

VIOLENT DEATHS IN THE UNITED STATES

An Epidemiologic Study of Suicide, Homicide, and Accidents

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FOREWORD BY JAN FAWCETT, M.D.

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TO PAUL H. HOLINGER, M.D.
Scientist, bronchoesophagologist, father, and friend

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P. C. H.

FOREWORD

This book illustrates the power of epidemiologic studies at their best, in that it achieves many of the potentials of the use of epidemiologic data. For the social planner who advises government on the priorities for problems that require prevention and intervention, it provides the data to allot a very high priority for further research and preventive programs on accidental death, suicide, and homicide as causes of violent death. For the clinician who views the tragic outcome of suicide, homicidal death, or accidental death in terms of the individual's characteristics, the epidemiologic approach highlights the important trends common over a number of occurrences and helps separate those data which are pertinent to the prevention of such outcomes from the welter of other important, though perhaps not as central, clinical data.

As clinicians, we are invariably confronted by problems of suicide and other manifestations of self-destructiveness in our patients. In our day-to-day work with patients, we often tend to overlook the larger scene. Dr. Holinger, as both clinician and researcher, reminds us in this book that if we take suicide prevention seriously, we must look at this larger picture. To accomplish this enhanced understanding of self-destructiveness, he presents the longitudinal trends of not just suicide but homicide and accidents as well, emphasizing the importance of age, period, and population effects.

Enlarging our horizons with respect to violent deaths and self-destructiveness is of critical importance in psychiatry. As this book demonstrates, there have not been any successful preventive interventions in the United States that have led to a decrease in suicide and homicide rates on a large-scale, public health level. Rather, period, age, and cohort effects, not intentional intervention effects, have dictated the trends in these rates during the 20th century. With accidental deaths, the picture is somewhat different. Some data suggest that changes in speed limits and increased

seat-belt use have decreased motor-vehicle-accident deaths in certain age groups. Yet for mental health professionals, it would seem that large-scale effective intervention and prevention of these forms of violent death should command a high priority. In countries outside the United States, there are only two examples of possibly effective public health interventions to decrease suicide rates: the shift from toxic to less-toxic gas in England, and the legislated decrease in the amount of prescribed sedatives in Australia. Even in these two instances, the data are extremely conflicting with respect to whether or not these interventions have, in fact, led to a sustained decrease in suicide rates.

Violent Deaths in the United States makes it clear that we must improve our efforts in intervention and prevention. To this end, perhaps the most intriguing part of the book emerges. In his attempt to bridge clinical and epidemiologic data and hypotheses, Dr. Holinger presents a series of studies on the relationship between population shifts and violent death rates. The importance of this work lies in the potential for prediction of violent death rates. With this predictive model comes the possibility of effective intervention and prevention of suicide, homicide, and accidents. Thus the epidemiologic realm is seen to influence us profoundly on a clinical level. Such an attempt at intervention and prevention is well worth our most serious attention.

Violent death is almost always needless death. Violent death in youth is a double tragedy. The relative loss of individuals whose lives seem to be full of potential by virtue of their physical health, energy, and the endless opportunities available to them cannot be tolerated in a progressive society. This work by Dr. Holinger and his colleagues helps us not only to see the importance of preventive intervention in the areas of suicide, homicide, and accidental death, but also to understand the important interface between social forces and individual dynamics which influences these outcomes and which must be further recognized and counteracted in order to avoid the tragic waste of potential creative life that we see today.

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SECTION ONE

RATIONALE AND METHODOLOGY

Section I describes the purpose, literature, and methodology of the study. Violent deaths (suicide, homicide, and accidents) are the leading cause of number of years of life lost in the United States and the third leading cause of death. The purpose of this study is essentially to examine the following three issues: (1) the epidemiology of violent deaths; (2) the extent to which all forms of violent deaths may reflect self-destructive tendencies; and (3) the potential prediction of violent death trends in populations. The literature review (Chapter 2) focuses on these three issues: epidemiologic studies of violent deaths, clinical and epidemiologic data regarding self-destructive aspects of violent deaths, and the prediction of violent death trends in populations. Chapter 3, on methodology, examines the type of data utilized in this study and the problems involved. National mortality rates are the primary type of data used, and the methodologic problems determining the number of deaths and the population figures are discussed. Misclassification errors, national changes in classification over time, and concepts such as comparability ratios and age-adjusted rates are presented.

CHAPTER ONE

INTRODUCTION*

RATIONALE

Violent deaths (suicides, homicides, and accidents) are the leading cause of death of people aged 1–39 in the United States. More lives are lost to violent deaths during the first half of the normal life span than to heart disease, cancer, diabetes, or any other cause. In addition, violent deaths are the leading cause of expected life lost in this country. Overall, for all ages, violent deaths are the third leading cause of death, behind cardiovascular disease and cancer, respectively (Holinger, 1980). It is no exaggeration to suggest that this violent death aggregate represents a serious social and public health problem in the United States. The purpose of this book is to examine three aspects of this problem: the epidemiology of violent deaths; the self-destructive quality of violent deaths; and the potential for the prediction of violent deaths.

Scientists have long been interested in self-destructive tendencies among human beings. Most studies of self-destructiveness, however, have tended to concentrate only on suicide, that is, overt self-destructiveness (exceptions to this include Menninger, 1938;

*Two issues regarding the data in this book should be noted at the outset. First, while most of the data include the years 1900–1980, some of the data begin after 1900 or end prior to 1980. The reasons for these differences are explained in the text, and usually relate to the dates of the beginning of national compilation of various data. In other instances (especially Chapters 11 and 12) the national mortality data through 1980 were not available at the time of the statistical studies, and in those cases the most recent data were used. Second, the graphs presented in this book are often quite complex and “busy.” Inasmuch as the book is oriented to discerning major trends (i.e., especially fluctuations of rates over decades and those age, race, and sex groups at highest and lowest risk) rather than to following minute changes in a single age group, the decision was made not to split the graphs up by age or to exclude certain data to make them less “busy”; rates for specific age, race, and sex groups can be found in the appendices if the graphs do not provide sufficient information.

Farberow, 1979; Wolfgang, 1959; and clinical data and research on accidents; see Chapter 2). The organizing principle of this book involves a curiosity about the nature and degree of self-destructiveness among human beings, and particularly the role such self-destructiveness may play in suicides, homicides, and accidental deaths in populations. An attempt will be made to show that the patterns of violent deaths in populations are not random, but rather have understandable patterns; and that while the behavior of an individual may be unpredictable, the violent death patterns for populations may be predictable. Essentially, three issues are presented in this book: (1) the epidemiology (distribution and frequency) of violent deaths (suicides, homicides, and accidents); (2) the extent to which all forms of violent deaths reflect self-destructive tendencies; and (3) the prediction of violent death patterns for populations.

A variety of questions will be addressed by examining these three major issues:

1. What are the epidemiologic patterns of violent deaths in the United States? What are the age, race, and sex patterns for suicides, homicides, accidents (total), motor-vehicle accidents, and non-motor-vehicle accidents? How are the patterns for suicide, homicide, and accidents similar and how are they dissimilar?
2. How do epidemiologic patterns of suicide (overt self-destructiveness) relate to patterns for homicides and accidents? What are the epidemiologic trends for violent deaths when studied in aggregate?
3. What variables seem to correlate most closely with violent death patterns? Is there any way to predict the suicide rates and other violent death rates for specific age groups in specific populations?

The term "violent deaths" has been used here as elsewhere (Weiss, 1976) to refer to suicides, homicides, and accidental deaths. There are at least two reasons for studying these forms of death in aggregate as violent deaths. *Webster's* (1977) defines the term "a violent death" as "caused by force: not natural." Thus, the first reason relates to the sense that these causes of mortality are often considered to be "unnatural" as compared with, say, cancer or

heart disease: They do not involve the deterioration of the body's internal organs, but are imposed from without. Second, clinical evidence suggests that homicides and accidents, as well as suicides, may be self-inflicted: the victim to some degree provokes his or her own death by being in the wrong place at the wrong time. The idea of risk taking is relevant here, people who take more risks being in greater danger of dying by accident or homicide. It should be stressed that homicide data, that is, deaths by homicide, refer to those who are killed, not to those who kill. One study of several hundred homicides (Wolfgang, 1959, 1968) demonstrated that about 25% of all homicides were provoked by the victim, and Wolfgang termed these "victim-precipitated homicides." Certainly a perpetrator is necessary in homicides and in some accidents, but in this book the focus is on the victim. Suicide, homicide, and accidents, in this framework, are seen as related in that all may represent some expression of self-inflicted mortality, with suicide being the most overt, and homicide and accidents being more subtle manifestations of self-destructive tendencies and risk taking.

In order to clarify this notion of viewing violent deaths as reflecting self-destructive tendencies, it is necessary to discuss briefly perception and consciousness. How is it that homicides and accidents, as well as suicides, can be conceived of as self-inflicted and self-destructive? It is most important to view the brain as an extremely powerful perceptual organ, the task of which is to perceive and organize stimuli. There is an increasing amount of evidence to suggest that the brain perceives far more than scientists initially thought it did. For instance, studies of so-called subliminal stimulation (stimuli whose registration is outside conscious awareness), negative hallucinations, and tachistoscopic data demonstrate the massive amount of stimuli that the brain does receive and process (Klein, 1959; Basch, 1975). Basch (1975) has noted that most current evidence suggests that all perception is unconscious, that is, outside conscious awareness. Then the important issue for study is why and under what conditions various unconsciously perceived stimuli are permitted to reach consciousness. For example, suppose a person trips over a crack in the sidewalk. Given the brain's enormous perceptual capacity, there can be little doubt that the crack in the sidewalk was perceived on some level. But the question arises: Why was this perceived information not permitted into consciousness to prevent the person from tripping? Similarly,

suppose someone is making a sandwich in a familiar kitchen and bumps his head on the overhanging cabinets. Again, clearly the brain has perceived the cabinets and their distance from one's head. Yet such information is not permitted into conscious or preconscious awareness in order to stop the accident from occurring. One has only to consider the brain's magnificent capacity for evaluating and organizing stimuli such as distance and speed (e.g., all the perceptual elements that go into a baseball player's catching a difficult fly ball or hitting a difficult pitch) to appreciate the nature of the block or distortion of the information flow to consciousness. Freud, although using a somewhat different perspective, dealt with this problem of accidents being psychologically determined as early as 1901 (Freud, 1901).

How, then, does this issue of perception by the brain and admission of such perceptions into consciousness help toward an understanding of the nature of homicides and accidental deaths, as well as suicides? Several clinical vignettes will be presented to bring the above discussion on perception back into the realm of violent deaths.

Clinical Vignette: Homicide

A 27-year-old woman in the midst of severe marital problems began going to bars in an area of the city known for its high crime rate. Despite being beaten up one night in that neighborhood, and against the urgings of her parents and husband, she continued her evenings in that area. One morning she was found murdered in that neighborhood. Witnesses said she had become rather obnoxious and provocative with two men the night before who were then seen following her out of the bar.

Clinical Vignette: Accident

A 31-year-old woman whose business was not going well was driving home from a business meeting and got on to a two-lane highway which she thought was part of an expressway with all lanes going her way. The car she was behind, as well as a semi-trailer up