



Critical Appraisal of Cohort/ Intervention Studies On Environmental Health

Advantages of using a cohort/ intervention study design:

- Cohort studies, particularly prospective cohort designs, more clearly indicate the temporal sequence between exposure and outcome. Subjects are considered to be disease-free at the beginning of the observation period when their exposure status (or intervention) is established
- The incidence (new onset) of disease in exposure groups can be calculated
- Multiple effects for a given exposure (or intervention) can be determined

Title Page and Introduction	
Who sponsored the study and what are the authors' affiliations? <i>Bias in study design and interpretation may be a concern</i>	
Is there a convincing rationale and purpose (hypothesis) for doing the study? Does it address a specific issue?	
Study Methods	
Is an appropriate method used to answer the author's question? <i>For example, study of incidence should be determined by a cohort prospective or longitudinal study design</i>	

<p>Was the intervention/ exposure groups clearly defined?</p> <p>Was the exposure accurately ascertained and verified?</p> <p>Do the measures of exposure reflect what they are supposed to measure?</p>	
<p>Is the intervention/exposed group representative of the population of exposed individuals in the community?</p>	
<p>Is the non-intervention/exposed cohort drawn from the same community as the exposed?</p> <p>Were a sufficient number of subjects in the intervention and non-intervention groups selected to allow for adequate study power?</p>	
<p>How comparable are the exposure groups in age, sex, and important confounders, including socioeconomic status?</p> <p>Were other confounders adjusted for in the analysis?</p>	
<p>Was the outcome clearly defined and validated?</p> <p>Was the outcome of interest not present at the start of the exposure determination or intervention?</p>	
Results and Discussion	
<p>Are the results accurate? Does the study have internal validity?</p> <p>Can bias, confounding, and random error be eliminated as alternative explanations?</p>	
<p>Was the attrition rate minimal?</p> <p>Were drop-outs dependent on their exposure/intervention status?</p>	

<p>Can the study findings be generalized to other people and situations, such as the local population?</p> <p>For example, was the study limited to certain age groups?</p>	
<p>Do the results suggest a causal association? (e.g. Bradford Hill Criteria)</p> <p>Are there other studies to support this association?</p>	

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References

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