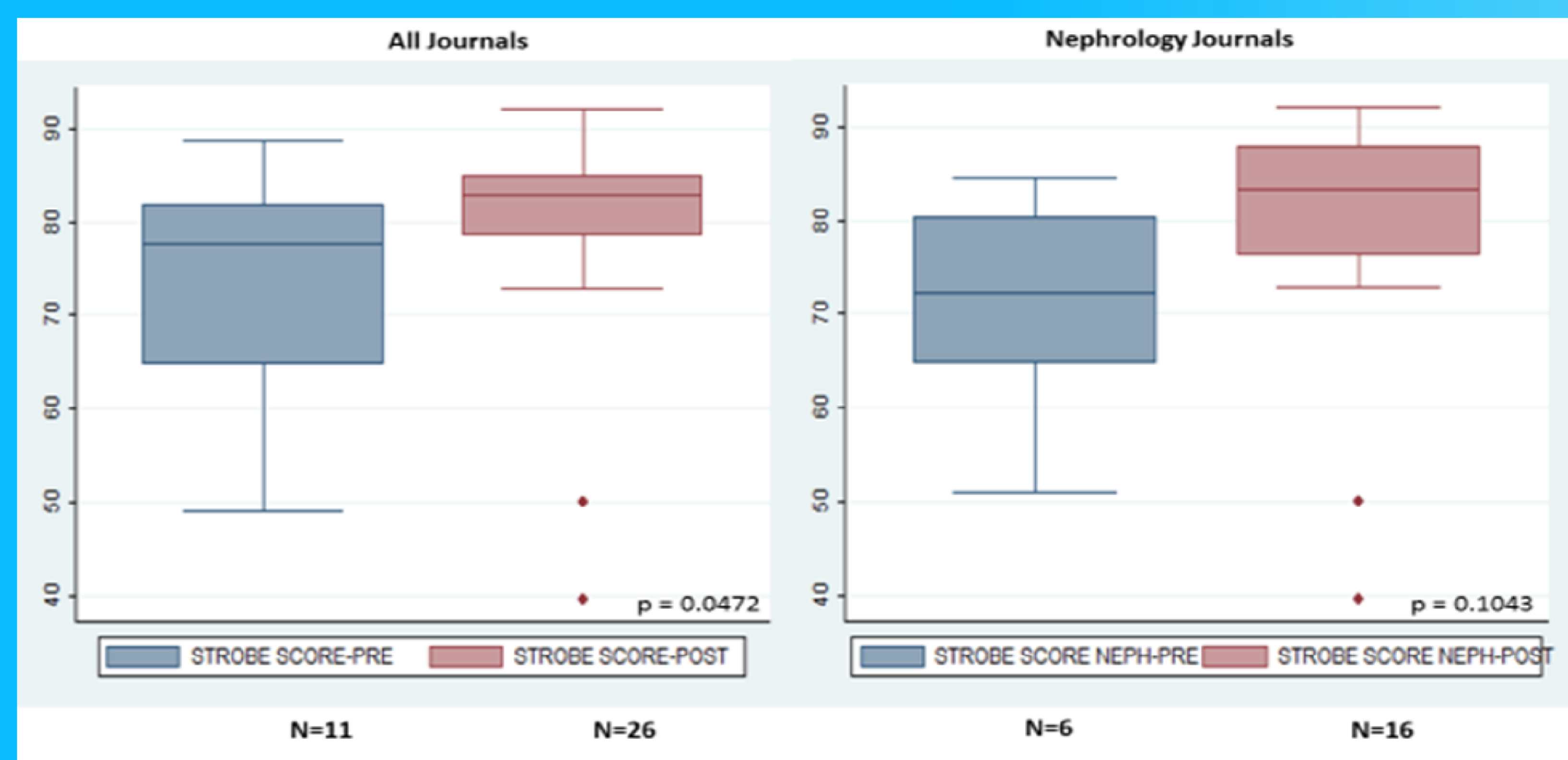


4b. Table: STROBE QUESTION SCORE (SQS), difference with 95% CI and p value

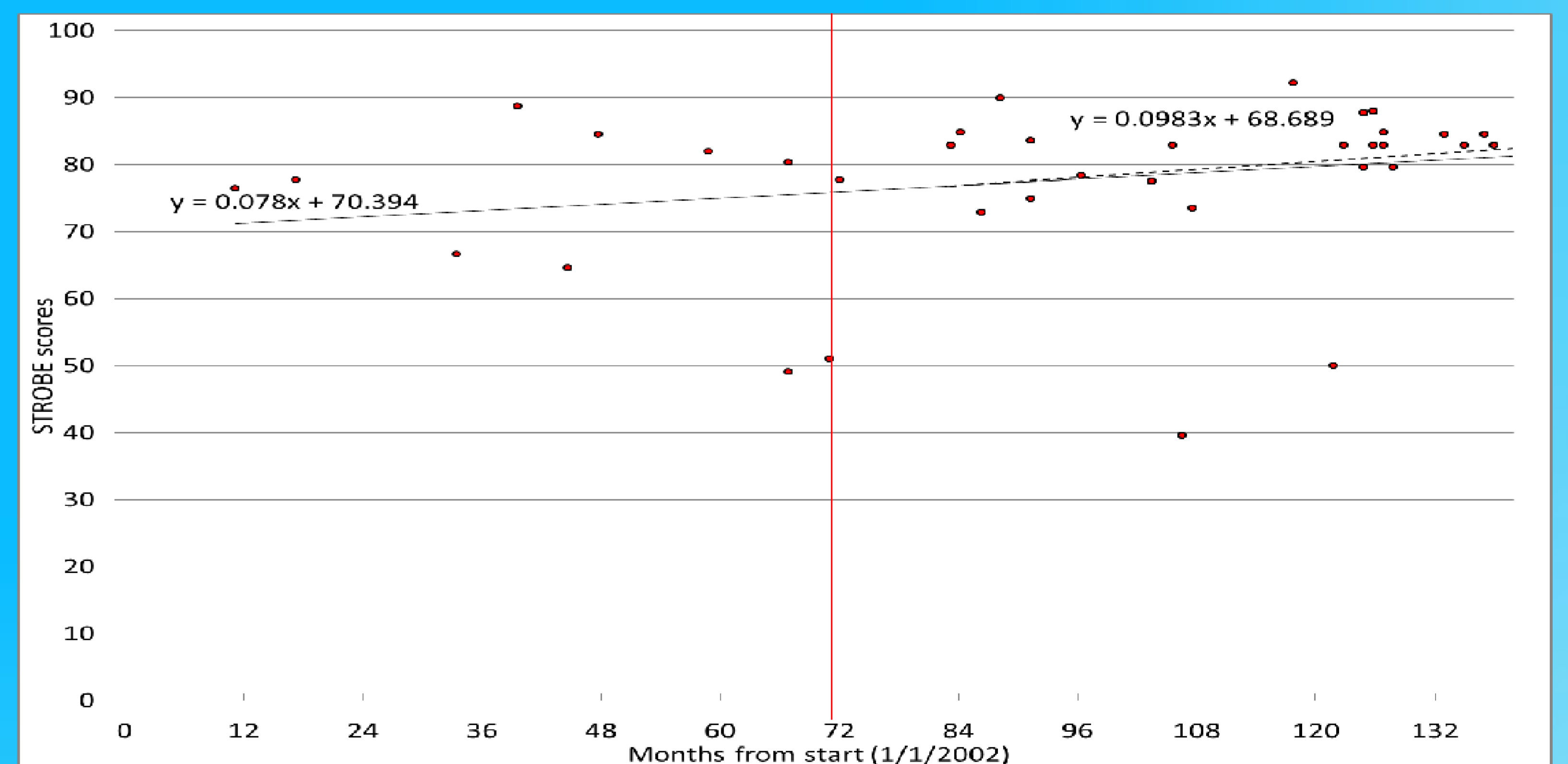
Item number	Data Items	Pre-STROBE SQS	Post-STROBE SQS	Difference	95% CI	p value
3B	Are the objectives reported?	0.73	0.96	0.23	-0.04 to 0.51	0.07
11C	Did they describe why quantitative groups were chosen?	0.30	0.71	0.41	0.07 to 0.75	0.04
12E	Did they describe any sensitivity analysis?	0.18	0.58	0.40	0.10 to 0.70	0.04
17B	Did they do a sensitivity analysis?	0.18	0.65	0.47	0.18 to 0.76	0.02

Item number	Data Items	Pre-STROBE SQS	Post-STROBE SQS	Difference	95% CI	p value
3A	Are any pre specified hypotheses reported?	0.18	0.23	0.05	-0.23 to 0.33	0.7416
10	Did they describe how the study size was determined?	0.0	0.04	-0.04	-0.13 to 0.04	0.9528
13C	Did they use a flow diagram if appropriate?	0.0	0.19	-0.19	-0.34 to -0.04	0.9557
14B	Did they indicate the number of participants with missing data for each variable of interest?	0.27	0.15	-0.12	-0.42 to 0.18	0.4044

4c. Figure: Reporting quality of studies in the two periods in all Journals and restricted to Nephrology Journals



4c. Figure: Time series of STROBE scores from simple and segmented linear regression models.



5a. Strengths:

- Novel study in nephrology.
- Looked at both quality of reporting and study design.
- Results have good internal validity.

5b. Limitations:

- Relatively small sample size of 37 cohort studies.
- Studies included were from one field of medicine.
- Imbalance in the number of studies assessed in the two periods.
- Reviewers were not blinded to the publication date of the study.

6. Conclusion:

- Continuing deficiencies in the reporting of STROBE items and their sub-criteria.
- Weak evidence of improvement in the reporting quality of cohort studies and likely due to penetration of STROBE over time.
- Endorsement by more journals and greater editorial efforts to ensure improved authors' compliance might improve reporting.

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