

Methods in Epidemiologic Research

Sample Problems

Chapter 8 - Cohort Studies

Background

Before accepting the reported results of research studies, each study should undergo a critical assessment. In turn, the completion of that assessment depends on the author's reporting clearly and completely the details of their research. The main items to be reported in cross-sectional, cohort, and case-control studies have been listed and discussed in STROBE (www.strobe-statement.org). See our suggestions in each of the appropriate chapters in this text.

Questions

Below we have listed a few example cohort studies that you can use to practice your assessment of study design and research reporting. Given that there is some subjectivity in the assessment of studies, we do not provide “solutions” to the following questions. Where possible, it will be worthwhile to discuss your views with colleagues and mentors. For one or more of the studies listed below, consider the following

1. Use the STROBE checklist for cohort studies to determine how well the study has been reported.
2. Use the critical assessment scheme presented on page 160 of the text to form an opinion of the validity and usefulness of the study. Note: there is considerable overlap between this checklist and the STROBE checklist, so rather than duplicating your observations, focus on a critical assessment of the study (ie how well was the designed, not how well was it reported)
3. It is difficult to think about forward projection (described on page 159 of the text) once you have already seen the results of the study. Nevertheless, use this approach to project a set of results that are different from those observed. Does this exercise help to identify any issues of concern with the study design?

Papers

Lutsiv O, Giglia L, Pullenayegum E, Foster G, Vera C, Chapman B, et al. A Population-Based Cohort Study of Breastfeeding According to Gestational Age at Term Delivery. *J Pediatr*. 2013.

Wasserstein D, Dwyer T, Gandhi R, Austin PC, Mahomed N, Ogilvie-Harris D. A matched-cohort population study of reoperation after meniscal repair with and without concomitant anterior cruciate ligament reconstruction. *Am J Sports Med*. 2013;41(2):349-55.

Wei L, Macdonald TM, Shimi SM. Appendectomy is associated with increased pregnancy rate: a cohort study. *Annals of surgery*. 2012;256(6):1039-44.