# Free sampling techniques essay sample

# Sampling Techniques

Environmental pollution is a well recognized risk factor for numerous respiratory diseases like asthma and chronic obstructive pulmonary disease (COPD) (Chauhan & Johnstone, 2003). Clinical and epidemiological studies on the link between environmental pollution and respiratory diseases are plagued by diverse and complex methodological issues (Barquera, Rico-Méndez, & Tovar, 2002). This paper will discuss the sample and sampling techniques appropriate for studying the association between respiratory diseases and environmental pollution.

A random sample would be useful in examining the issue of the association between respiratory diseases and environmental pollution. However, due to difficulties in obtaining a random sample from the population on the issue, a convenience sample can also be useful. The convenience sample would involve selection of persons with respiratory diseases thought to be caused or triggered by exposure to environmental pollutants. The link between their respiratory disease and environmental pollutants would then be explored through a retrospective review of their history of exposure to the environmental factors.

Studies on respiratory diseases and environmental population fall in the category of population studies. Like most population studies, a sampling frame that is, an up-to-date list of all eligible subjects is usually unavailable. Therefore, sampling for this type of studies cannot be done using basic sampling techniques like simple or stratified sampling. Instead, they have to use complex sampling techniques capable of covering large areas or populations (Barquera, Rico-Méndez, & Tovar, 2002). Cluster sampling is an

example of the latter techniques. It involves randomly sampling a large unit that contains the elements of interest. The elements included in the final sample are then sampled from the sampled units also called clusters. In some cases, more complex sampling is done whereby random samples are selected from subclusters. The advantages of cluster sampling are: it requires less time for data collection, is cheap, and has less instrumentation errors. The major demerit of this sampling technique is that it requires more complex statistical analysis. The complicated statistical analysis is necessary to eliminate the errors introduced by the sampling technique (Barquera, Rico-Méndez, & Tovar, 2002).

In summary, this paper has examined the sample and sampling techniques appropriate for studying the link between respiratory diseases and environmental pollution. It has established that a random sample is the most appropriate but due to difficulties in getting a sample frame, it is not always feasible. A convenience sample can also be used for retrospective studies. The most suitable sampling technique for population based studies on the issue is cluster sampling.

## References

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