

# Good example of literature review on observational study design

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## **Association between HIV prevalence and Tuberculosis (TB)**

HIV infection is one of the risk factors for tuberculosis. According to Leidl and colleagues (2010), it is the most common risk factor for tuberculosis in Africa. An estimated 1.4 million new cases of TB were reported among people living with HIV in 2008 (Getahun, Gunneberg, Granich, & Nunn, 2010). In addition, 26% of deaths related to AIDS were attributed to tuberculosis in the same year.

## **Justification for the Design**

The most appropriate study design for establishing whether HIV is a risk factor for tuberculosis infection is cross-sectional study design. It is advantageous for this study for various reasons. First, HIV and TB prevalence can be compared at one given time without having to employ a longitudinal approach since the study does not focus on establishing a trend. This makes the study process cheap and less time-consuming.

The design also enables researchers to observe different groups of subjects at one given time. Comparisons can then be made of the groups based on the observations. Another advantage of this study is that it does not involve manipulation of the environment. Consequently, it has fewer demands.

Cross-sectional design is also advantageous for studies that need to be carried out over short duration of time. For instance, studies carried out to provide basis for quick implementation of various programs. However, this design cannot be used to study causal sequence. This implies that it is not appropriate for studies dealing with causal factors that occur in sequence.

Data obtained from cross-sectional design is also relatively more valid than that obtained from longitudinal studies Rindfleisch (2008)

## **What Can Be Learnt From Using the Design**

Cross-sectional design also provides insight on epidemiologic information of a given population at the time the study is carried out. For instance, researchers are able to tell the prevalence of a given condition at a given time based on data obtained from studies carried out using cross-sectional design. This information can be used to initiate relevant health programs to tackle population health concerns appropriately.

Cross-sectional study design can also provide information on incidence rate of a given condition. This is also important since it can help health program implementers to establish the severity of a problem. Consequently, measures would be taken to correct the trend. A series of studies can also be done so that a trend is established. This may help in assessing and evaluating a program.

## **References**

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