

Nutritional epidemiology and its policy recommendations.

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Introduction

In nutritional epidemiology, dietary and nutritional characteristics are researched in connection to illness occurrence at a community level. Nutritional epidemiology is a relatively new field of medicine that studies the relationship between food and health. It's a relatively young branch of epidemiology that's growing more and more relevant to today's health concerns. Diet and physical activity are difficult to quantify, which could explain why nutrition has gotten less attention in epidemiology than other disease risk variables. Nutritional epidemiology uses information from nutritional science to better understand human nutrition and explain the fundamental concepts that underpin it. Nutritional epidemiology research and interventions, such as clinical, case-control, and cohort studies, rely on nutritional science information as well [1].

To investigate the link between diet and disease, nutritional epidemiology methodologies have been created. These research findings have an impact on public health because they inform the creation of dietary guidelines, including those customised specifically for the prevention of specific diseases, disorders, and cancers. Because of its expanding relevance and prior successes in improving public health worldwide, western experts argue that nutritional epidemiology should be a basic component in the training of all health and social service professions. However, it is also claimed that nutritional epidemiology studies produce incorrect results since they rely on the role of diet in health and disease, which is characterised as an exposure subject to significant measurement error. [2].

Ecological study

An ecological research is an observational study that investigates the effects of risk-modifying factors on population health outcomes based on their geographic and/or temporal ecological state. Ecological studies are valuable for examining illness patterns in large groups, but they may not adequately reflect genuine connections among individuals within such populations. Geographic information is used in ecological research to study the spatial framework of disease and exposure, although there is the possibility of systemic differences in classification language [3].

Cross-sectional study

A cross-sectional study is a single-case observational research that looks at current exposure and outcomes. Cross sectional studies are useful for evaluating the association between

disease and food because they provide a snapshot of the prevalence of disease in a community at a specific point in time. Cross-sectional studies provide several advantages, including the ability to quantify numerous outcomes and exposures, as well as the ability to plan and allocate health resources by assessing the illness burden in a specific community. However, population responses are largely dependent on the outcome measurement. Responder bias and so incorrect results result from non-response [4].

Case control study

An observational-individual research that is characterised by the result is known as a case-control study (i.e. measures outcomes in the present and past exposure are established). It consists of two groups: controls and cases (diseased), each of which has two treatment options: exposed and unexposed. Case-control studies can be used to research rare diseases over lengthy periods of time, but they are limited to evaluating only one outcome and are subject to bias if the control groups chosen are not representative of the population, resulting in misleading results [5].

Cohort study

A cohort study is an observational-individual research in which the result is determined in the future and the exposure is measured in the present across long periods of time. Multiple outcomes can be measured per one exposure in cohort studies. It is useful in nutritional epidemiology research because it can quantify both incidence and prevalence of outcomes that occur after exposure. Cohort studies, on the other hand, are expensive and time-consuming. Because the outcome is determined in the future, any difficulties relating to data collection or confounders cannot be handled in the past.

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