Limitations of Epidemiology from the Level of General Medicine to Report on the Health Situation of People and Groups

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ABSTRACT

N/A

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Introduction

To estimate morbidity, traditional methods are health surveys and cross-sectional studies.[1] However, these health surveys are a type of instrument that is not free of errors and difficulties.[2-4] Although the cost of cross-sectional studies is relatively lower than that of other epidemiological designs, such as cohort studies, this cost is not negligible, as they require some fieldwork, use questionnaires that are applied by interviewers or need to take biological samples or anthropometric measurements, and medical examinations, with specific technical equipment.[1] Furthermore, low response rates can lead to errors in estimating disease prevalence and larger surveys can be costly and difficult to perform.[1,5] On the other way, unless large numbers of individuals are surveyed, it is difficult to determine prevalence in small geographic areas such as census tracts.[6]

An alternative is to use data generated in the general practitioner's (GP) office, which can be especially useful. Thus, incidence and prevalence rates for morbidity can be obtained from the population seen in general medicine clinics by identifying cases at the patient's presentation with a GP.[7] It has been established that the population registered in General practices is representative of the entire population. In developed countries around two-thirds of the population consults in a general medicine service at least once a year, and more than 80% contact once every 5 years.[8-10]

However, this alternative of obtaining community epidemiological information from GP consultations is not free of problems either. Epidemiological findings and scientific advances change and question the usefulness of diagnoses: the classification of peptic ulcer has been transformed from a psychosomatic to an infectious disease; the usefulness of distinguishing between common migraine and muscle contraction migraine diagnoses is questionable since these labels do not predict different outcomes, etc. Beliefs about symptom control (such as pain) significantly influence disease perceptions, and may therefore affect diagnostic results in patients seen by GPs.[11]

On the other hand, there are gender differences; The different biological stages in women determine the specific needs and demands of

health services. Furthermore, from a sociological point of view, it has been considered that women perform a worse self-evaluation of health and consult with the doctor with greater probability than men, although the degree to which the differences reported in prevalence and use of health are not known. However, biological or physiological differences, susceptibility to smoking, and hormonal factors have been proposed as causes of increased general susceptibility in women compared to men.[12] Furthermore, in general medicine, and especially in psychiatric problems, the information conveyed by the diagnosis (i.e. the "type" to which the individual patient is labelled) is in itself insufficient for therapeutic and prognostic purposes; and thus a more detailed characterisation of the individual case is necessary.[13]

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Regardless of these limitations, the use of data generated in the GP's office has other new challenges that are rarely recognized and studied: doctor-patient relationship and their effects. Diagnosis and treatment are the most important tools in medicine; this fact structures the relationship between patient and doctor, organizes the disease, and provides access to resources.[14]

The doctor-patient relationship is a professional, complex, multiple, and heterogeneous social relationship. The models of the doctor-patient relationship, depending on the interrelationship established between doctor and patient, imply different models of decision-making (diagnosis and treatment). Since symptoms are subjective evidence of health problems and are expressed differently depending on the context of the doctor-patient relationship, this variable limits the degree to which the doctor obtains psychosocial information from the patient, and implies different diagnoses. That is, different modes of doctor-patient relationship lead to different diagnoses by the GP. In addition, beliefs can be affected by the doctor-patient relationship model and therefore can affect diagnostic results in patients treated by the GP.[15]

The different possibilities of doctor-patient relationship point in the direction that in each of these contexts of relationship, the information expressed by the patient and that obtained by the doctor will be different.[16] Thus, these different models of the doctor-patient relationship would give rise to different prevalences, incidences, sensitivities, specificities, predictive values, etc. according to the type of doctor-patient relationship, and therefore, ultimately this has “hidden” epidemiological implications in morbidity data (prevalence and incidence of diseases and their distribution in the population).[15] In addition, it can be hypothesized that the doctor-patient relationship is different in different types of health problems[17], in situations of multimorbidity[18], or in elderly patients[19], as well as when pharmacological treatments are involved.[20]

Consequently, there is no doubt that the doctor-patient relationship is an aspect of great

importance in the treatment of patients, but also in epidemiological information. Thus, GP communication style has a significant impact on the ability to recognize and manage health disorders. Therefore, the processes of the doctor-patient relationship play a mediating role between healthcare resources and the results of clinical encounters, and it is an aspect of great importance in the treatment of patients, but also in epidemiological information. Because the doctor-patient relationship is a theoretically analyzed but little-studied concept, it would be important to try to characterize the distribution of the types of doctor-patient relationships that occur in general medicine practice, in order to correct epidemiological results or disease data in the community.

In summary, it can be said that epidemiology has limitations in its ability to exhaust the field of relationships between health and living conditions. These limitations are of a technical, methodological, and conceptual nature in the biological sciences in defining, describing, and explaining the health situation of individuals and groups.

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