

Research

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Health sciences and medicine research Health sciences and medicine research Cross-section method of research is mostly employed in psychology development. It is also used in various fields that include among others educational and social science. In this method, different sets of people of different interests are targeted in the research process (Gratton, 2004). However, these sets share some of their characteristics, for example, education background, ethnicity and socioeconomic status. The methodology involves collection of data from the study of the whole population, which has been carried out in particular point in a given time. This data is utilized to explore the existing correlation between variables of interests and diseases. In other words, cross-sectional methodology presents an image of the occurrence of a disease in a population in any time interval. This research technique is preferable in the assessment of diseases that pose as a burden to the population. The information gathered by this technique will assist in the allocation of resources related to health and planning.

Cross-sectional study types

Descriptive

It entails the study of purely descriptive information. It is utilized in the assessment of occurrence and distribution of a given disease in a specified population. For example, schools randomly sampled across New York can be utilized to assess the prevalence or the burden of Yellow Fever among 12-17 years old.

Analytical

Analytically, the study data may also be utilized to investigate the relations between an alleged risk factor and an outcome of health. Nevertheless, this type is limited in the drawing of valid conclusion regarding possible casualty

or association since the presence of outcomes and risk factor are determined simultaneously (Blade, 2001). This makes it hard to evaluate which of the exposure or disease came first. Therefore, it requires a combination of more than one methodology for the technique to be rigorous. Information collection regarding the risk factor is retrospective, hence likelihood of biasness.

Limitation of the technique

Information collected regarding outcomes; exposure and disease is not reliable in drawing conclusion in reference to the health status of the sample population. Simultaneous evaluation outcomes and risk factor pose the risk of biasness of the results obtained in the analysis (Pine, 1997). Therefore, it will be difficult to trust that the data obtained is of desired accuracy and precision.

Another hindrance of the technique lies in the fact that, the mystifying factors in most cases will not be similarly distributed amongst the various sets of interest in the research. The inequality causes biasness and results to subsequent misinterpretation.

In the process of cross-sectional research of diseases associated with dietary field, the research involves the study of the current diet being consumed by the affected sample population. Information obtained in this study will be incorrect, since, in most instances, the population will change their diet depending on the prevailing diseases. Therefore, the current diet is disease dependent, thus may not serve as an appropriate sample for the data collection.

Errors related to possible outcome and recall exposure is another limitation associated to cross -section studies.

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Despite the fact that the technique seems simple, it is a challenge to single out participants who shares similar variables of interests for the study.

Furthermore, in case the set is located, the population is most likely to be affected by cohort differences that may have resulted from a specific experience of another unique set of people. Individuals born in the same time may share various similarities, but due to geographic variances, their experiences differ greatly. Therefore, the information gathered may not be reliable.

References

Gratton, C. &. (2004). Research methods for sports studies. London: London: Routledge.

Blande, M.. (2001). An Introduction to Medical Statistics. 3rd Ed. Oxford: Oxford University Press.

Correlation method

In this technique, it is impossible to clearly distinguish the unit of analysis. In other words, the unit is indivisible if the statistical object exists in a larger area or as a group. Ecological correlation finds existence where the analyst is interested in the frequency of a certain phenomenon in the area or group.

The other reason for the use of this technique will be dictated by the cost.

Correlation technique reduces the overall cost of research (Trochim, 2006).

An example of ecological fallacy is where there exist a positive correlation in unemployment level in police force areas and the areas of crime rate.

However, comparison does not exist between the offending individual numbers and the unemployment rates. Therefore, if confusion is developed between the two scenarios, then the incident is referred to as an ecological fallacy.

Correlation method may not be appropriate for a dissertation, since the topic of exploration may be interpreted differently. For example, a scenario where the crime rate and unemployment are confused with unemployment and offenders means that wrong data, as well as interpretation, will also be confusing the aspect of planning and solution finding.

References

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Trochim, W. (2006). Time in research. Research Methods Knowledge Base. Chicago: Web Center for Social Research Methods.