PERGAMON

Social Science & Medicine 57 (2003) 539–550

SOCIAL SCIENCE & MEDICINE

www.elsevier.com/locate/socscimed

Epidemiological transition: Model or illusion? A look at the problem of health in Mexico

Martínez S Carolina*, Leal F Gustavo

Department of Health Care, Autonomous Metropolitan University (Xochimilco), Calzada del Hueso 1100, Col. Villa Quietud, Mexico City 04960, Mexico

The present is merely the culmination of the past and the future does not exist. Vladimir Nabokov

Abstract

This paper discusses the validity of the *epidemiological transition* model to interpret changes in the structure of mortality and morbidity. Epistemological and political questions are posed. The case of Mexico is used to illustrate the limitations its use imposes on understanding the constellation of components explaining the epidemiological profile, and the problems involved in designing a public health policy on the basis of this sort of misinterpretation. It is suggested that the illusory certainty of a pre-determined destiny distorts the prospective that would enable to construct scenarios; what is actually happening remains hidden by the model and health policies are designed without adequate parameters for evaluating their effective impact. We conclude with some remarks on the usefulness of constructing alternative forms of interpretation for understanding changes in the epidemiological profile, one of the most important inputs for designing better policies to face the challenges posed by health care and dealing with illness in modern-day societies.

Keywords: Epidemiological transition; Health policy; Epidemiological epistemology; Mexico

Introduction

How does one account for the current widespread use of a term as conceptually weak as *epidemiological transition*? Specialist articles in which it continues to be used give the impression that, with very few exceptions (Gaylin & Kates, 1997; Cabello & Springer, 1997), the only thing that remains of the original postulates of the early 1970s (Omran, 1971, 1977) is the shred of common sense contained in the idea that populations' health profiles *change* over time (Frenk, Bobadilla, Sepúlveda, & López, 1989; Frenk et al., 1991; Phillips, 1991; Marshall, 1991; Wolpert, Robles, & Reyes, 1993; Vigneron, 1993; Boedhi-Darmojo, 1993; Hungerbuhler, Bovet, & Shamlaye, 1993; Reddy, 1993; Albala & Vio, 1995; Gulliford, 1996; Murray & Lopez, 1997; Tapia, 1997; Albala, Vio & Yanez, 1997; Ghannem & Fredj, 1997; Elman & Myers, 1997; Serow, Cowart, & Camezon, 1998; Smallman-Raynor & Phillips, 1999; Seale, 2000).

One thing is certain, however; the set of illnesses suffered by the population at a particular time (some of which lead to death) is never the same as the next. Abrupt changes may be more easily perceived than those that take place more slowly over a longer period of time (Braudel, 1989). Nevertheless, these processes are essentially in a continuous state of flux.

In our view, the main theoretical problem posed by the insistence on using the *epidemiological transition* model to interpret changes in the structure of mortality and morbidity is that it provides a *phenomenological* description that is merely approximate (as well as partial), rather than a *theoretical explanation* of the causal constellations responsible for these events and

*Corresponding author. Tel.: +52-5-54-83-72-44; fax: +52-5-54-83-72-18.

E-mail address: msoc1298@cueyatl.uam.mx (M.S. Carolina).

0277-9536/03/$ - see front matter © 2003 Elsevier Science Ltd. All rights reserved.
doi:10.1016/S0277-9536(02)00379-9

their links with the changes experienced in the societies where this all takes place.

The other even more worrying problem it raises is political. Using a model instead of a detailed analysis of what is in fact taking place creates the false impression that one *already* has all the answers: "we can put it all down to the fact that the country is undergoing an *epidemiological transition*." It prevents one from understanding what is actually happening, since this is hidden by the model. The illusory certainty of a predetermined destiny distorts the *prospective* that would enable one to construct scenarios. Consequently, health policies are designed virtually in the dark, without parameters for evaluating their effective impact.

The validity of this model (the *epidemiological transition*) will be discussed below. The case of Mexico will be used to illustrate the limitations its use imposes on understanding the constellation of components explaining the epidemiological profile, and the problems involved in designing a public health policy on the basis of this sort of misinterpretation. We shall end with some remarks on the usefulness of constructing alternative forms of interpretation, in the search for a more solid basis for understanding changes in the epidemiological profile, one of the most important inputs for designing better responses to the challenges posed by health care and dealing with illness in modern-day societies.

From the original model to its current interpretations

Omran's proposal: the limits of a vision

The stimulating, thought-provoking conception of the historical determinants of changes in the epidemiological profile that Omran (1971) organized in the *epidemiological transition* model was based on the scientific, social perspectives that prevailed at the time, governed by gradualistic conceptions of the economy and linear visions of *social time*.

The economic theories of over 30 years ago, with their references to development, underdevelopment and modernization (Rostow, 1960; Prebisch, 1963; Huntington, 1983) were compatible with the idea of "progress" put forward by social sciences of the time (Wallerstein, 2000) and with the medical views that subscribe to the idea of societies going through pre-determined stages, rather like biological organisms.

However, Omran's conception was distorted by the new conservatives, who, in their attempts to systematically freeze social time, vulgarized it at the same time as they generalized the use of apparently sophisticated models that were actually oversimple for the situation they were intended to explain (WHO, 1999, 2000).

Artificially freezing social time enabled them to take the *first step* towards establishing a before and an afterwards, so that it could then be re-constructed into two sub-times. The first included a challenge that had already been supposedly *met* by the health agenda, namely the control of communicable diseases, while the second contained one that was regarded as *still pending*, i.e. the front opened up by non-communicable diseases. From there, it was not difficult to take the *second step*: making this epidemiological alibi the major objective of health policy and establishing the fact that although some issues remained pending, other goals had already been achieved. Having established this *two-fold challenge*, as it was called in the *1999 World Health Report* (WHO, 1999), it was then easier to achieve the necessary gradualness for turning health policies into genuine constructs oriented and defined by frozen time, and to create a profile of policies with deadlines that had already been met and deadlines that had yet to be met, in an attempt to justify the progress of government work and that of its *experts* (Frenk et al., 1989).[1]

As a result, the new conservatives felt that they had achieved their goal of "modernization," the dream of aligning their model as part of the discourse of modernity, by projecting an action required by the present onto the distant fulfillment of an unattainable progressive future (Habermas, 2000).

Meanwhile, most of the analyses drawn up under the doctrine of *epidemiological transition,* including the most recent ones, continued to show the same two constants:

(a) the assumption that the economic development of countries takes place in *stages* and
(b) the assumption of *epidemiological transition as a natural destiny* of societies, a sort of path that sooner or later, all countries would have to follow.

Over time, it has become common to use the term "*epidemiological transition*" to designate "...the shift in the main causes of death-from infectious diseases to degenerative cardiovascular diseases and cancers," as a point of inflection in which most members of a society have obtained access to the satisfaction of the basic material needs for their lives (Wilkinson, 1994, p. 65) despite the fact, as has been so rightly pointed out (Wilkinson, 1994, p. 65) that:

> The impact of medical science is not reflected in the epidemiological transition. In fact the transition would have happened (and largely did happen) without it. The great infectious diseases of the

[1] It is hardly surprising, then, to find Omran's foundational work in the section on public health classics in the most recent issue of *Bulletin* (WHO, 2001), but it is worthy to notice that it is preceded by excerpts from a respectful yet extremely sharp comment by Caldwell (2001) who since then, and on the basis of his thought-provoking demographic approach, has expressed his reservations about Omran's proposal.