

Methods in Epidemiologic Research

Sample Problems

Chapter 7 - Observational Studies / Cross-sectional 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 cross-sectional 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 cross-sectional 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

Paunescu AC, Dewailly E, Dodin S, Nieboer E, Ayotte P. Dioxin-like compounds and bone quality in Cree women of Eastern James Bay (Canada): a cross-sectional study. *Environ Health*. 2013;12(1):54.

Procter TD, Pearl DL, Finley RL, Leonard EK, Janecko N, Reid-Smith RJ, et al. A Cross-Sectional Study Examining the Prevalence and Risk Factors for Anti-Microbial-Resistant Generic *Escherichia coli* in Domestic Dogs that Frequent Dog Parks in Three Cities in South-Western Ontario, Canada. *Zoonoses Public Health*. 2013.

Zlotta AR, Egawa S, Pushkar D, Govorov A, Kimura T, Kido M, et al. Prevalence of prostate cancer on autopsy: cross-sectional study on unscreened Caucasian and Asian men. *J Natl Cancer Inst*. 2013;105(14):1050-8.