A Brief Study of the Epidemiology and Its Health Characteristics.

Quinn Morton*

Department of Epidemology, University of Iowa, IA, USA

Accepted on 06 December, 2021

Commentary

Epidemiology is the study and analysis of health and disease characteristics in specified populations, including their distribution (who, when, and where), patterns, and factors. It is a cornerstone of public health, influencing policy and evidence-based behavior by identifying disease risk factors and preventative healthcare priorities. Epidemiology has facilitated the development of technique for clinical research, public health research, and, to a lesser extent, basic biological science research. Illness causation, transmission, outbreak investigation, disease surveillance, environmental epidemiology, forensic epidemiology, occupational epidemiology, screening, biomonitoring, and comparisons of treatment effects, such as in clinical trials, are all major fields of epidemiological study. Other scientific disciplines are used by epidemiologists, such as biology to better understand disease processes, statistics to make effective use of data and develop suitable results, social sciences.

Epidemiology is derived from Greek epi 'on, among,' demos 'people, region,' and logos'study, speech, discourse,' implying that it exclusively pertains to human populations. However, despite the availability of the term "epizoology," the term is commonly used in studies of zoological populations (veterinary epidemiology), and it has also been applied to studies of plant populations (botanical or plant disease epidemiology) Hippocrates developed the terms "epidemic" and "endemic" to distinguish between diseases that "visit" a group (epidemic) and those that "reside inside" a population (endemic) (endemic). In his work Epidemiologa Espaola, published in 1802, the Spanish physician Villalba appears to have invented the term "epidemiology" to describe the study of epidemics. Epidemiologists also look at how diseases interact in a population, which is known as a syndemic.

The term epidemiology is increasingly frequently used to describe and explain not only epidemics and infectious diseases, but disease in general, as well as related situations. High blood pressure, mental illness, and obesity are just a few of the issues examined by epidemiology. As a result, this epidemiology is focused on how the pattern of disease causes a change in human function. Involving the assessment of data covering time, place, and person, analytic (looking into known associations or conceptual model), or experimental (looking into unknown associations or hypotheses of the study). Nature is allowed to "take its course" in observational studies, with epidemiologists watching from the sidelines. In experiments, on the other hand, the epidemiologist is in control of all of the variables that go into a case study.

Whenever possible, epidemiological studies try to uncover unbiased connections between exposures like alcohol or smoking, biological agents, stress, or chemicals and mortality or morbidity. An essential part of epidemiology is identifying causal links between these exposures and outcomes. Informatics is a tool used by modern epidemiologists. There are two components to observational studies: descriptive and analytical. The "who, what, where, and when of health-related state occurrence" is the object of descriptive observations. Analytic observations, on the other hand, focus on the ‘how' of a health-related event. RCTs (commonly used for new medicine or drug testing), field trials (conducted on people at high risk of getting a disease), and community trials are all examples of experimental epidemiology (research on social originating diseases). In evaluating an outbreak, the term "epidemiologic triad" is used to describe the confluence of Host, Agent, and Environment.

The former type of research is solely descriptive and cannot be utilised to make conclusions about a population of individuals with that ailment. These studies, in which a sharp clinician notices an unique element of an illness or a patient's history, may lead to the development of a new theory. Analytic studies could be conducted using the data from the series to look at possible causal elements. Case-control or prospective studies are examples of this. In a case-control research, comparable controls without the disease would be compared to the cases in the series. In a prospective study, the case series would be followed throughout time to assess the disease's natural history.

*Correspondence to

Dr. Quinn Morton

Department of Epidemology, University of Iowa, IA, Usa

Iowa

USA

E-mail: Quinn@gmail.com